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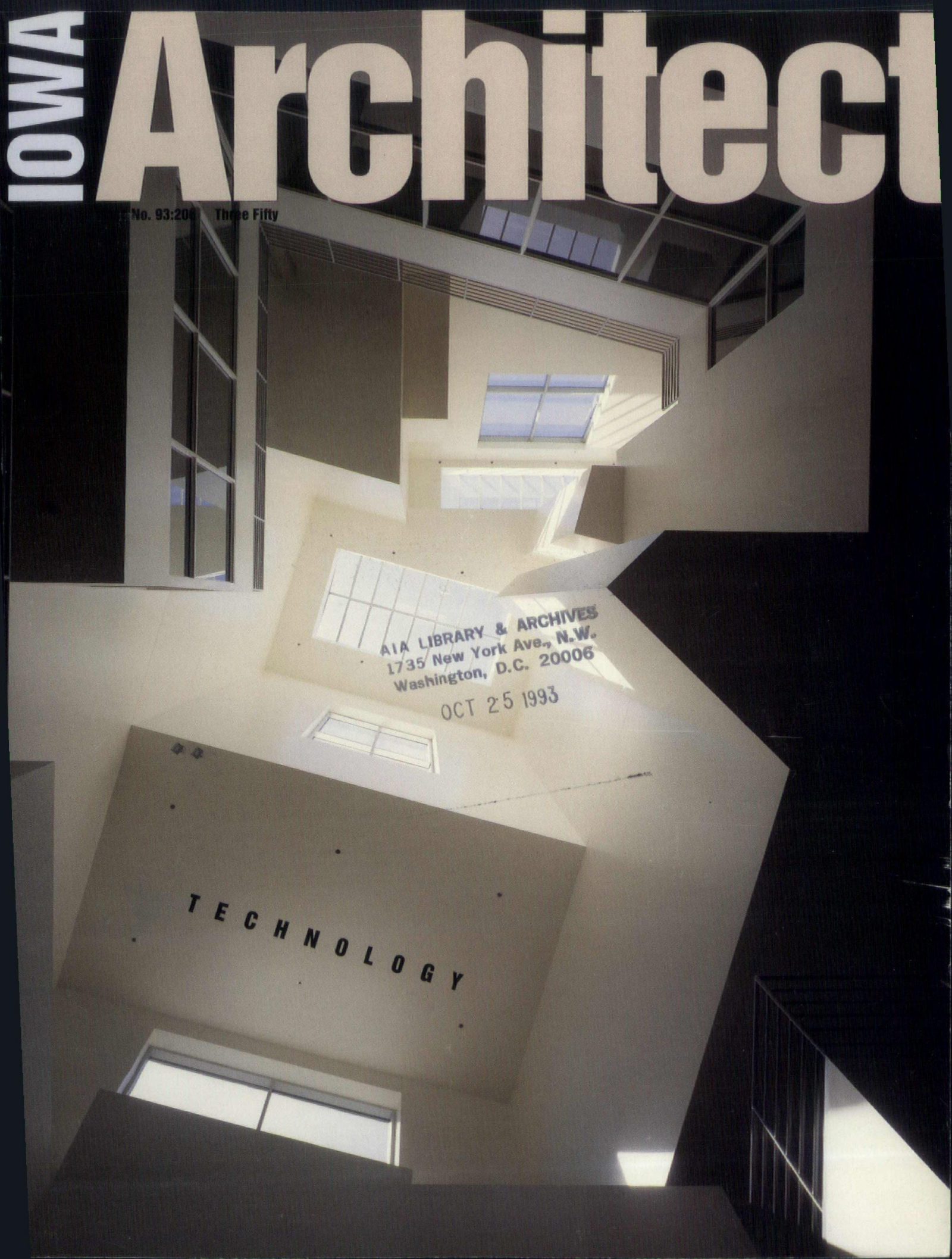

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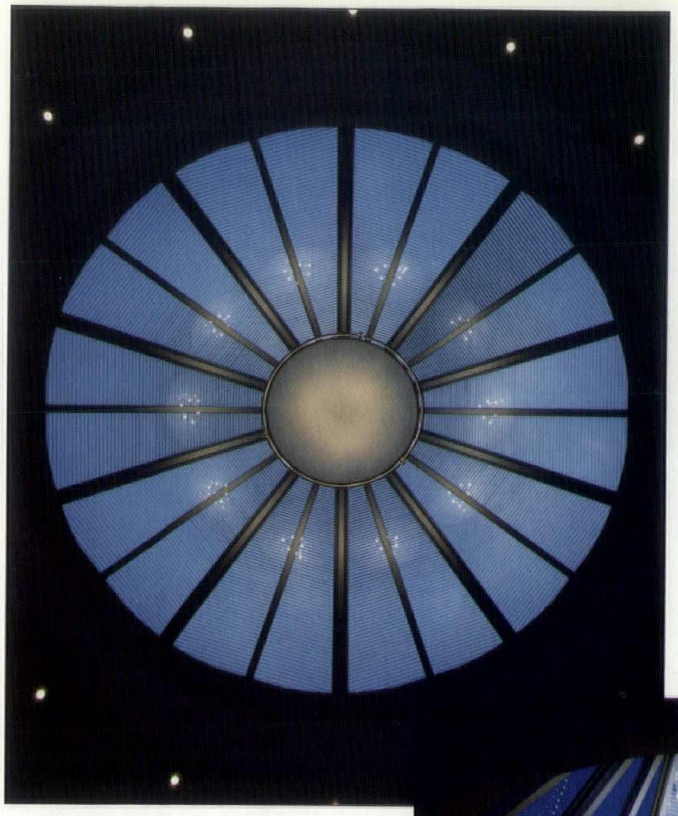

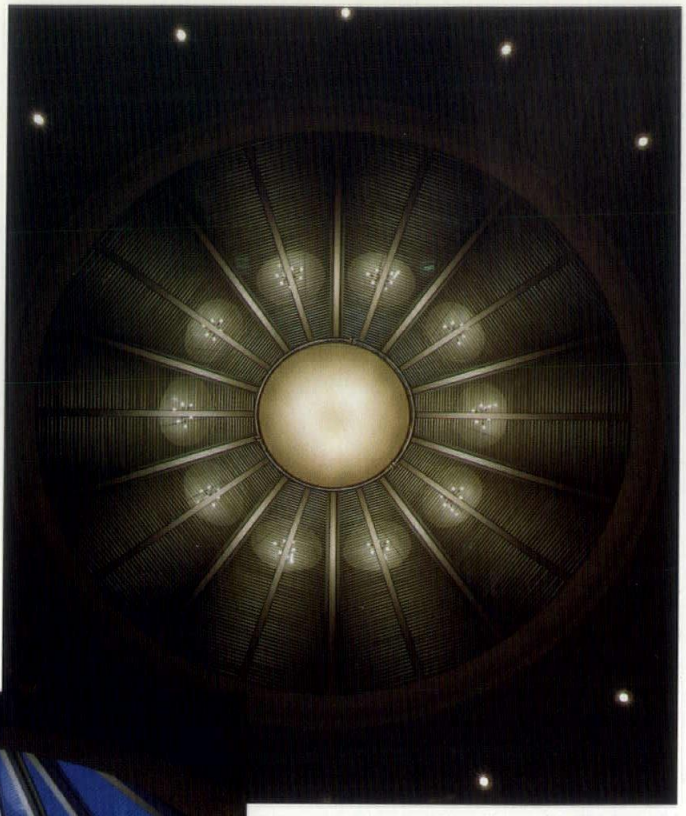

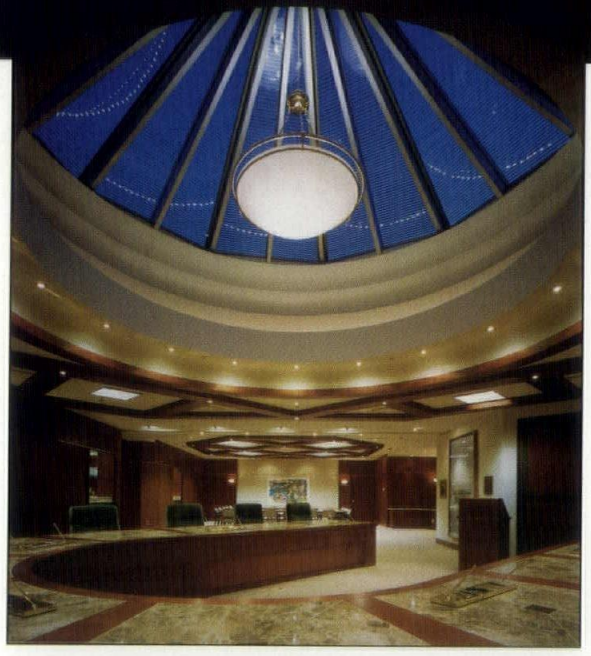

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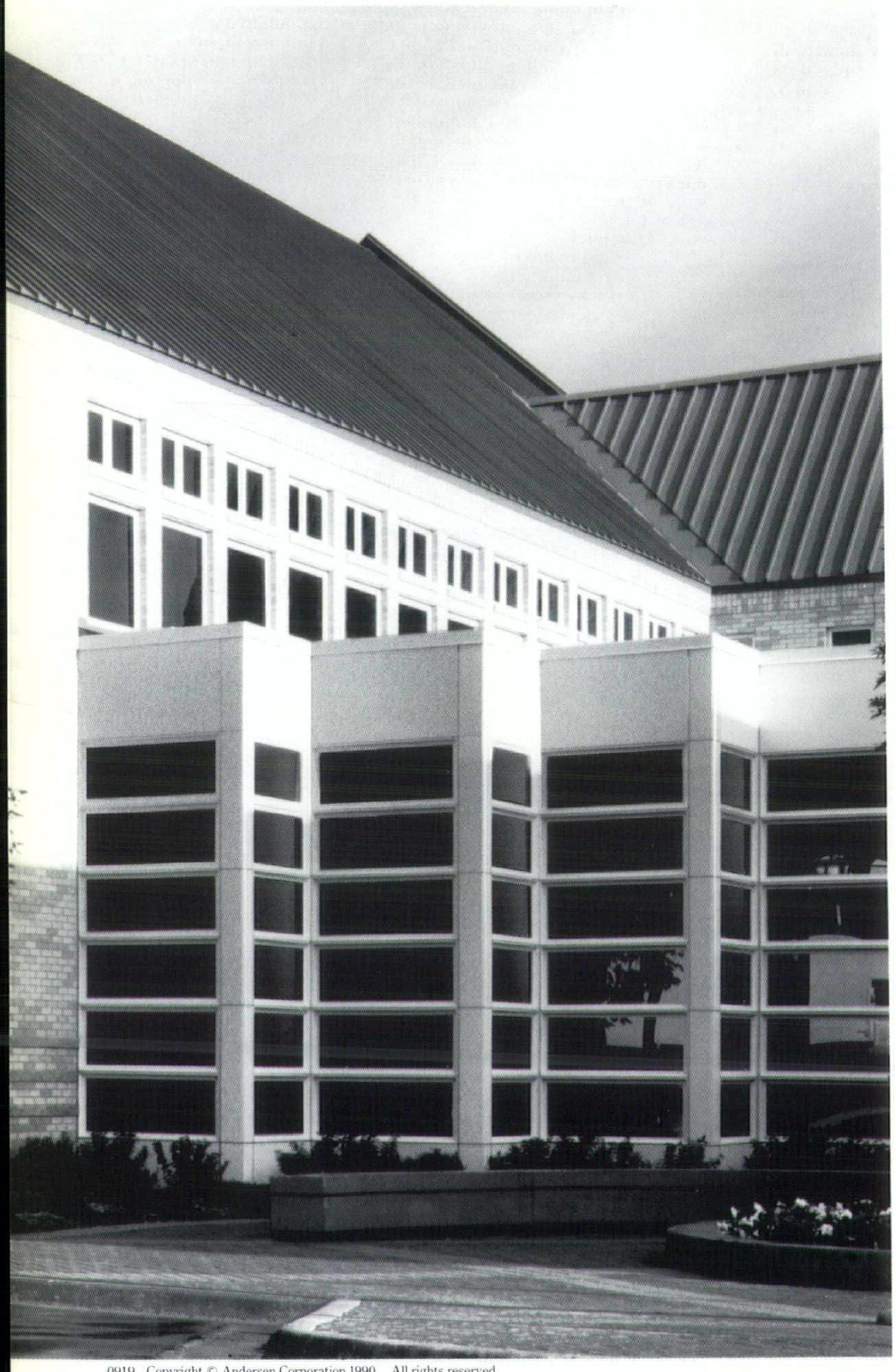
TECHNOLOGY

DEPARTMENTS

Cover
View from the interior atrium of the Frank O. Gehry & Associates/ Herbert Lewis Kruse Blunck Architecture Iowa Advanced Technology Building. Photograph by Erich Ansel Koyama.

AND YOU THOUGHT ANDERSEN WAS JUST A HOUSEHOLD NAME.



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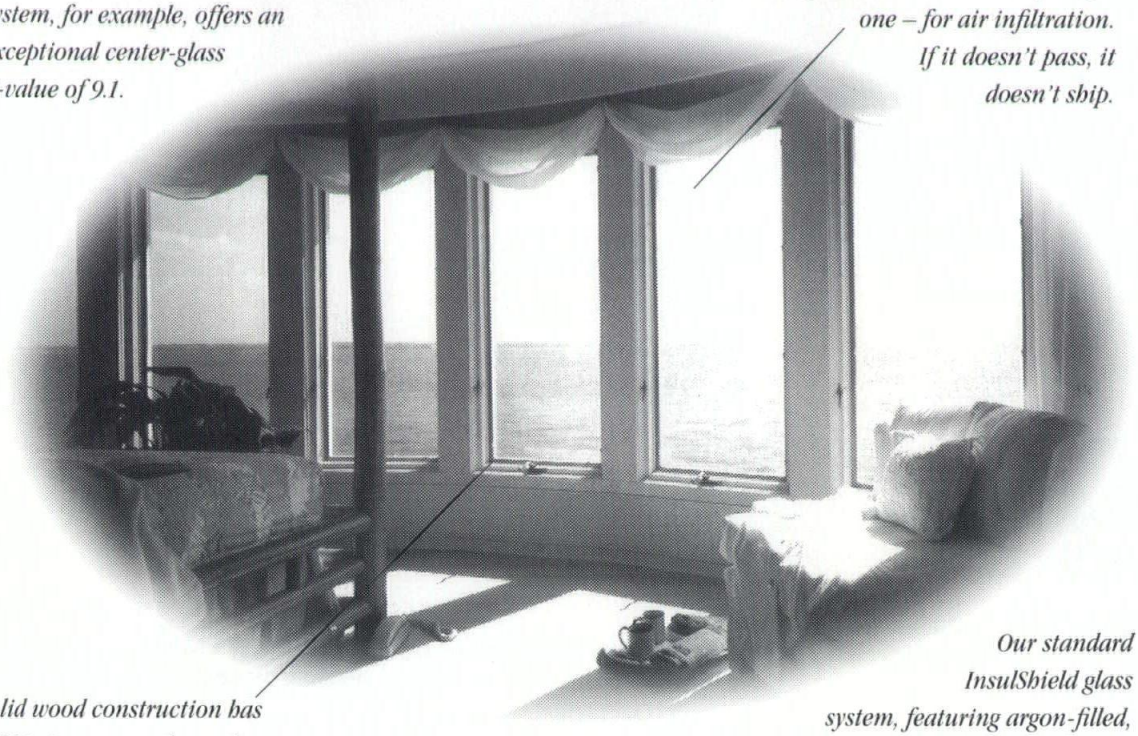

