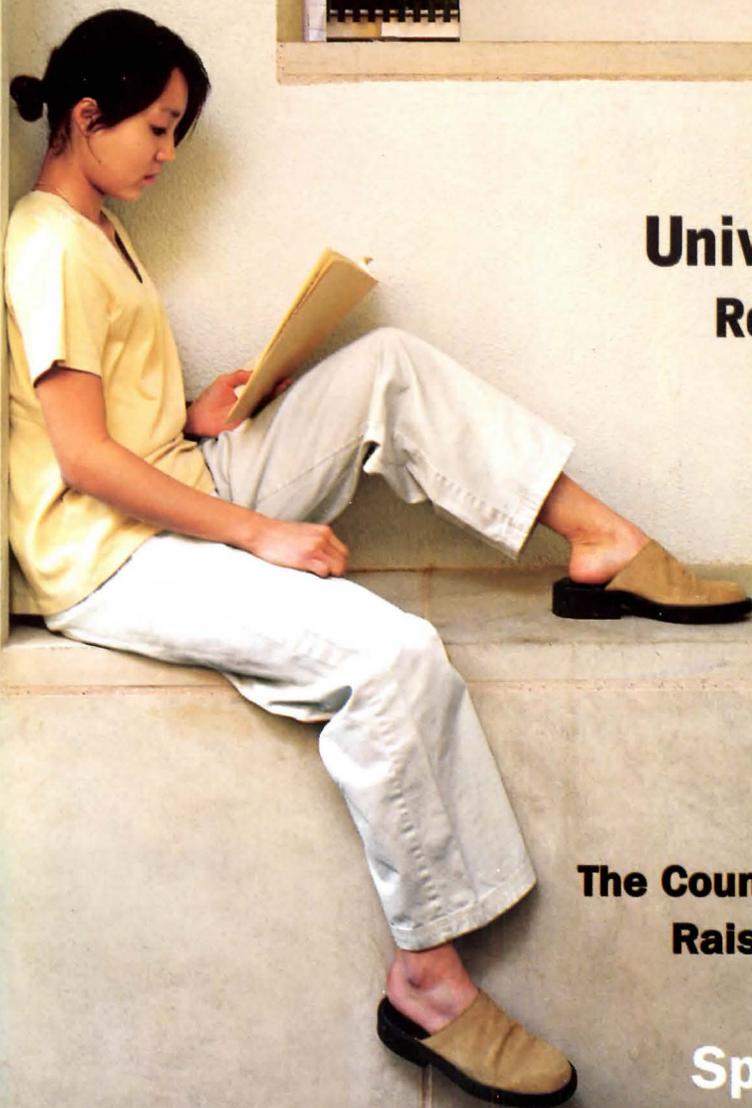


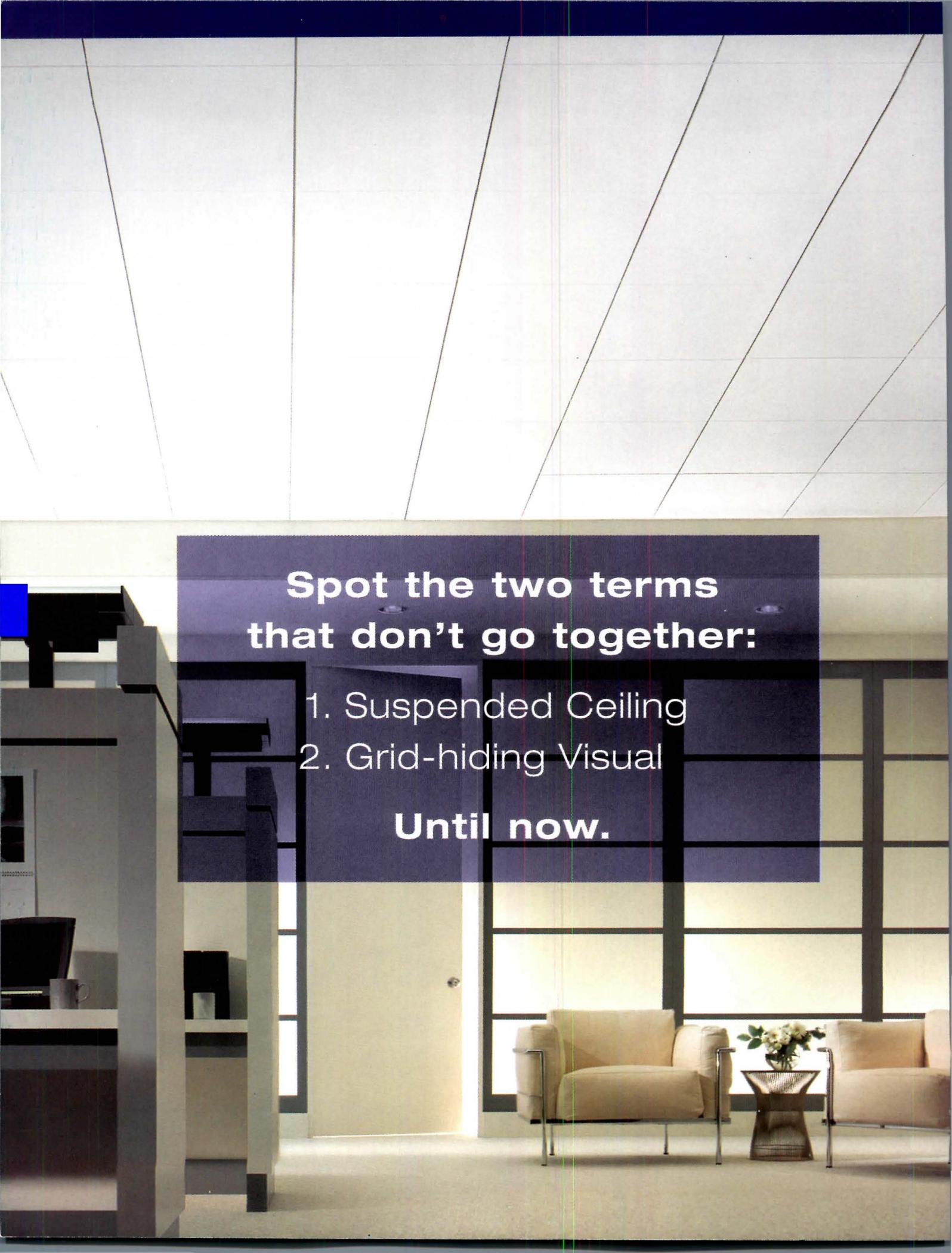
ARCHITECTURAL RECORD



**Universities:
Remaking the American Campus**

**The Country's Biggest Landlord
Raises the Bar on Design Quality**

Special Section: LIGHTING

A modern office interior featuring a suspended ceiling with a grid-hiding visual. The room includes a desk with a computer monitor and a cup, a white door, and a lounge area with two beige armchairs and a small table with a vase of flowers. The ceiling is a key feature, showing a grid pattern that is not visible, illustrating the 'grid-hiding visual' mentioned in the text.

**Spot the two terms
that don't go together:**

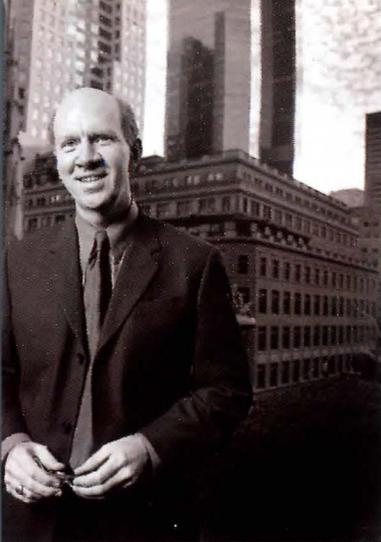
1. Suspended Ceiling
2. Grid-hiding Visual

Until now.

Just another renovation

Editorial

By Robert A. Ivy, FAIA



Who said renovations are simple? The university commission had begun with such fanfare. It seems only yesterday that the provost called a kickoff meeting in the school cafeteria, over rubber chicken, for you, the new architect, to meet the powers of academe. What a group—six vice presidents present, three deans, the head of the state building authority, his assistant, two inspectors, and the campus architect—and the university types all addressed each other as “Dr.” You itched, a bit uncomfortable as the only Armani-wearing, round-glasses-sporting, non-doctoral person in a sea of gray suits.

Unfortunately, everyone there but you already knew a secret: with one stray match, the 110-year-old tinderbox would go up in flames. Oil-rubbed wood floors make superb fuel. You were supposed to bring the old hall up to code, which you were perfectly willing to do, despite the fact that the state historic preservation officer, who was attending the luncheon (a thin man, carefully cutting his chicken in the corner), didn’t smile very much.

In high hopes, buoyed by the toasts, you proceeded with the work. Everyone agreed that the building needed a new set of stairs, which you promptly designed. Then the historic preservation officer nixed the neoexpressionist fire-stair tower that was your sole personal flourish. The complications compounded with every turn, from the ductwork in the corridors to the wiring. Every note brought a rejection, even for the sprinkler system.

So, you flew the lot up to a neighboring university 300 miles away, where a similar problem had been solved. The trip had a good effect, and that night, at the Olive Garden, where everyone had too much wine, they admitted that they were actually “on the same team,” even the preservationist, who wept effusively.

Meanwhile, to tie things down, you hired a code consultant, at your own expense, who backed up what you had already suggested in a 200-page, 2-inch-thick document that cost you \$12,000. The fire-code guru suggested sprinklering the glazed walls separating the wooden stairways for “an equivalency rating.” It was daring, but worth every penny to meet the code.

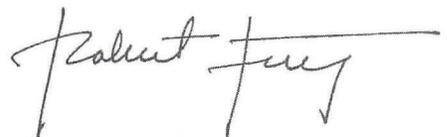
Just when things had been resolved, disaster struck. The state building director had a stroke, throwing the entire process into hiatus while he regained the ability to speak. His job, which involved late-night calls from the legislature and harangues from the governor, finally got to the man, an architect with an even temper and strong political skills, who had allowed the pressure to gnaw on him internally. Subsequently, he conducted his meetings with a slight lisp.

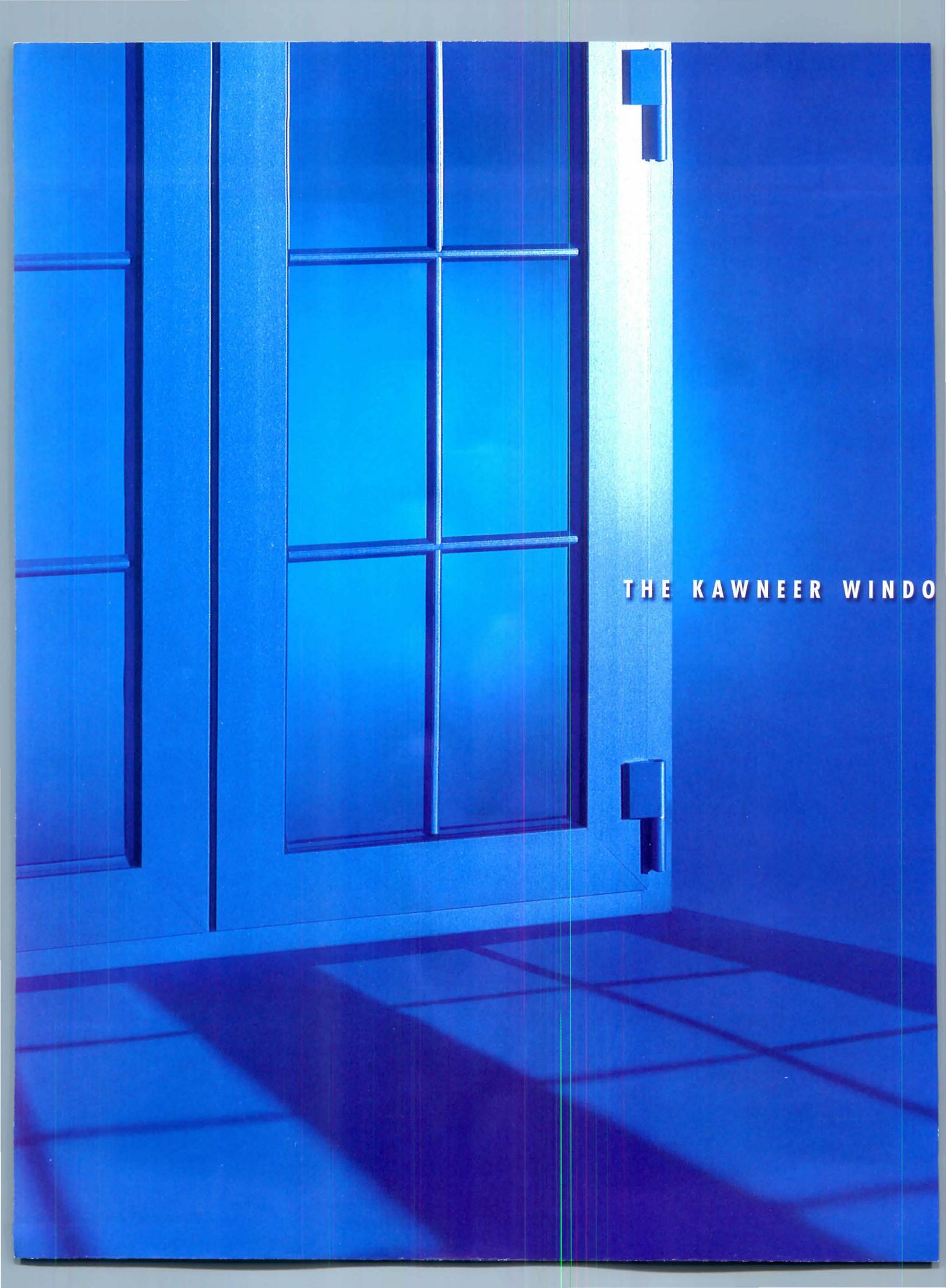
As he recovered, a group amnesia fell on the assembled monthly meetings, such that no one could rightly remember just how and why all those decisions had been made. Liabilities loomed. You, and you alone, seemed to bear the weight of memory, but it was fading fast.