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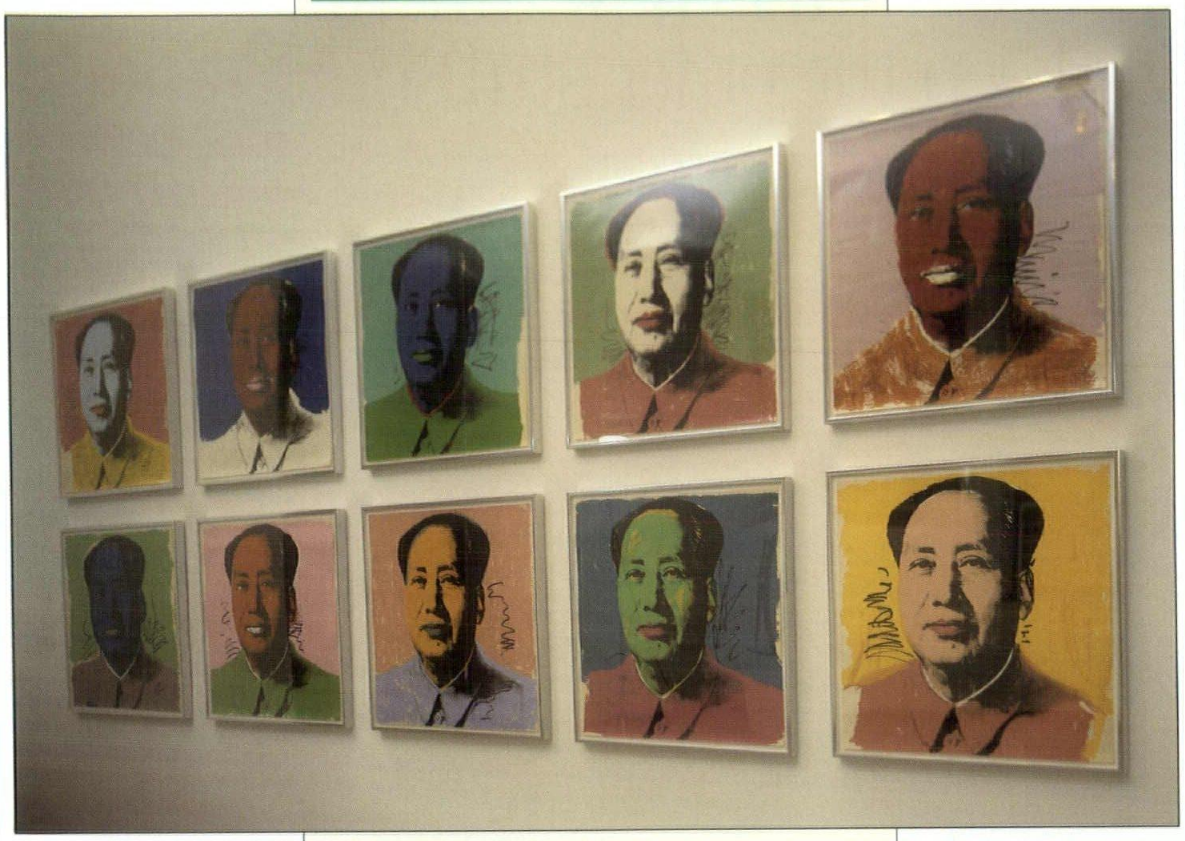
ARTS



The Poetry of Form: Richard Tuttle Drawings from the Vogel Collection

For almost 30 years, Dorothy and Herbert Vogel have collected the work of Richard Tuttle, known since the 1960s for his eccentric drawings and constructions. From October 2 through November 21, 1993, the Indianapolis Museum of Art will feature an exhibition of more than 80 small, delicate, often playful constructions from this collection. Running concurrently to this exhibition, the museum will present a group of floor drawings representing a different facet of Tuttle's work.

Art at the Edge: Ray Smith

From September 28 through November 28, 1993, the High Museum of Art in Atlanta, Georgia, will present an exhibition of work by American artist Ray Smith. Born in the border town of Brownsville, Texas, Smith's work investigates boundaries between cultures, the physical world, and the psyche. *Art at the Edge: Ray Smith* will feature a new cycle of paintings focused on issues of cultural metamorphose and interaction.

Craigie Horsfield

Black-and-white photographs by British artist Craigie Horsfield will be featured in an exhibition at the Walke Art Center, Minneapoli from September 26, 199 through January 2, 199 Comprising nearly 14 his monumentally-scaled photographs, th show will cover a broa range of Horsfield's su ject matter, including portraits, landscapes, urban streetscapes an interiors.

Lee Friedlander

An installation of almost 100 photographs by renowned American photographer Lee Friedlander will be presented in the lobby concourse between the Walker Art Center and the Guthrie Theater in Minneapolis, October 12, 1993, through January 23, 1994. The photographs represent a selection of images from Freidlander's upcoming book *Letters from the People.*

Andy Warhol: Print Portfolios

The Des Moines Art Center is presenting an exhibition of eleven complete portfolios by Andy Warhol, November 20, 1993, through February 20, 1994. *Andy Warhol: Print Portfolios* is comprised of 104 silkscreen prints spanning 20 years of production, from 1967 through 1987. This is the first museum exhibition devoted to this aspect of Warhol's oeuvre. The show is accompanied by an ancillary exhibition of paintings, publications, and video produced by the artist.

Max Ernst: Dada and the Dawn of Surrealism

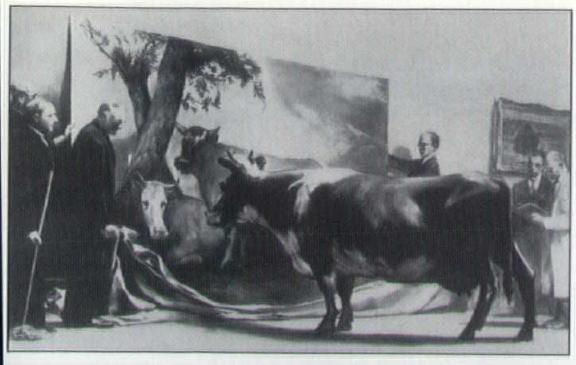
The most comprehensive visual and intellectual exploration ever undertaken into Max Ernst's Dadaist work will be on view at the Chicago Art Institute, September 15 through November 30, 1993. Approximately 150 works are presented, including paintings, collages, relief sculpture and drawings richly augmented by documents related to Ernst and the Dada movement.

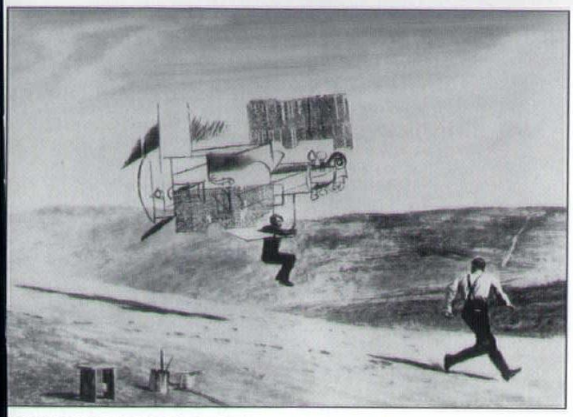
Susan Rothenberg: Paintings and Drawings

The first major survey of the work of Susan Rothenberg will be on view at the Museum of Contemporary Art, Chicago, August 21 through October 24, 1993. Featuring approximately 80 paintings and drawings, the exhibition examines the role of the artist's drawings in her development as one of the preeminent painters of her generation. Throughout this exhibition, paintings are viewed with related drawings to show the process that results in Rothenberg's dynamic and often strange imagery.

PAUL MANKINS, AIA

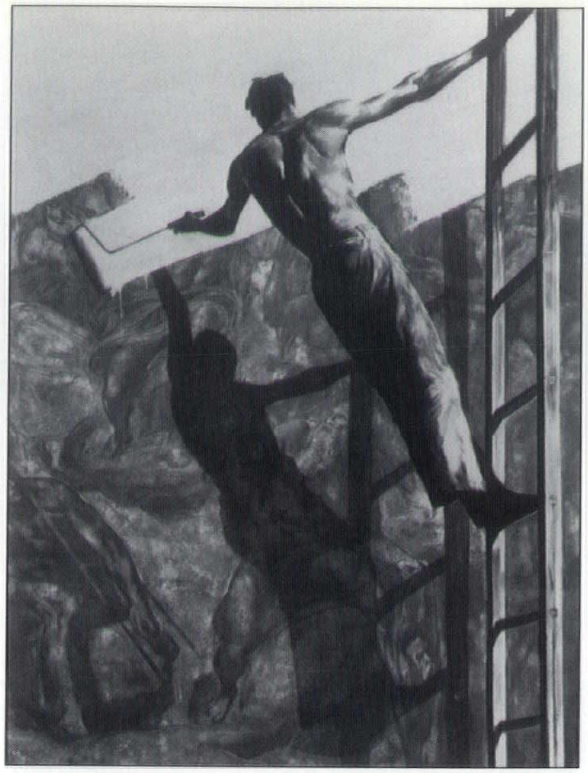
PORTFOLIO





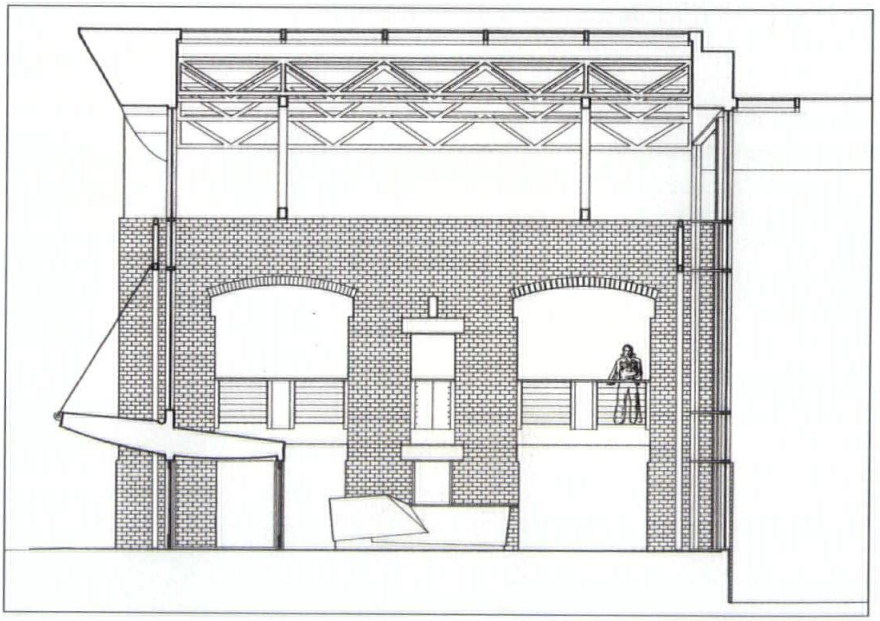
Mark Tansey

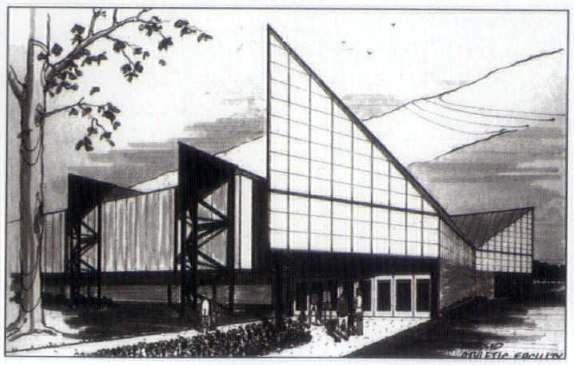
The Milwaukee Art Museum will be the sole midwest venue for the first major exhibition of paintings by contemporary American artist Mark Tansey. This retrospective features 25 large scale paintings and *Wheel* (1990), a three-dimensional object built in collaboration with Fritz Bruehner. Tansey's paintings reassert the importance of pictorial content as a response to the Abstract Expressionists who dominated the art world after World War II. The work exemplifies a combination of strong technical skills and astute wit, exploring tensions between pictorial representation and reality.



Athletic Facility

RDG Bussard Dikis is completing design development for a new athletic and recreation facility at Franklin and Marshall College in Lancaster, Pennsylvania. Major spaces include a reception room that overlooks a 50-meter pool, a fieldhouse, jogging track, weight training room and meeting rooms. Notions of strength, sponsored by visual lightness of steel and physical heaviness of masonry, served as inspiration for the character of the reception space. Construction is scheduled to begin in the spring of 1994.

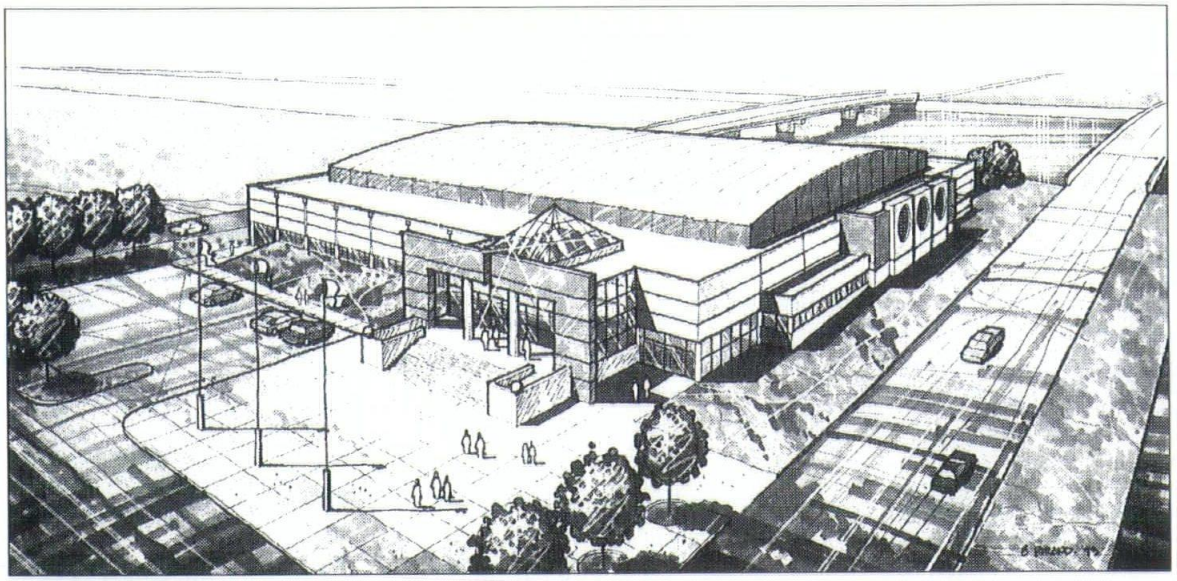




Multi-Purpose Facility

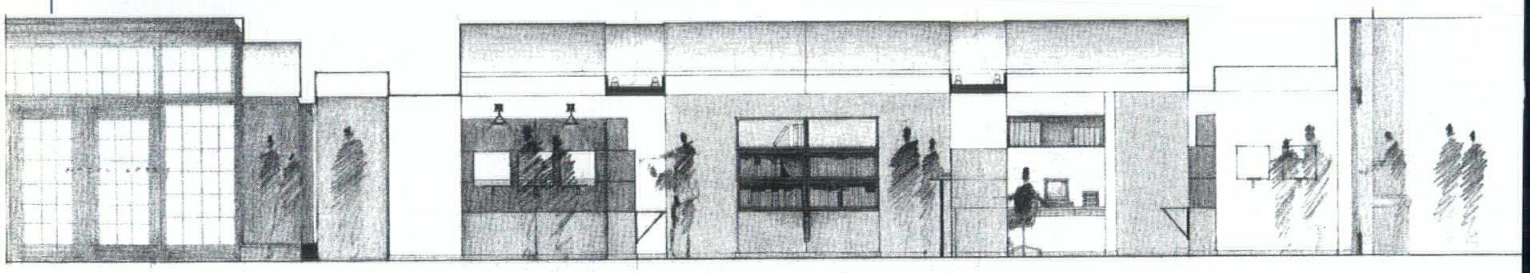
Construction is underway for the Intercollegiate Athletic Facility at Northwestern College. Designed by FEH Associates, Inc., the 55,000 square-foot, 4.5 million dollar facility includes a gymnasium, locker rooms, wrestling practice rooms, weight/exercise rooms, faculty offices and related support functions. Completion is scheduled for the fall of 1994.

TODD GARNER, AIA



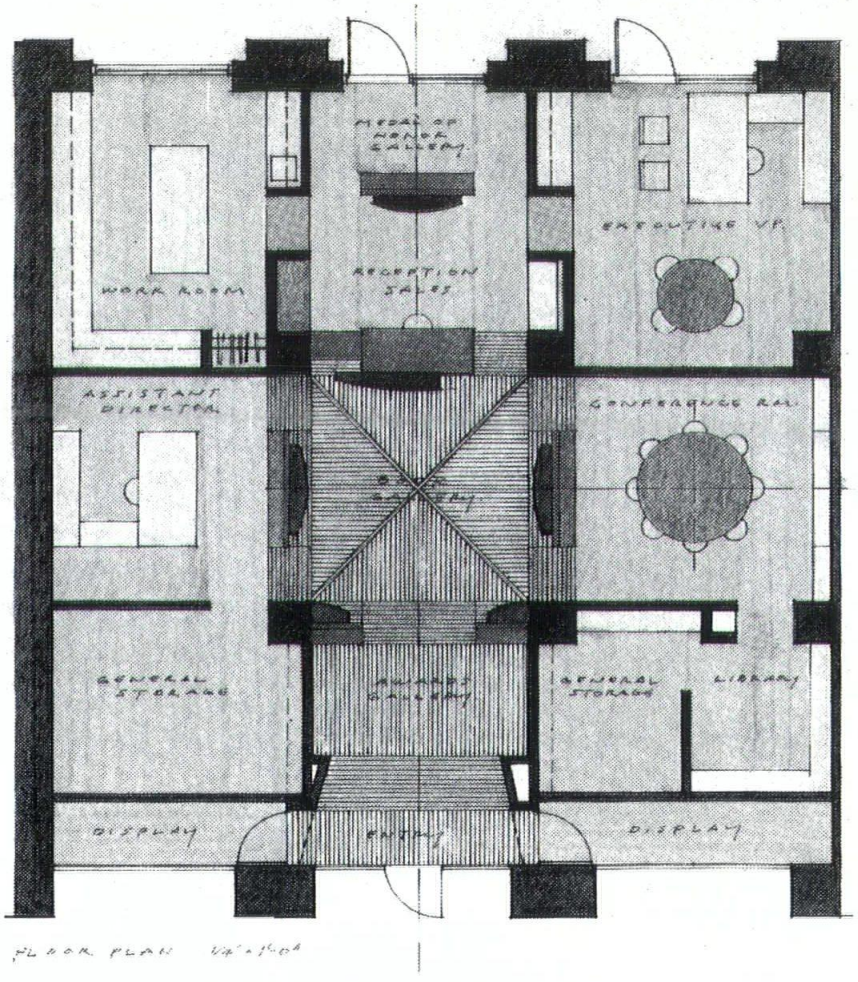
Young Ice Arena

Thanks to a generous gift from members of the family of Mr. and Mrs. J.A. Young, Thorson Brom Broshar Snyder Architects has worked with the Waterloo Recreation Commission to develop a design for a new ice arena. The building, sited adjacent to the Waterloo Recreation and Arts Center, will have an Olympic-sized ice rink and a variety of multi-purpose functions.



AIA Iowa Office

AIA Iowa is scheduled to move into new offices in the Hotel Fort Des Moines. Designed by Kevin White of Baldwin White Architects, P.C., the offices feature a series of gallery spaces for the display and promotion of architecture. Construction is scheduled for completion by the first of November.



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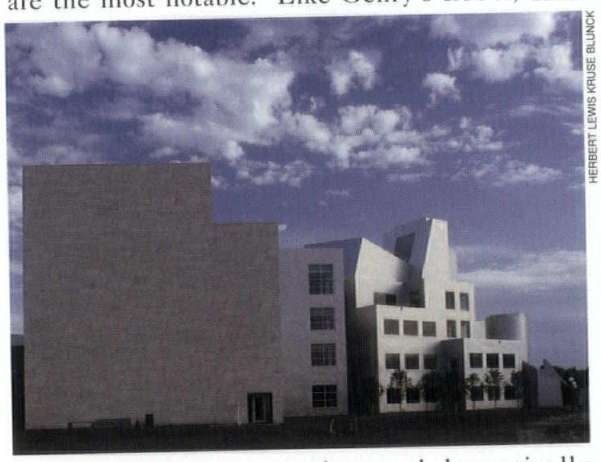
A BOOK AND ITS COVER

The Iowa Advanced Technology Laboratory

As important as Gehry's design is to this project, the success of the IATL does not hinge solely on the merits of its magnificent composition or brilliant cladding; in time it will be judged by its guts.

Without a doubt, the University of Iowa's Advanced Technology Laboratory (IATL) by Frank O. Gehry and Associates and Herbert Lewis Kruse Blunck Architecture has drawn the kind of attention and respect the university has long sought. For almost two decades the university has focused on a more contemporary idiom than its brick and limestone image.

Efforts to commission architects of both local and national repute have brought a new life to the campus. Among these, CRS' Carver/Hawkeye Arena and Gunnar Birkerts' cylindrical law building are the most notable. Like Gehry's IATL, each



HERBERT LEWIS KRUSE BLUNCK

(Right) View showing IATL stone laboratory block to the left and the stainless steel clad offices to the right.

(Opposite) Abstract and fragmented forms play in the afternoon sun. To the left, the stainless steel-clad sunshade "beak" rests, almost precariously, on the roof of the director's suite.

sets an ambitious precedent and dramatically defines a section of the campus. With these buildings, the university has set a course that will be as difficult to maintain as it is to reverse. While not appropriate for every project, buildings of this rank and composition will draw certain praise and criticism, and eventually elevate the campus environment to the high level to which the university aspires.

It is beyond naive to believe that Frank Gehry was chosen to design the IATL because, as some have stated, "they felt he would not impose an alien structure on the campus." Whether you believe that Gehry's work is the inspiration of a genius or just flip, unmitigated hubris, what distinguishes his buildings is that they rise above clutter.

Clearly, Gehry's design is a not-so-subtle statement that lends credibility to a controversial and fledgling laser research program. In that regard, the building is an unqualified success.The degree to which the IATL's mechanical and electrical components can respond and adapt to rapidly evolving research will ultimately determine the value of this facility to the university and State, and in turn, determine the fate of like-minded programs and buildings into the foreseeable future.

The IATL was originally conceived as a international center for laser research. While lase research is still the dominant focus, the scope of th facility has been expanded to include "high technology research." In addition to laser researc this all-encompassing euphemism include particular disciplines such as the study of acid ra and software development. In order t accommodate such open-ended research, designe had to plan for every conceivable contingenc provide back-up systems, and allow for maximu flexibility in the future.

Because of the ever-changing nature of "hig technology research," specific progra requirements for laboratory space in the facili were difficult to identify. In response, th designers created a universal or modular laborato configuration that is intended to satisfy a eventuality with only minimal modification. impressive menu of lab amenities has bee provided as well as the flexibility to expa capabilities without extensive renovation.

Laboratory space is housed in the building stone block because of the delicate nature of las research. Laser research requires precise toleran and is extremely sensitive to vibration, light a variations in air quality. The necessary stability a light requirements were achieved by creating windowless, cast-in-place structure. Lighti systems include surface mounted fluorescent a incandescent track lights on dimmer controls precise experimentation and variable light volum

Distribution of utilities was the determin factor in the configuration of laboratory space. L are positioned parallel to a single-loaded util corridor. This "pipe canyon" distributes all utili and houses the facility's elaborate exhaust syst In addition to fume hoods, each lab has a chan exhaust, each of which are connected to system's massive central exhaust duct. Electr service to each lab includes three voltage lev 120 V, 120/280 V three-phase, and a 48 disconnect. The facility also has a closed-lo processed cooling water system to dissipate h from experiments. In addition, the pipecan accommodates both data and communication lin

Suitable air quality is maintained with a serie filters and diffusing fans. Clean air is supp through ultra-fine 95 percent filters and humi variations are kept below 5 percent in any 24-h period through sophisticated vapor barri Because Gehry insisted that the building not h fans on the roof, all HVAC and lab exhaus expelled on either end of the pipe canyon.

Project: Iowa Advanced Technology Laboratory
Owner: Board of Regents
Architect: Frank O. Gehry and Associates, Santa Monica, California
Associated Architect: Herbert Lewis Kruse Blunck Architecture
Structural Engineer: Structural Consultants P.C.
Mech./Elec. Engineer: KJWW
General Contractor: Mid America
Photographer: Erich Ansel Koyama, unless noted otherwise

ROBERT TIBBETTS

technology

We know the world we inhabit — our homes, schools, offices, community buildings — by its physical reality, and that reality through its materiality — brick, wood, steel, concrete, glass, and a myriad of other fabrications, literally the "stuff" we build with. Embodied in the Indo-European root "tekth" are today's concepts of technology: technique, craft weaving and making, and building with artful skill. This issue focuses on the artful exercise of technique and use of technology to bring about architecture.

At the Gerhry/Herbert Lewis Kruse Blunck Iowa Advanced Technology Laboratory at the University of Iowa, the unique demands and configuration of the research equipment drove the form of the building solution. In a wonderful twist of technological necessities, one of today's most futuristic research enterprises, the Anadrill Calibration Building, is housed in an entirely wooden structure designed by Michael Underhill. Using one of the world's oldest building materials, it is fabricated without any metal because metal would disrupt the accuracy of the experiments to be conducted.

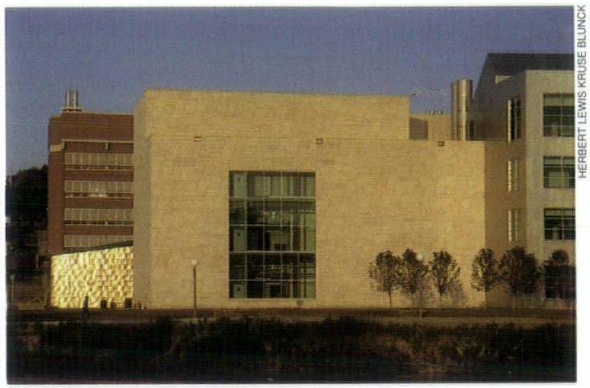
Linking the choices clients and designers make in their buildings to the global environment, the Bob Berkebile article addresses the issues of technology and sustainability. Using "low tech" materials, automatic energy controls, and building configuration in a site-specific manner, the Center for Energy and Environmental Education by Architects Wells Woodburn O'Neil at the University of Northern Iowa utilizes approximately one-third the energy of similar facilities to maintain comparable comfort levels. Creative Edge, a Fairfield, Iowa, based company, illustrates the "cutting" edge of design to enhance the work of the architect.

The design techniques and technologies available today support energy-efficient, sustainable architecture. They enable artful fabrication and material connection. Combined, there are rich possibilities for expressive, functional and vital architecture. We trust that you will find the work presented here validates this notion.

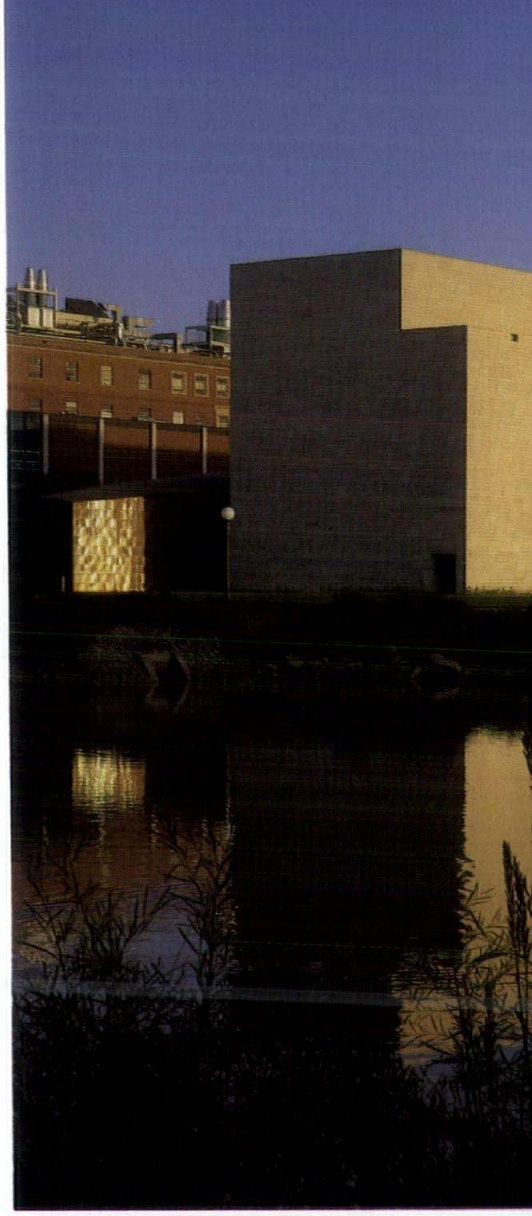
Gregory Palermo, FAIA
Iowa Architect Editorial Board

IOWA Architect

(Right) A montage of the IATL'S material palette, including the copper mechinal block, the limestone lab block, and the stainless steel offices.



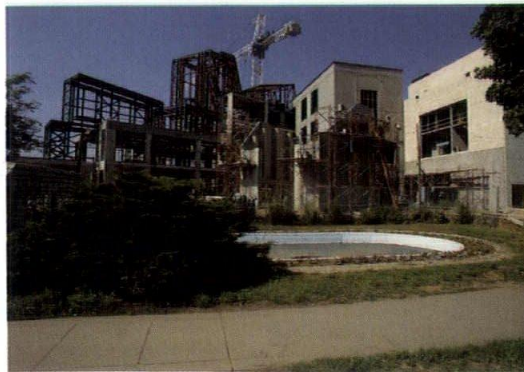
HERBERT LEWIS KRUSE BLUNCK

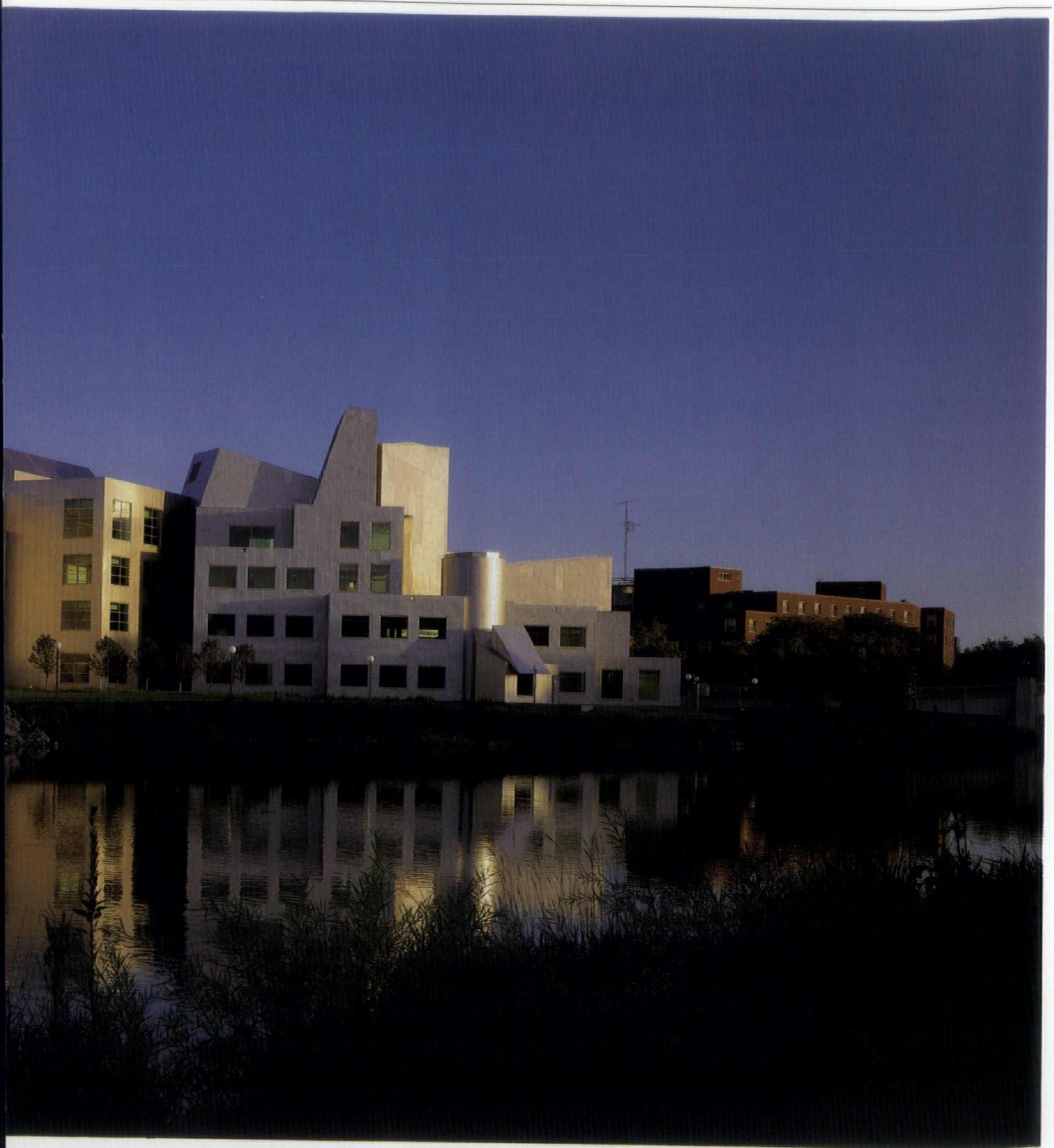


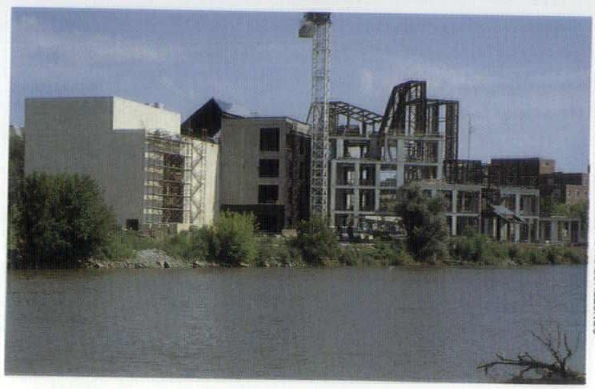
The building's most intriguing element is its crystalline form. One might expect that some herculean structural elements were necessary to realize Mr. Gehry's idiosyncratic design. The truth is, the structural design of the building is much the same as it is in a rectangular box: steel forms and curtain wall. Regardless of the technology that went into these forms, a large measure of finesse and creativity was required to make the building a reality. Herbert Lewis Kruse Blunck's office has been credited with supplying plenty of detailed drawings to keep everything on track.

It is still too early to tell if the University of Iowa Advanced Technology Laboratory will be successful, and by what criteria will measure that success. Certainly, Mr. Gehry's sculptural statement will in time be embraced as an endearing fixture on the University of Iowa campus. The merit of the IATL, on the other hand, will be weighed only by the quality of research put out in coming decades. Hopefully, the IATL will prove to be a fertile environment for research and open the door for more programs of comparable ambition and buildings of similar stripe.

Robert Tibbetts is a frequent writer on art and architecture and a one-time resident of Iowa City currently living in Oakland, California.







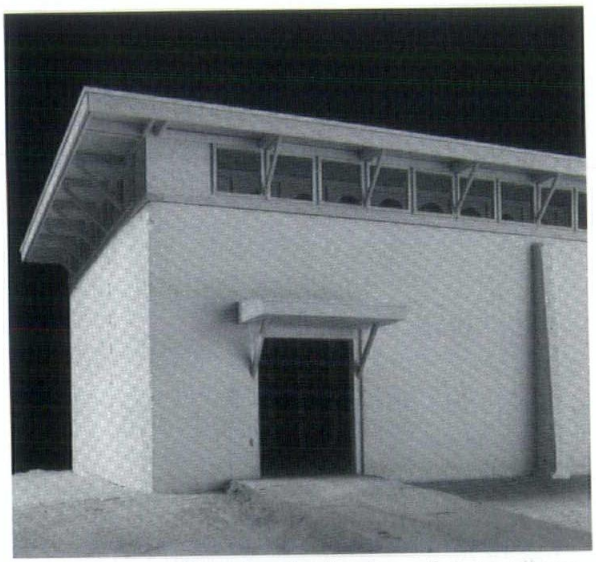
CONSTRUCTION PHOTOS - HERBERT LEWIS KRUSE BLUNCK

(Left) Construction photos reveal that the differentiation between the lab and office blocks is more than skin deep.

STRUCTURE IN ARCHITECTURAL EXPRESSION

Anadrill Calibration Building

(Right) The Anadrill Calibration Building demonstrates a marriage of function and architectural expression that goes beyond conventional methods of construction.



In very deep oil wells, the logging of the well consumes a tremendous amount of time and money. Logging normally involves pulling up all of the pipe and drilling bit, and sending equipment down the hole to find if the drilling is drifting sideways and what kind of geological formations the drill is going through. To avoid interrupting drilling, Anadrill (a subsidiary of Schlumburger Limited) has developed a tool that goes down in the well behind the drill bit, and continuously collects data which is transmitted up to the surface by radio. The tool consist of two stainless steel tubes, one inside the other, with delicate electronic equipment housed inside the inner tube, and with the interstitial space for drilling mud pumped down to lubricate the drill bit. The tool is about 8 inches in diameter and about 12 feet long.

The company requires a building for continued research and development, for calibration of finished tools, and for repair and recalibration of tools in service. Tools placed on a brass stand are swung around into various positions and attached to computers that run a series of diagnostic tests. Because the tool senses geological data by electromagnetic waves, the building housing this activity cannot contain any ferrous metals, nor any metal in the form of a circle or ring around the tool stand. Other requirements are simple: plenty of north light for the engineers, and high ceilings for the tools to swing in any direction.

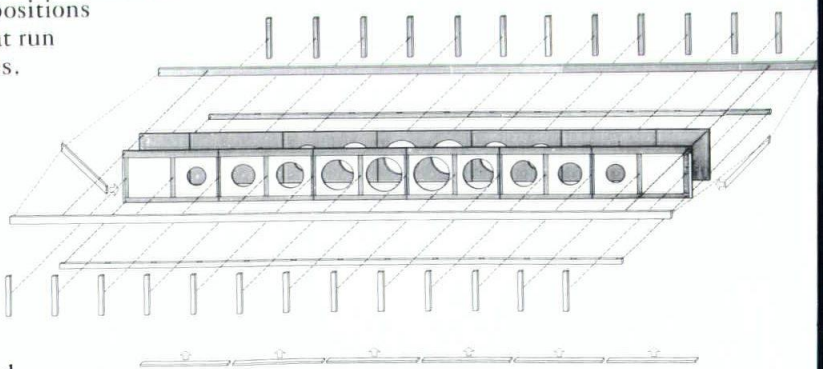
The building is sited several hundred feet from the manufacturing facility and a demonstration offshore drilling platform. It is also kept at least 40 feet from any electrical lines or underground pipes. The site was once a rice field, so the terrain is flat and flooding requires the building to be raised on a berm. A long, gently sloped-ramp is provided to enable the tools to be pushed up on dollies.

The design is to serve as a prototype for other manufacturing facilities. For the sake of economy, concrete, concrete block, wood, and glass was used. Inflated fabric, plastics, and plaster all proved too expensive. The building system is essentially a very straight-forward standard system, but with structural gestures accentuated because of the necessary lack of steel reinforcing. When concrete or wood was not strong enough, structural depth rather than reinforcing was added.

The slab has extra-deep-grade beams and the concrete is reinforced with fiberglass cables. The concrete block wall has no steel reinforcing but instead has buttresses built twelve feet on center. The roof structure relies on five wood vierendeel trusses formed by cutting holes out of plywood. The window wall is wood and has similar trusses used as vertical mullions to resist wind loads, since aluminum window walls require steel reinforcing inside aluminum framing members.

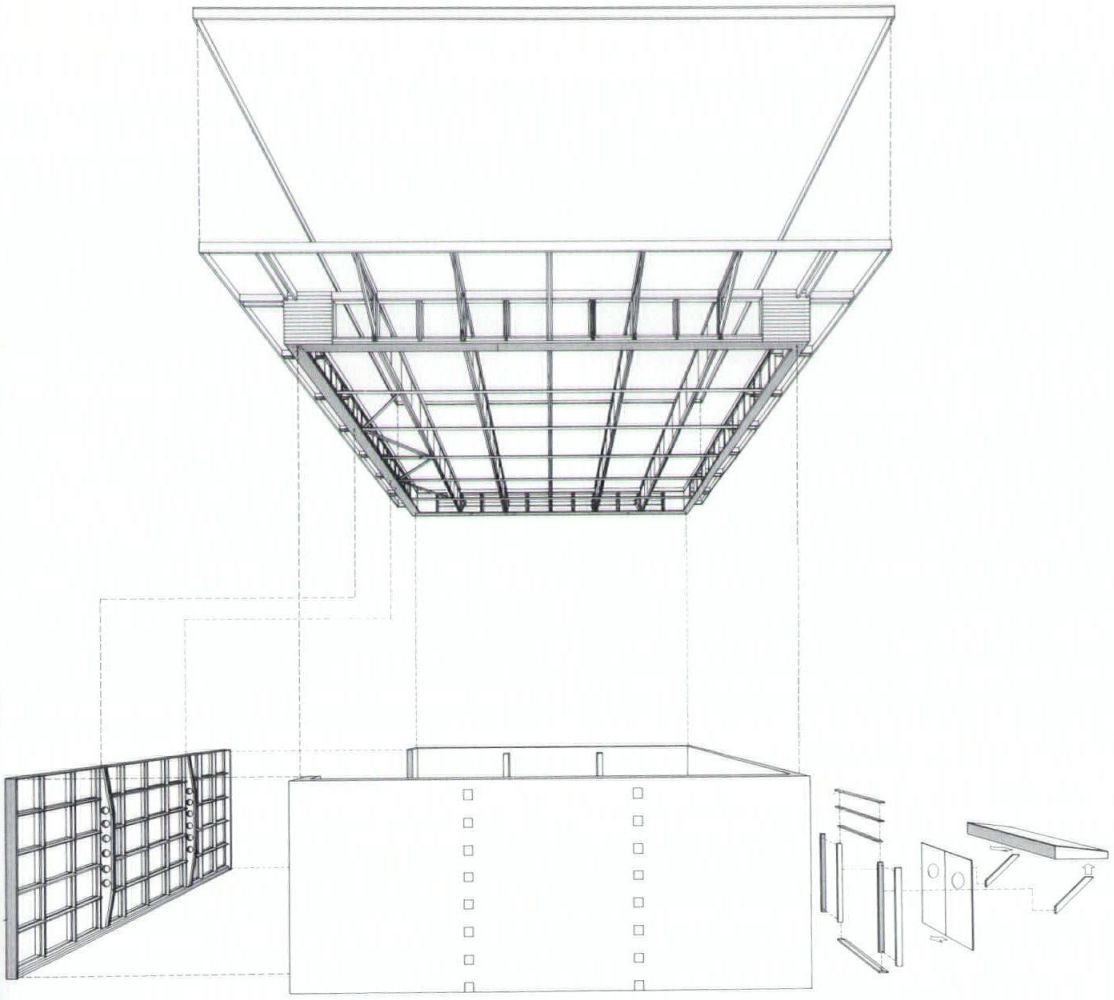
Similarly, large overhanging eaves are required to avoid any steps in the wall section that would require flashing, for even if aluminum was used, flashing that forms a ring around the perimeter of the roof would interfere with the calibration activity. HVAC equipment and electrical junction boxes are housed in a small structure 30 feet away from the calibration areas. Conditioned air is fed underground in plastic pipe, and all electrical wiring after the junction box is run inside plastic conduit.

(Right) Vierendeel trusses of plywood and 2X4 lumber are assembled for two vertical mullions in the window wall and five primary roof supports.



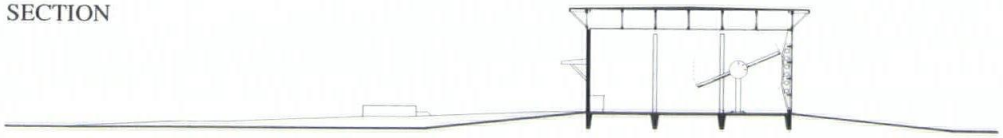
Project: Calibration Building (Prototype)
Client: Anadrill (subsidiary of Schlumberger Limited)
Architect: Michael Underhill, AIA
Project Team: Michael Underhill and Tim Cisneros
Structural Engineer: George Cunningham
Model Builder: Todd Dykshorn
Photos: ISU Photo Services

MICHAEL UNDERHILL, AIA

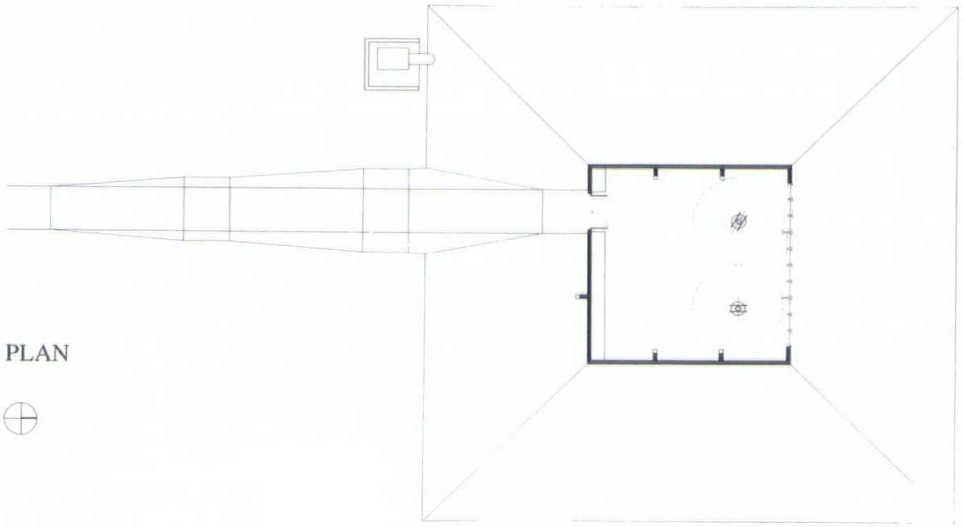


(Left) Exploded perspective drawing articulating the components for the Anadirill Calibration Building.

SECTION



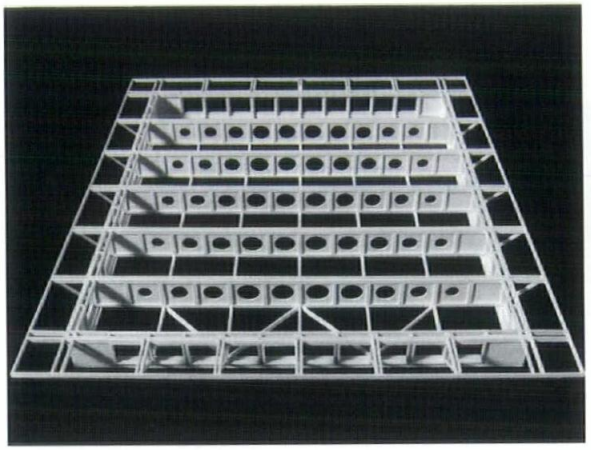
(Left) Plan and section drawing of Calibration Building.

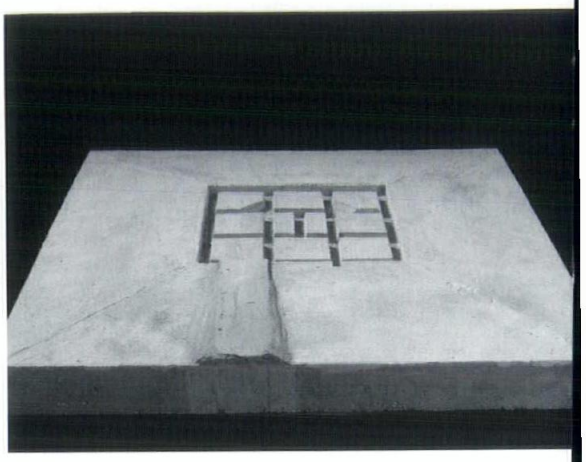


PLAN

(Right) Roof is assembled with trusses six feet on center and tongue and groove wood decking. Deep overhang at eaves is supported by diagonal braces. Horizontal bracing at the bottom of trusses also provides lateral support for window trusses.

(Far Right) Fiberglass reinforced concrete foundation. Soil berm and platform prepared foundation.





When we abandoned Modernism I was fearful that we "*threw out the baby with the bath water.*" There are crucial ideas embedded in the Modern Movement that have great sticking power. An important idea is technology and how it contributes to aesthetics. In the most interesting work since Post-Modernism, this issue has resurfaced. However, the reconsideration of technology's aesthetic appeal sometimes seems as tacked-on as the moldings in Post-Modern projects.

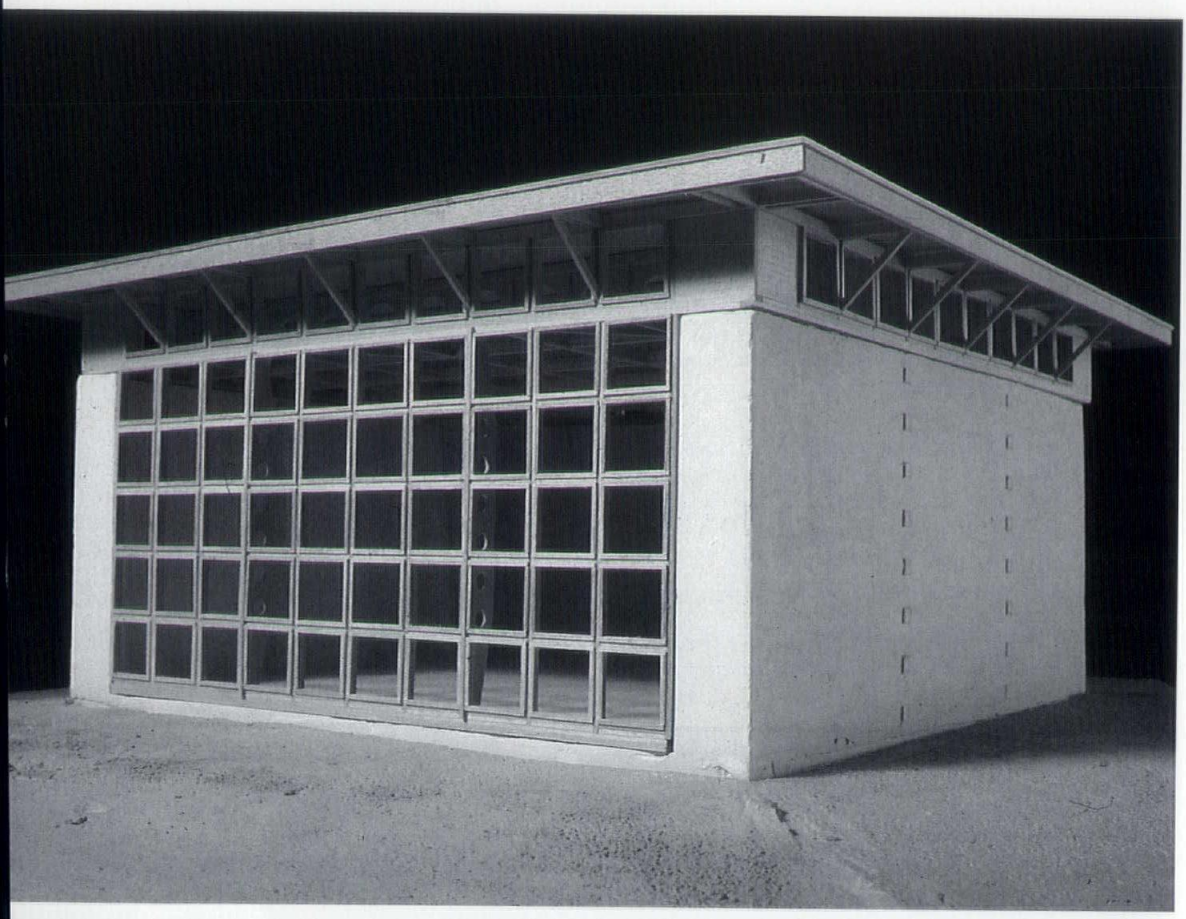
For example, three years ago when I was designing this project, I was very excited about the work of Holt Hinshaw Pfau Jones, especially the Astronauts' Memorial at Kennedy Space Center (see PA, January 89, pp 68-71). The structural considerations, construction system and workings of the monument were essential to the aesthetic statement. The elegance of the thing is intrinsically connected to the way it is made. However, as more of HHPJ's work was published, the essential quality of their tectonics wore thin. The exposed steel formations on the Right Away Ready Mix project (see PA, January 87, pp 101-103) and the Central Chiller Plant for UCLA (see PA, pp 99-101) serve non-essential roles in the buildings, and are reduced to the role of decoration.

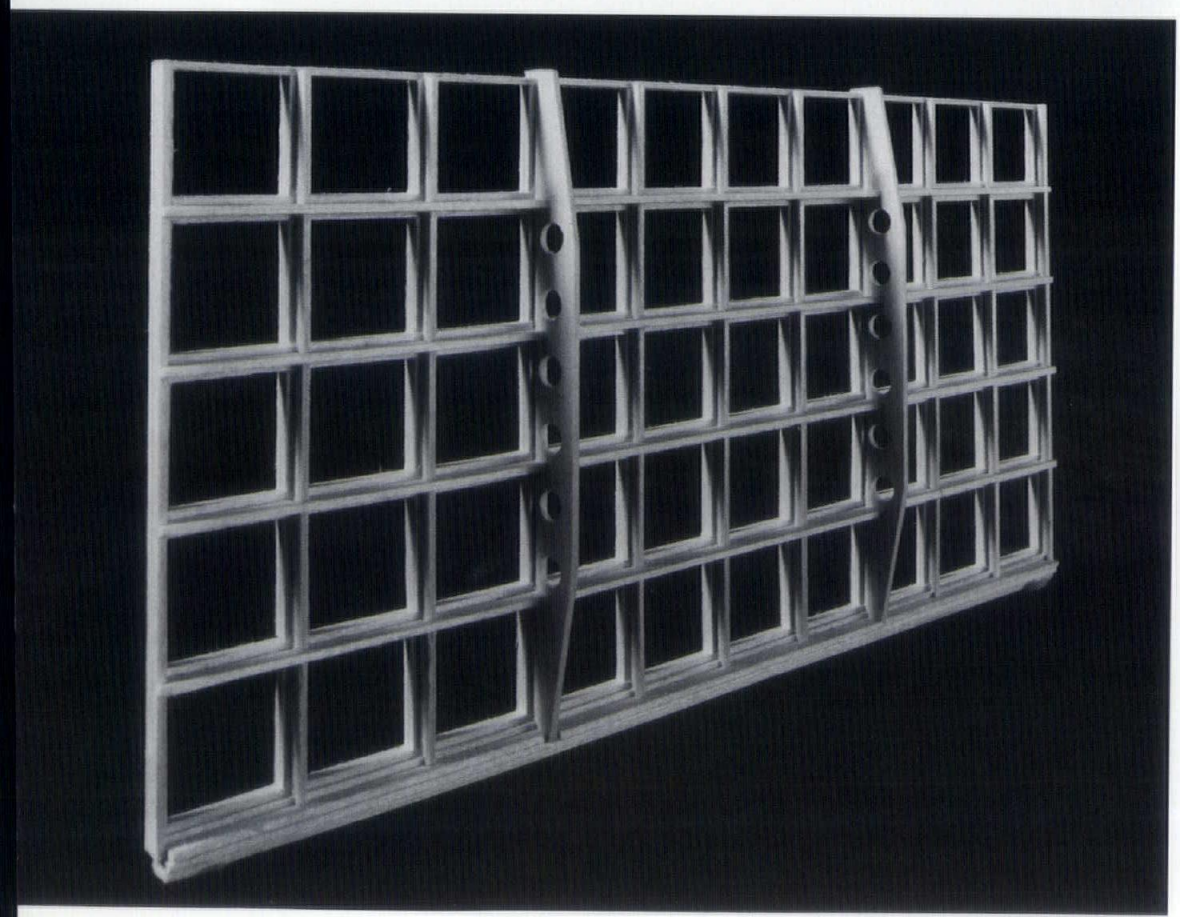
In the project for Anadrill an interesting twist occurred. The fact that I was forced to use a lower level of construction technology helped keep the aesthetics of the structure essentially connected. The fact that I couldn't use steel to reinforce masonry helped to rediscover the essential structural form for masonry. The fact that roof span (all to easy for steel) was too long for joist forced the development of the vierendeel trusses and the role they played in modulating light from the high ribbon of windows. The window wall would have been so easy and in the end mundane with an aluminum frame, turned into a real design problem.

I believe that good design must go beyon "form follows function," but that designers mu not lose the idea that elegance can come from th relationship between design and technology.

Any success in this project is due to my reawal ing of Frank Lloyd Wright's adage to respect "th nature of materials." Wright argues that "... th material of which a building is built will go far determine its appropriate mass, its outline ar especially proportion." He further admonish designers to go beyond the simple *exposure* of stru ture when discussing "continuity" as an essenti quality, "... you may see the appearance of th thing in the surface of your hand as contrasted wi the articulation of the bony skeleton itself."

Michael Underhill was the department head for t Architecture Department at Iowa State University prior his appointment as Dean of Architecture at Arizona St University. Michael practices in Iowa and is member Iowa AIA .

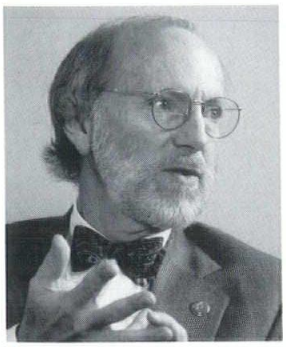




(Left and lower left) Window wall is assembled completely of 2 inch dimensional lumber. Trusses span vertically, and 2X10s and 2X8s span horizontally between the trusses. Individual window frames are 2X4s.

A GARDEN OF EARTHLY DESIGNS

By Dick Russell



Bob Berkebile, AIA

With architects like Bob Berkebile, AIA, leading the way, the AIA is working to create environmental awareness in the field of architecture through resources such as the Scientific Advisory Group for the Environment and the Environmental Resource Guide.

Standing beside the new aviary that he designed for the Kansas City Zoo to house its Australian bird life, Bob Berkebile pointed out one of the least exotic aspects of the project - the waste marble and salvaged lumber used in the building. "The limestone excavated from the construction site went right into the retaining wall," he said. "Did you realize that construction debris makes up about 30 percent of what's clogging our landfills nationwide?"

Rather than describing hallmarks of the building's style, the fifty-five-year-old architect turned to its new parking lot, proudly noting the trees that he had insisted be retained.

"The building crews were told from the get-go," Berkebile added, "that they would be called to account for dead trees. Somebody has calculated that we need to breathe about thirty-two pounds of oxygen a day to stay healthy. But our American landscape is so deforested and degraded that it's producing only sixteen pounds. So the other half we 'import' - from oceans, rainforests, wherever we can get it. Yet you do not hear much about our oxygen deficit."

Shaking his head, Berkebile lamented that the majority of his profession remain so disconnected from the urban fabric, natural environment, or both. While "primitive" builders relied for centuries upon indigenous materials and subtle, simple means of climate control, most modern architectural styles, from Le Corbusier's 1920s vision of the home as a "machine for living in" to the rise of today's omnipresent skyscrapers, have seemed intent upon leaving earthly realities far behind. For the first time, however, many architects, designers, and builders are beginning to rethink their trades from the ground up. Their effort is to align their disciplines with the needs of the planet, in ways that would have seemed unimaginable a short time ago.

Over the past several years, Bob Berkebile has been one of the driving forces behind a more environmentally-sound approach from the 56,000-member American Institute of Architects (AIA), whose annual convention theme this summer was devoted to "Architecture at the Crossroads: Designing for a Sustainable Future." This joint gathering with the World Congress of Architects will culminate with the creation of guidelines called a "Declaration of Interdependence."

It has taken a while for such an idea to make inroads within the construction industry and affiliated building trades - among architects designers, developers, landscape designers, an contractors of all kinds. "The building profession i very conservative," notes Rob Watsson, a senio energy resource specialist for NRDC who sits on th AIA's new Scientific Advisory Group for th Environment (SAGE). But Watson credits Berkebil with "turning the AIA from a bureaucrati organization looking out only for members' interes to one trying aggressively to initiate and educat them about their broader responsibilities. He add "Within the architectural community, which wa previously only concerned with the external lines a building, people are waking up that buildings are huge resource sink with profound ramifications."

Architects are in the best position to convey th idea that "we can do more with less, mo creatively," says Kirsten Childs of the Croxto Collaborative, which designed the Natural Resourc Defense Council headquarters in the late 1980 According to Childs, some 54 percent of all ener used in America is related to construction, if o factors in energy used in making buildi components and shipping them.

While the seventies marked a brief initiati toward solar design and the eighties brought so focus onto energy efficiency and indoor air quali this decade's scrutiny is upon the overall impact building methods, materials, and potenti alternatives. In Austin, Texas, Pliny Fisk is using f ash - an otherwise useless by-product of co combustion - as a substitute for portland ceme whose manufacture contributes about 8 percent the carbon dioxide to atmospheric global warmi In Missoula, Montana, Steve Loken incorporate structural honeycomb floor system that is 93 perc air, rather than using old-growth lumber for the la joists. In Lawrence, Kansas, William McDonou persuaded Wal-Mart to experiment with a custo built heating and cooling system that contains ozone layer-depleting chlorofluorocarbons.

The architectural attitude change began to oc at the AIA's 1989 convention when Berkebile an Kansas City colleague, Kirk Gastinger, introduce resolution called "Critical Planet Rescue." T would consider each stage of a building materi life cycle: natural resource depletion and ecosyst effects, energy consumption, waste generation, indoor air pollution.

The idea had been percolating in Berkebi mind for some years, ever since a tragedy that pains him to discuss. On July 17, 1981, two skyw collapsed into the lobby of Kansas City's Hy Regency Crown Center hotel, killing 114 people injuring 185 more. Berkebile had been the l

DICK RUSSELL

(Left) A new $16 million entry/education complex at the Kansas City Zoo is a demonstration of state-of-the -art lighting systems and use of low enviromental impact materials.

rchitect for the hotel. Although it was ultimately etermined that he was not at fault, the long terrible ight that he spent assisting rescue teams at the hotel hanged his life.

"Why am I an architect?" he remembers wondering. And am I making the world better or worse? I began alling architect friends all across the country. Nobody emed to have an answer for that question."

When it came time to oversee a new building for s architectural firm, Berkebile and his partners went considerable lengths to specify wood veneers from nly sustainable tropical forestry operations. Then, at n open house celebrating the opening, Berkebile calls someone raising the likelihood "that the uminum on this forty-five-story window wall may ve come from bauxite mines beneath the South merican rainforest. I realized we were all so ignorant out whence our materials come. For me, it was a nchmark moment."

Aluminum. Who would have thought that this s the most energy-consumptive material used in e entire building trade? Not only is tropical nforest being stripped to unearth the bauxite, but st amounts of power are being used to process it o aluminum. After Berkebile started raising such tters publicly, the aluminum industry countered at the deforested areas were afterwards being nverted to agricultural use. This has not washed th Berkebile, who believes it is a poor tradeoff.

"The reason we all use so much aluminum is that s very strong for its weight, durable, and resists rosion," says Berkebile. "In many ways it's a good terial if we'd just use it more intelligently. And aluminum industry is doing a better job of ycling than almost anyone else. So my attack on t front is against designers and the construction ustry, because we only recycle 17 percent of the minum used. If I specify recycled instead of gin aluminum for a project, I prevent 95 percent the energy consumption and avoid 96 percent of pollution in the bauxite conversion process."

Architects can now learn about aluminum - as ll as the ecological impacts of particle board, wood, concrete, insulation, sealants, vinyl oring, paint, carpet systems, and more - by subscribing to the AIA's new quarterly Environmental Resource Guide (ERG). The Guide has evolved out of a unique partnership between the AIA and the federal Environmental Protection Agency (EPA).

"Architects are in a uniquely positioned discipline to help society move away from the industrial high-tech era into a successful new paradigm," says Bob Simmons, a Colorado-based senior policy adviser in the EPA's pollution prevention division who now works closely with the AIA. The EPA put up an initial $600,000 research grant over a three-year period (now up to $900,000) and turned over its own extensive indoor air quality data for use by the AIA's new permanent Committee on the Environment (COTE).

Today the COTE has established task forces on indoor air quality, building ecology, building materials, waste minimization, alternative energy, and planning and site development. Almost 1,000 AIA members have signed up to participate at regular meetings, and the scientific advisory panel consists of such overseers as Amory Lovins of the Rocky Mountain Institute; Patricia Hynes of MIT; Thomas Lovejoy of the Smithsonian Institution; Denis Hayes of Green Seal; DuPont's "plastic waste solutions" specialist Robert Weis; and NRDC's Watson.

Leading up to the 1993 convention, the AIA sponsored a series of three video conferences on "Livable, Sustainable Communities" at more than 170 locations in the United States and Canada. According to one of the presenters, Texas's Pliny Fisk, whose attending the sessions went from an initial 2,000 to some 6,000 architects by last April. In conjunction with the International Union of Architects, it is also conducting a worldwide design competition on sustainable human habitats. Examples of a more holistic architecture are still a long way from becoming mainstream, but much progress has been made.

Pushing the agenda to a full throttle is Susan Maxman, a Philadelphia architect who last year became the first woman president elected in the AIA's 136-year history. Maxman describes her own

ENVIRONMENTAL RESOURCE GUIDE SUBSCRIPTION

NATIONAL AUDUBON SOCIETY

(Above) The century-old Audubon Building, recently renovated to create an energy-efficient structure.

awakening. While moderating a 1991 panel discussion, a TVA spokesperson discussing ecosystem degradation suddenly "turned to all the architects and said, 'You are responsible for reducing the human footprint on our global ecosystem.' A light went off in my head," she recalls, "that we are the interface between the built and natural environment."

After accompanying Berkebile to last year's Earth Summit in Brazil as AIA representatives, Maxman became his staunchest ally. "This movement will eventually affect the whole aesthetic of architecture," she believes. "You won't see a rubber stamp across the country anymore, like deconstructionism or post-modernism. We'll start asking, 'What is the appropriate design to emerge from a sense of place, what are the indigenous materials, what is the climate telling you?'" Maxman adds that this used to happen - with wood-frame construction in New England, adobe in the Southwest - before architects intervened in the process. "Then we came along with our fancy stylism saying 'we can overcome nature.' But why shouldn't architecture respect the cultural value of different regions? Why should every building look the same from Philadelphia to Kansas City? Elegant simplicity will, I hope, be very valued in the future. And how people feel in spaces, the human aspect, how light enters - all those kinds of things you don't need a lot of bells and whistles to do, you just need to be clever."

Montana builder Steve Loken, whose Center for Resourceful Building Technology emphasizes usage of recycled materials, describes the new down-to-earth philosophy by raising basic questions: "How does the house meet the land, and does it heal the land or have to be a blight upon it?"

James Wines, founder of a twenty-two-year-old New York-based collaborative of architects, designers, and environmental artists called SITE (Sculpture in the Environment), is looking to turn that fusion of architecture and ecology into a whole new aesthetic. "The environmental design movement in the 1960s and 1970s failed because solar panels and earth shelters were all so ugly," Wines has said. SITE's approach is to eliminate the distinctions between landscape and buildings by, for example, allowing indigenous vegetation to pervade an interior space. The notion is basically to plant a building and watch it grown - and SITE's nature-oriented projects are springing up as a waterfront plaza in Chattanooga and riverfront park in Windsor, Ontario.

Far more esoteric are the earth ships of Michael Reynolds in Taos, New Mexico, one of which was built for actor Dennis Weaver out of rammed earth and old tires. Even *The New York Times* has described them as "quite lovely," with thick curved walls that echo the bend in the tires, U-shaped rooms that open onto a solar window-laced, bright hallway, and an "interior wetlands" of garden vegetables and flowers extending the full length of the house.

In the vanguard of the new movement is NRDC the Environmental Defense Fund (EDF), and National Audubon Society, all of whose new headquarters in New York have specified the latest in sustainable design. Randy Croxton, whose firm designed the NRDC and Audubon projects, recently completed an environmental master plan for Home Box Office's new building and is consulting on the environmental aspects of two huge New York developments. EDF designer William McDonough's firm has gone on to five current projects with environmental impact as the key criterion - an office park in Nimes, France; a day care center in Frankfurt, Germany; the Heinz Family Offices in Pittsburgh; the Wal-Mart eco-prototype in Lawrence, Kansas; and a self-sufficient village for South Dakota's Oglala Sioux tribe.

Paul Bierman-Lytle, a Connecticut-based original member of the AIA's Environmental Steering Committee, has specialized for a decade in home building for chemically-sensitive individuals. His firm is also building a prototype, solar-powered organic farm in Idaho, and a Southern California home that utilizes a single lightweight concrete material for the entire structure. Recently, he has expanded to open a New York retail outlet called Environmental Construction Outfitters.

But, as Bierman-Lytle sees it, a potential design revolution is scarcely without inherent problems. "Many of us are taking different directions because really we're all in kindergarten. This is all so new, taught, and we're making lots of mistakes and assumptions which will prove to be incorrect in another couple years."

One conflict — between energy conservation and indoor air quality — has been solved. Says Berkebile, "Until recently, when we decided to seal buildings up for greater efficiency, we were ignorant that we were inserting more durable but also more toxic new materials. NRDC's retrofit of Rocky Mountain Institute's buildings were among the first to successfully conserve energy while recirculating fresh air."

Another often-cited problem is the higher cost of materials such as less-toxic paints or highly-efficient fluorescent lighting. Berkebile, Croxton, and other architects, however, speak of a long-range savings — in energy bills, health-care costs, and of course

ROCKY MOUNTAIN INSTITUTE

(Left) An overview of the main building at the Rocky Mountain Institute.

r the planet.

The AIA is pushing to bring other federal agencies to the R&D phase. Currently, the Department of nergy is contributing $35,000 annually, but erkebile anticipates the DOE may ultimately be a gger partner than the EPA. Other departments - ransportation, Housing and Urban Development - e seen as having roles to play. And the AIA's adership certainly has a friend in Vice-President Al ore, who met with Berkebile and Maxman after the 92 Earth Summit and, says Maxman, "got very cited about what we are doing."

Berkebile's hope is that, sometime in the next two ars, the building materials industry will start doing own research, drawing upon the AIA's studies. When I'm designing, I should be able to sit down at y computer and call up any system, particular aterial, or finish and get a reading on it. I can't do at yet."

Another vital step will be filtering a new rriculum into the nation's architectural schools. ary Coates, a professor at Kansas State University no specializes in sustainable design, sees the tential for ending "the narcissistic phase of chitectural education that predominated in the 80s." But, at the moment, as Bierman-Lytle puts it, ne only thing most architectural schools train in quired courses is design — which largely has had no ncern for materials or energy. The only nscientious rules I remember as a student were ne understanding of the setting of a building in a mmunity."

Leaving the Kansas City Zoo, Berkebile has ven over to Blue River Industrial District, a clining area of the city. It is here that his firm poses to reclaim a blighted landscape for the dwest Regional Recycling Center, a national totype with four components envisioned: a central ste collection and sorting facility for a 200-mile ius, new plants for private waste processors, development sites for manufacturers who reuse or recycle waste materials, and a Recycling Research Institute. "Our funding proposal calls it RIMBY - Recycling in My Backyard," Berkebile says with a grin, a take-off on the familiar NIMBY (Not in My Backyard) theme.

It has been a typically busy time for the AIA's ecological spearhead. The largest U.S. architectural firm, Ellerbee Beckett, has enlisted Berkebile's company to become the sustainable component for a National Park Service project at Harper's Ferry. Berkebile himself has recently returned from McMurdo Station in Antarctica, where the National Science Foundation called him in to consult with ozone layer-studying scientists about how to improve their earthbound environment. His most popular proposal, he says, was a large hydroponic greenhouse in the town center.

Now, gazing sadly across a hodge-podge of abandoned manufacturing plants and junk yards, Berkebile becomes philosophical. "The overall goal," he says, "is to create a cultural change for our society. Joseph Campbell pointed out that the focus of the tallest building has changed as society changed — from church steeple to capital dome and currently, the corporate high-rise. Now we need a new paradigm and appropriate symbol."

Gary Coates, the Kansas architecture professor who is also the author of a book that examines these questions (*Resettling America*), has a suggestion to offer: "It's about relationship, a human-scaled settlement powered by sun and wind, integrated into the natural ecology, in which there is a true balance. I've referred to this, quoting William Irwin Thompson, as the meta-industrial village. We need a building metaphor that somehow encapsulates the idea of cooperative community, of a responsibility toward the earth and each other that we have abandoned."

THE CENTER FOR ENERGY AND ENVIRONMENTAL EDUCATION

University of Northern Iowa

The Center for Energy and Environmental Education attempts, through design and function, to illustrate what it teaches.

Solar designs of the 1970s paid homage to one god, and if a client asked his or her architect to design a solar building, both had a preconceived understanding of its form. Form did follow "function," and that was the problem: early solar designs looked solar.

The 1990s could be a time when solar architecture reemerges incognito, as part of a polytheistic approach to energy efficient design. The Center for Energy and Environmental Education at the University of Northern Iowa (UNI) combines solar design with aesthetics and environmentally sensitive choices in the use of building materials. The United States Department of Energy recently granted four million dollars to UNI to construct this facility, a place where students, teachers, business people and others may learn about the relationship between energy and the environment. Not only does the building provide a space for the program, but is itself an education tool, a laboratory for the integration of good design, energy efficiency, and sensitivity in use of materials.

Architects Wells Woodburn O'Neil, in conjunction with The Weidt Group, energy and environmental consultants from Minneapolis, have considered many aspects of energy consumption and environmental impact when designing the facility, choosing materials that have the least negative impact on the environment. This involved investigation of many environmental factors, such as the amount of pollution created in the manufacturing of materials. Kevin Nordmeyer of Architects Wells Woodburn O'Neil says, "We based our material selections on their embodied energy, energy spent to produce, transport, assemble and maintain. For example, manufacturing aluminum takes a lot of energy; rather than specifying all aluminum window frames, we chose a vinyl-clad wood window frame with insulated low-E glass."

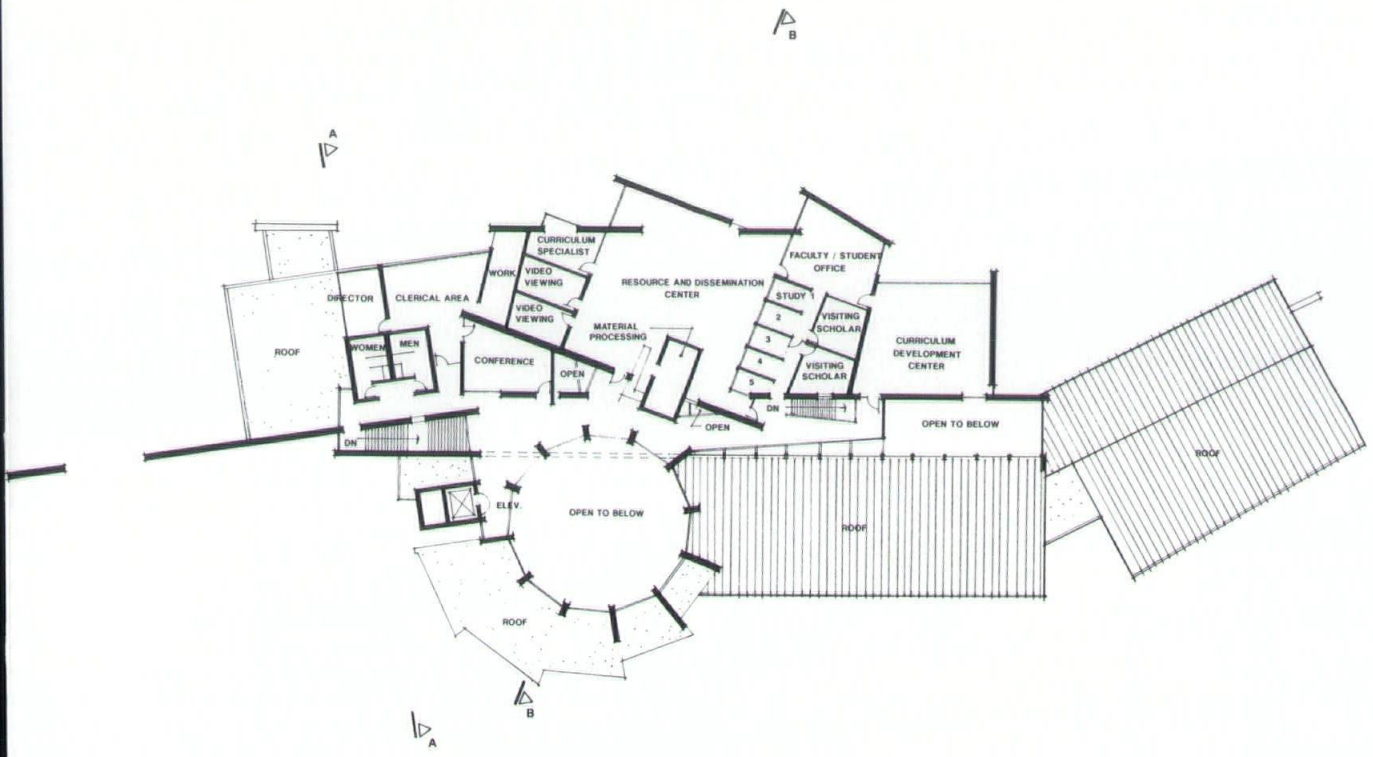
Other material choices include non-painted cinder block, brick and metal panels. Nordmeyer says, "We have left the materials unpainted to show people that these materials are beautiful." He says that there are several other reasons not to use paint: lower maintenance cost, reduction of interior toxins and the environmental pollution created by the manufacture of paint.

The architect and consultant established energy and environmental goals to provide for a building

(Right) Model of the Center for Energy and Environmental Education.

Project: Center for Energy and Environmental Education
Owner: Iowa State Board of Regents, University of Northern Iowa
Architect: Architects Wells Woodburn O'Neil
Energy Consultant: The Weidt Group
Structural Engineer: Jim Wilson, P.E.
Mechanical Engineer: Alvine and Associates
Cost Consultant: Specker Harmsen
General Contractor: Larson Construction Co.
Photographer: Mark Mickunas, unless noted otherwise

JOHN PULASKI THOMAS

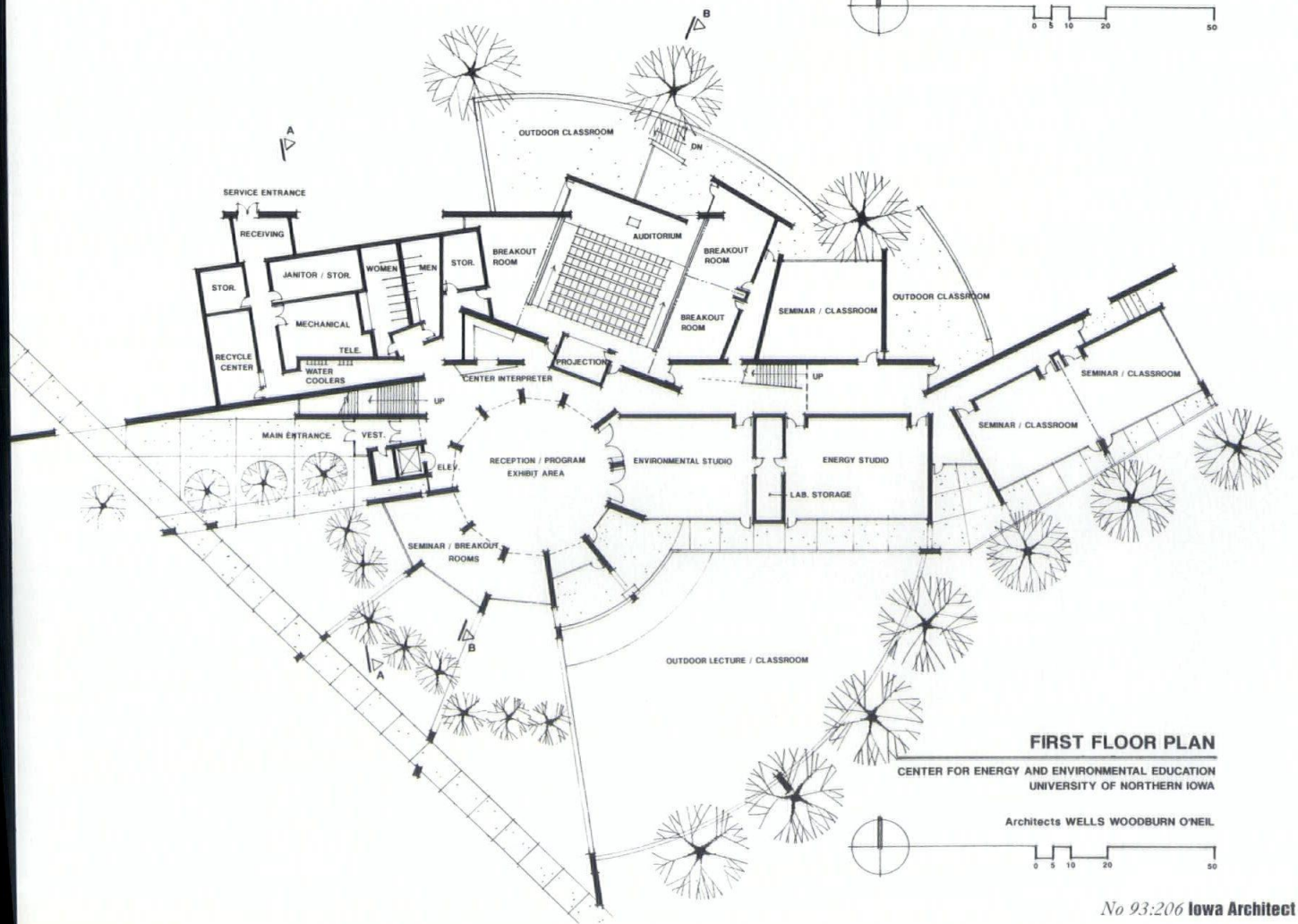


SECOND FLOOR PLAN

CENTER FOR ENERGY AND ENVIRONMENTAL EDUCATION
UNIVERSITY OF NORTHERN IOWA

Architects WELLS WOODBURN O'NEIL

0 5 10 20 50



FIRST FLOOR PLAN

CENTER FOR ENERGY AND ENVIRONMENTAL EDUCATION
UNIVERSITY OF NORTHERN IOWA

Architects WELLS WOODBURN O'NEIL

0 5 10 20 50

(Below) A view of the center's passageway.

ARCHITECTS WELLS WOODBURN O'NEIL

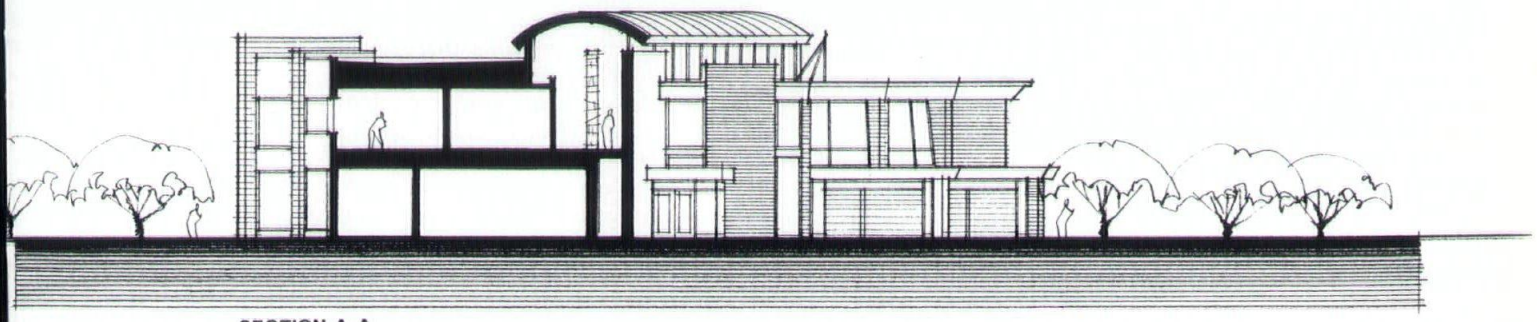
that would use only one-third the energy of th campus average. Building design strategies utilize daylighting, as much non-mechanical ventilation a possible, and solar heat gain. The solar daylightin and heating strategies are concepts that distinguis this building from a solar design of twenty yea ago. Tom McDougall of The Weidt Group say "We do not think of the building as a power plan we simply allow the shape of the envelope to tak advantage of as much passive solar gain a possible." This in turn does more than lowe heating bills; it shifts the peak heating time awa from traditional peak times, minimizing addition load on the power plant. Using these goals as grounding, the architects began to fold in ideas siting and context.

The site is a threshold; it mediates between th developed portion of campus and a forest preserv and it buffers the public parts of campus from th private residence halls. The architects designed limestone wall that exploits this threshold: the wa slices through the long east-west axis of th building, extending out across a path that links th residence halls to campus. At this intersection is passageway, a symbolic portal between the publ and private and between the developed land campus and the biological preserve. Using material that makes sense both contextually a environmentally, limestone from a local quarry w used to construct the wall.

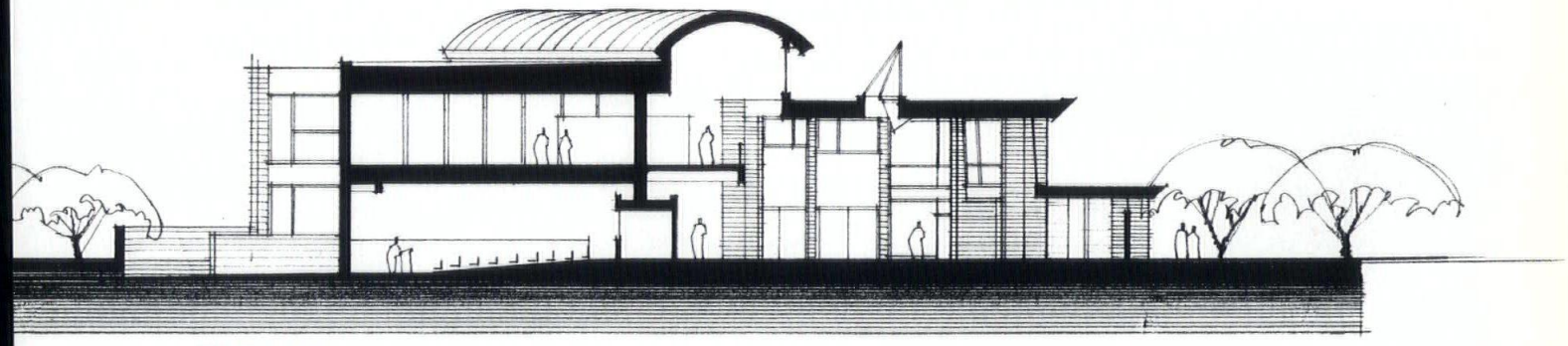
The wall frames a central interior corridor, spine, which orients the visitor towards the prai and forest preserve; it also orients the visitor to t sun. Generous clerestory windows allow the win sun to warm the limestone wall. Nordmeyer sa "The spine wall serves as a solar heat sink and a point of environmental orientation; it directs you to the sun and sky, and it links you visually a materially with the earth and prairie ... T corridor's passive solar heating scheme is eas demonstrated to visitors, allowing them to tou and see this strategy firsthand."

The spine also organizes the program spaces, between public and private, but according to sun. The auditorium, seminar rooms and serv areas are located on the north side of the corri and the program space, laboratories and classro are on the south side, which face the forest carefully sizing south glazing in program ro preventing direct sunlight from reaching tasks, borrowing from the light-filled corridor, avai daylighting was maximized. Daylighted n facing rooms also receive light from the int light well.

(Below) Site elevations of the Center for Energy and Environmental Education.



SECTION A-A



SECTION B-B

The other important design element in the ergy center is the program space. It is the most blic portion of the building, which is adjacent to e entry, and serves as an information center, a ace for exhibits, and a gathering place. rdmeyer says that its radial shape is symbolic of sun dial, which denotes the passage of time and ar movements. The juxtaposition of this circular ogram space with the linear spine informs the ometry of the rest of the building. When the wall ersects the program space, it fractures, not unlike ht when it passes through a prism. This breaking of the wall resonates throughout the rest of the lding, creating odd angles in some of the rooms, he corridor and in outdoor spaces adjacent to the lding.

Low walls extend from the building that terrace land and serve as visual boundaries for outdoor ms. These walls essentially mediate between de and outside; however, they serve another ction. In plan, they contain the pieces of the fractured limestone wall. Because these perimeter walls conform to the radial pattern of the program space, there is a visual resolution.

This weaving of program, efficiency, environmentally sensitive choices and context of building to site is what makes this building both compelling and refreshing; it is not a one-liner reminiscent of the 1970s. It addresses many issues, and the form of the building expresses these functions.

John Pulaski Thomas is a graduate student in the department of architecture at Iowa State University.

SMOOTH CUT, SHARP DESIGN

Water Jet Technology

Is there any doubt that technology is shaping the structures we build? A look at Creative Edge Corporation, Fairfield, Iowa, describes how sophisticated abrasive waterjet cutting, with CAD/CAM interface, opens new doors for the use of design elements and materials.

(Above) A 15-foot high glass sculpture at Monsanto headquarters in St. Louis, Missouri.

You can cut through five-inch-thick granite or slice twenty-foot lengths of metal that will not warp. These advances come from the development of abrasive waterjet cutting. This new technology will allow architectural design options to open like wind hitting high sails.

Companies such as the Fairfield-based Creative Edge Corporation are demonstrating the versatile applications of this relatively new technology, which takes materials cutting out of the Stone and Bronze Ages and into the twenty-first century. Five years ago, businessman Jim Bellilove and sculptor Harri Aalto purchased Creative Edge from Creative Glassworks International, a Rock Island, Illinois, firm that manufactures waterjet equipment. Building on years of expertise and technical know-how, Creative Edge's custom waterjet cutting business has carved itself a unique niche in the industry.

The shop, which Aalto describes as "both a factory and an art studio," operates 24 hours a day, with three shifts of workers and seven machines. Bellilove says, "This helps drive down the costs of waterjet so that more applications become available." The technology is decidedly modern: with the combined power of garnet abrasive and water under pressures up to 55,000 psi, abrasive waterjet cutting involves forcing water through the tiny orifice of a sapphire jewel, then blasting it out at 2.5 times the speed of sound.

The specifications of the process are exacting, the results, extremely precise. Using CAD/CAM (computer-assisted design/computer-assisted manufacturing), parameters such as water pressure feed rate and the size of nozzle, grit and cutting jewel interact with cutting speed and tolerances to determine the actual finished edge on a given material.

Currently Creative Edge strikes a fifty-fifty mix of architectural design work and industrial applications. On the industrial end, use of abrasive waterjet eliminates tool and dye costs; its cold process sidesteps typical problems of slag, burrs, delamination and metal contamination associated with heat-related processes. Milling costs, as well as production time, are also dramatically reduced with this technology.

From a design standpoint, abrasive waterjet technology opens up an exciting degree of design freedom. The vanishing skilled craftsman reappears in the form of this precision cutting technology. A wide palette of materials can be cut: granite, marble, metals and alloys, glass, plastics, acrylics, rubber, and high-pressure laminates, to name a few.

Equally liberating in terms of design is the fact that abrasive waterjet cutting handles intricat shapes with ease. Aalto says, "With this technology anything that can be drawn can be cut. Stone an metal have become graphic media, just like pape and pencil used to be. Now we take stone, f example, and use it almost like paint."

Aalto's design background gives the company competitive edge. A client can come in with an id or sketch; Aalto will then interpret the idea, mak suggestions, and produce a blueprint. Once drawing is approved, a computer programm digitizes the drawing, developing a productio ready blueprint that meets the client's need an interfaces directly with the cutting machinery.

A world map mosaic for Denver's new airpo was created in this way, illustrating both th technology's cutting capabilities and the company unique design resources. The client had a concep Aalto suggested the materials, and a stunning pie resulted. Like a giant jigsaw puzzle spanning feet x 25 feet, each of the map's 4,500 multi-colore stone pieces has been individually cut and the fitted to create a panoramic view of continents a swirling bodies of water.

At Chicago O'Hare Airport's United Airlin terminal, Creative Edge cut glass for t spectacular overhead sculpture of neon and gla designed by architect Murphy Jahn. Another high visible project is the Astronauts' Memorial Florida's Kennedy Space Center. The 40 foot x foot memorial has been programmed to gen rotate, tracking the sun's movements. Created fr five-foot square panels of two-inch thick grani the memorial's highly polished surface mirrors t clouds and changing sky. The names of Unit States astronauts who have given their lives pursuit of space exploration appear in the bla granite-like stars. Creative Edge cut the names of the granite and filled it in with inlaid crystal. the memorial rotates in the sunshine, light shi through the astronauts' names, causing them twinkle like stars in a night sky.

Closer to home, Creative Edge recently work with Baldwin White Architects, Des Moines, o tower structure for the Forest Avenue Branch of Des Moines Public Library. Conceived as a cen icon for the community, the library tower cro the Mid-City Vision Committee's years of effort improve the neighborhood on the north side of Moines.

Children of the community were enliste help light the way. Students from Martin Lu King Jr. Elementary School and Moulton Mi School selected appropriate quotations for ea four book-like panels at the base of the twenty-

CHRISTINA LADD CAMPBELL

(Right) Shooting a stream of ight into the neighborhood's ight skies, two luminaries nstalled at the top and ottom of the Forest Avenue ibrary tower structure create steady light column that lluminates words of wisdom elected by area school children. Says project coordinator Roger Spears of Baldwin White Architects, "There was always an idea that the tower would be about the importance of education and reading, that it would be about light and learning."

oot steel frame tower. Two of the groups created heir own statement. The outside surfaces of the anels are painted steely gray, while the inner urfaces are bright colors: violet, green, blue and ed. The view of the stencilled words on each panel eveals these colorful inner surfaces. "The gray anels are like bookcovers," says project oordinator Roger Spears. "You never know what ooks are really like from the cover. The magic of ooks is inside."

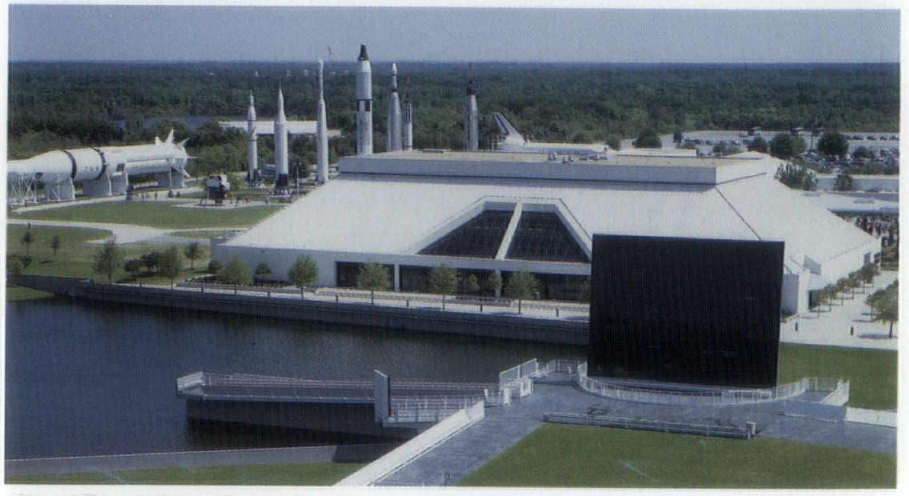
The Baldwin White design team had planned to o laser cuts on the one-half-inch-thick aluminum anels for the children's quotations, but discovered at laser cutting would not work with this material. he team was unable to find anyone able to do the ork until they tracked down Creative Edge. Says pears, "Here we were searching all over the ountry and right in our backyard we found meone. ... It's amazing that we have this great source that is virtually unknown in Iowa."

Creative Edge's clients run the gamut from edical implant manufacturers to aircraft parts ppliers, upscale hotels to department stores. housands of one-inch-thick stainless steel letters at are fourteen inches high were cut by Creative dge for signage throughout a Hyatt regency Hotel mplex in San Francisco. Solid stainless steel was lected for the project to resist corrosion from the ty air. Creative Edge recently completed a series inlaid medallion mosaics for Lord & Taylor using ree kinds of marble, brass lettering and ornate ass scrollwork. "Architectural signage is an area at has grown with us," says Aalto. "With waterjet, u can incorporate a new, high-end image ... but affordable.

"I think waterjet and our company is actually ving an influence on the direction of decorative ments and the kinds of things architects and ilders are putting into their designs," says Aalto. would say there's a mini-renaissance taking place. Many of the things done painstakingly by hand a ndred years ago, which have since fallen away, now be done efficiently in a modern way, with loss of detail. In fact, things can actually be done h more detail."

Innovative technology is driving our world ture, shaping the way we perceive the world. In ms of architectural design, abrasive waterjet ting is creating some breathtaking shapes.

istina Ladd Campbell is a freelance writer who lives Fairfield, Iowa.

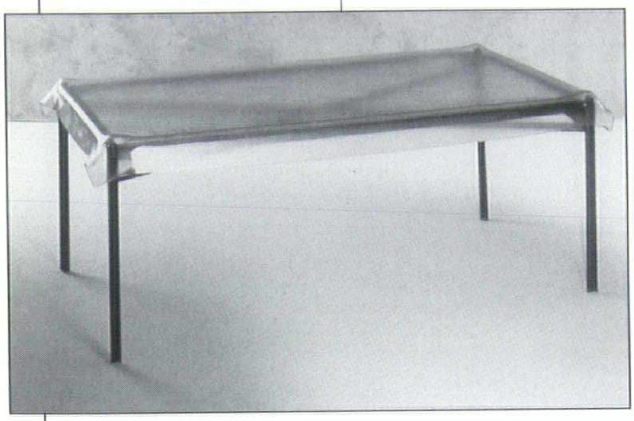


(Above) The rotating surface of the Astronauts' Memorial at Kennedy Space Center reflects an ever-changing skyscape. Cut into the mammoth granite surface and inlaid with crystal are the names of United States astronauts who gave their lives in pursuit of space exploration.

DesignDigest

Illusion
Forma and Design Inc.
203.855.9325

"The laws of logic, economy, optics, physics, prudence, and even good taste, show that this table does not exist: it is an aberration, an illusion," says designer Philippe Stark. The top is sand-blasted curved crystal glass and the base is drawn iron.



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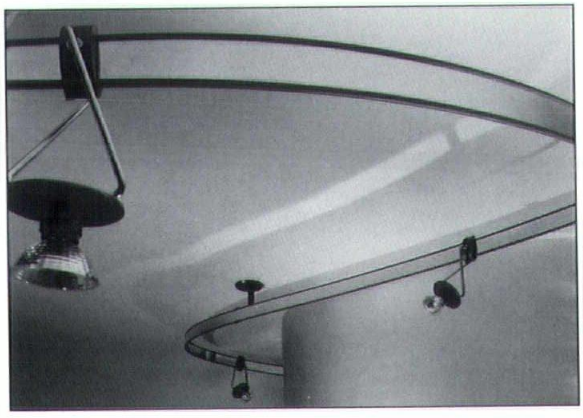
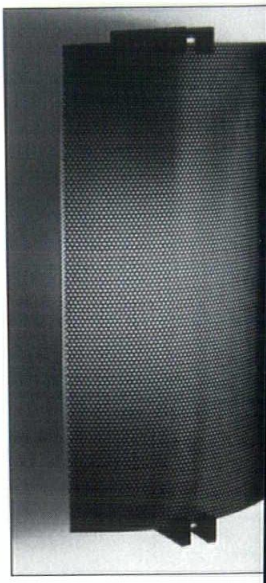


Carved Glass
Wallach Glass Studio
707.527.1205

The Wallach Glass Studio specializes in custom-carved signage, glass walls and donor systems, all three-dimensionally V-carved into plate glass or optically-pure white crystal. The process and materials produce superb readability and luminescence. The glass wall shown is laminated plate glass with V-cut graphic lines.

Stackable Chair
Driade NYC, Inc.
212.477.2224

Catalan architect Oscar Tusquets Blanca has combined aerobatic grace, tradition and technology to distill the secret poetics of function. The frame is executed in structural painted iron and the shell in perforated and painted sheet iron. The chair is available in grey, green or red.



The Richard Meier Collection
Baldinger Architectural Lighting Inc.

"There is much we can learn from the way natural light enters great buildings. The relationship between light and structure, the way light filters and radiates...we can try to recreate the essence of these qualities," says Richard Meier. *Ana*, the wall sconce shown, embodies the conceptual and spatial organization the architect brings to his building designs. There is a separation of "skin" from the structure of the fixture. The rectangular-shaped sconce radiates direct uplight and soft indirect light.

ROBERT A. NOVAK, AIA

Journal

Buildings of Iowa

Buildings of Iowa by well-known architectural historian David Gebhard and architectural photographer Gerald Mansheim has been published by Oxford University Press. The book encompasses the full range of Iowa's buildings, from early Native American influences to the present. It takes readers on a fascinating tour of the history and diversity of the state's architecture, from the corncribs and grain elevators to the Prairie-Style bank buildings, Beaux Arts courthouses, Italianate schools, Art Deco service stations, and Streamline Moderne houses that can be found in many of Iowa's cities and towns. This comprehensive and lively guide reveals the unity of urban and rural reflected in Iowa's buildings and landscape.

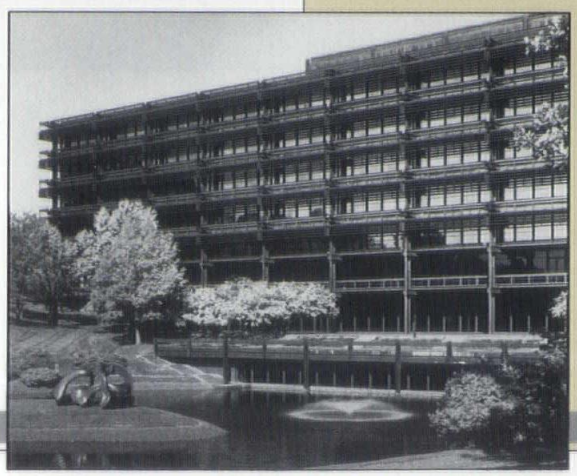
The book offers a treasure trove of architectural discoveries for the scholar, the buff, and the curious. Arranged by the five geographic areas of Iowa and alphabetically by city and town within each region, detailed maps to the properties listed inspire self-guided tours.

Illustrated with more than 400 photographs, line drawings, and maps, *Buildings of Iowa* is the second book in the Society of Architectural Historians monumental series, *Buildings of the United States*. Designed to identify and celebrate American culture as reflected in our architecture, the series will eventually include every state.

A Test of Time

Revered by a generation of architects for its simplicity of form, technological innovation, and brilliant siting, the Deere & Company Administrative Center in Moline, Illinois, designed by Eero Saarinen, was selected by the AIA to receive its 1993 Twenty-Five Year Award. Saarinen's projects have now garnered this award an unprecedented six times, a testament to the power of the Modernist giant's work.

"The Deere & Company Administrative Center looks better today than it did 25 years ago," noted the AIA Honor Awards Jury in making its selection. As the landscape matured, the building is now seen in the way Saarinen envisioned, and the original concept has been validated."



Bridging the Gap

Recently there has been much discussion about the focus of the architecture curriculum at Iowa State University. Some people have questioned if too much emphasis is being placed on theoretical issues rather than those of technology, an area ISU has always been strong in. Four nationally-known faculty members starting in the 1993-94 school year challenge this question with an inseparable attitude towards theory and practice.

Professor Mark Rakatansky comes from the University of Illinois-Chicago; he was the Director of the Committee on Physical Thought. Rakatansky has established an international reputation in the application of design research to social problems, and has been a visiting faculty member at Northwestern University and the University of Florida at Gainesville, and a visiting critic/lecturer at Harvard. He is currently serving as an editorial board member of *Assemblage*.

Coatroom, Adult Care Center East Des Plaines, Illinois

Dr. Catherine Ingraham is a leading figure in the field of architectural theory and criticism and an editor of *Assemblage*. She received her Masters and Ph.D. from John Hopkins University and comes from the University of Illinois-Chicago School of Architecture where she has been an assistant professor. She is a Fellow of the Chicago Institute for Architecture and Urbanism and has served as an associate professor at Harvard University and Columbia University.

Coming from Princeton University where she has most recently been an assistant professor and is currently completing her Ph.D. dissertation is Paulette Singley. She received her Master of Arts in Architectural History from Cornell University and Princeton University, and her Bachelor of Architecture from the University of Southern California.

Currently President of the National Architectural Accrediting Board, Inc. (NAAB) and former Vice-President of the National AIA, Professor Gregory Palermo, FAIA, has a B.Arch. from Carnegie Mellon University and a Master of Architecture and Urban Design from Washington University. In 1990 he chaired the AIA's Architectural Education Task Force and has taught at the School of Architecture, Washington University in St. Louis. Palermo has served as principal, manager and designer for a wide range of projects at several firms, including Mackey Associates and Hellmuth Obata and Kassabuam, both located in St. Louis. Most recently, Palermo has been at Architects Wells Woodburn O'Neil, and is currently on the board of *Iowa Architect*.

MICHELLE KAUFMANN

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Winter Issue 93:208
1993 Design Awards

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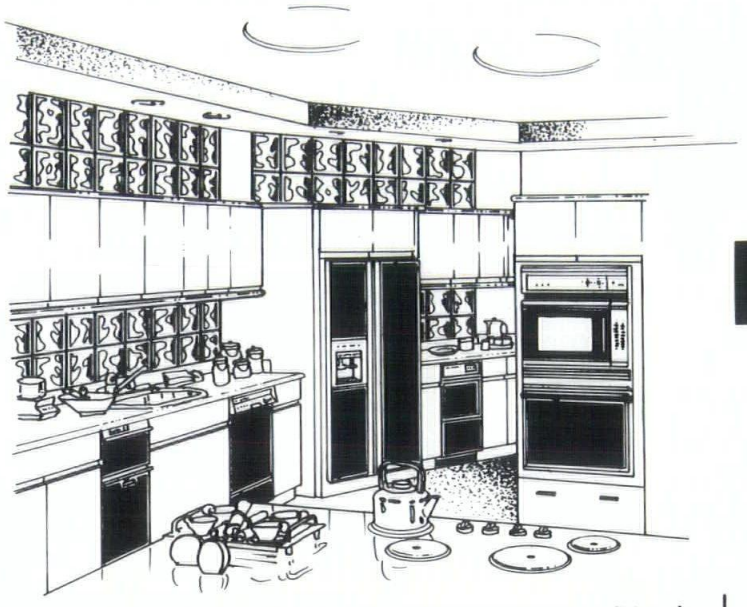

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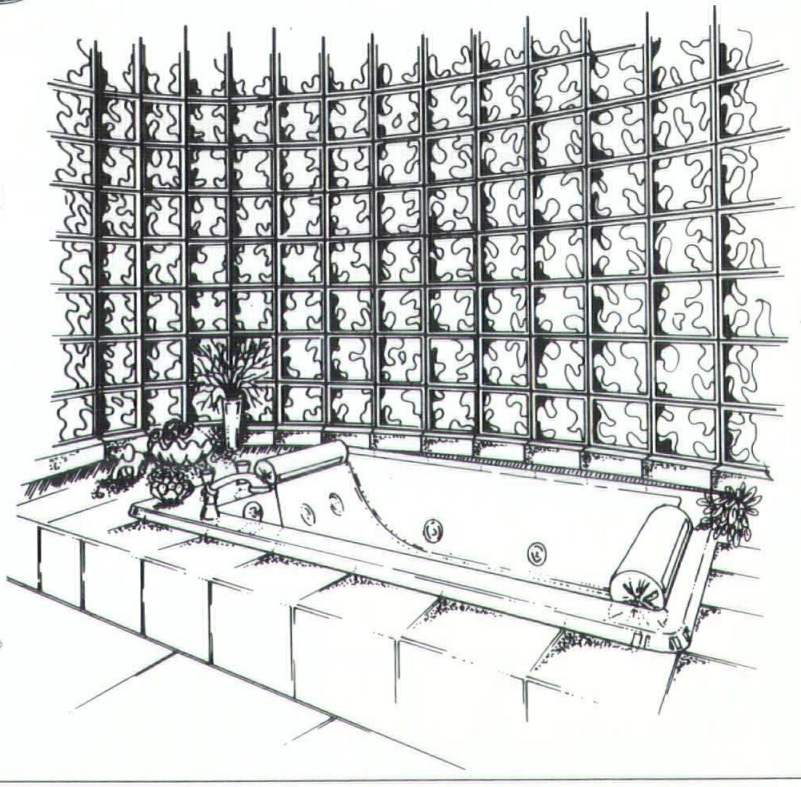

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