Despite this circle through the Inferno, it all worked out. At the final inspection, everyone slapped each other on the back, admitting that the work eminently suited the old hall. Kids casually draped themselves on the benches and the steps, jabbering away and sucking on soft drinks as if this building had been transformed without human aid. It was, in short, a miraculous conversion.

On the rededication day, with the president of the university and even the great philanthropist there, the building was renamed, and where were you? Back of the dais, third row from the rear, unacknowledged but unconcerned, focused on the installation of the light fixtures, which seemed a trifle skewed. One more call to the contractor.

As the crowd dispersed, you walked past the plaque that listed the governor, the building and university officials, and you, the architect, on the last line. You touched the plaque and smiled: At least they spelled your name right. Have you been there?





THE KAWNEER WINDOW

Letters

Driving housing points home

Your November 1999 article on the state of public housing ["Public Housing: A Hard Assessment," page 76] raised many fine points, but neglected to discuss some necessary issues.

One issue is that the home mortgage deduction program is this country's most successful "subsidized housing" effort. Clearly, without that "program," the landscape of housing, particularly the single-family residence, would look radically different. Unlike support for the public-housing movement, support for this form of indirect public-financed housing is broad, cutting across class, social standing, and cultural preference.

Issue two: It will take more than good design intentions to hold the tide against the decline and abandonment of HUD's "new" publicly sponsored housing developments. Housing authorities will have to hold the line, municipal leaders will have to show more than good faith, and residents will have to be vigilant. Beneath the surface, however, the city's social, racial, political, economic, and cultural mix remains volatile and antagonistic.

The emergent middle-class resident looks outside city limits for the education, recreation, and social benefits that mark a better quality of life. Your article leads me to wonder if we as a society are truly up to the task to expand on the optimism of an earlier and somewhat surer generation.

—George R. Hill
Baltimore

Don't fence us in

Witold Rybcynski [Critique, November 1999, page 29] writes that the Lawrenceville School campus is arranged around two open spaces. One is formal and the other informal in its layout. Rybcynski reports that the informal one is heavily used while the other one is not, then draws a

direct correlation between the form and its popularity and extrapolates that the informal layout creates a democratic, American type of space while the formal type does not.

These are far-reaching conclusions. The design of an open space does affect its use, but as William Whyte has empirically proven, the effect is due to a complex series of determinants such as size, the straddling of paths, the equipment, its management, and the use and porosity of the buildings that surround it.

But this is to answer the small question. The larger question is the effect that formality of design has on utilization. In this case, Rybcynski's contention can be disproved instantly by remembering that cross-axial Bryant Park in New York City is crowded, while dozens of picturesque squares built in the 70s are not.

This however, assumes a rudimentary, utilitarian definition of use. Must public space, to justify itself, be heavily occupied? By such measure, the relentlessly commercial shopping mall would be the most successful space in America. But the fostering of civic pride and community consciousness are also palpable functions, and this effect can be achieved by passively gazing at a beautiful square or just knowing it is there. Hundreds of town squares, as well as the Mall in Washington, serve that purpose without being constantly trampled.

The biggest question behind the essay is the proposition that there is contradiction between formal design and a democracy. This notion, pushed to its conclusion, has led to a widespread and possibly dangerous tendency within the architectural avant-garde to equate order with repression, and by extension, disorder with democracy.

Look to the campus, said to be the only real invention of American

urbanism. American campuses, from the University of Virginia through Columbia, S.U.N.Y. Purchase are much more orderly than the European universities, scattered as they are throughout the urban fabric. And the higher education purveyed in these American campuses is a triumphant achievement, unrivaled in the world for scope and quality, despite the fact it is subject to a hierarchy of president, provost, deans, chairmen, and the minutely classified professoriat.

Rybcynski is seldom wrong, but the correlation he draws between orderly and disorderly space at Lawrenceville is not a reflection of democracy or otherwise, but the manifestation of a different system of order: the position of spatial type in the rural-to-urban continuum, called the *transect*. Urbanism requires a full variety of open space.

The curious allergy to order and convention endemic to the architectural avant-garde is, I suspect, at the heart of Professor Rybcynski's bias. This may explain it: an experienced practitioner knows that a chaotic design vocabulary elides the contribution of the client. The architecture of a democracy has always been, and must continue to be, a shared common language. The elite, abstract language of the avant-garde represents the privileging of the artist. This, while acceptable when confined to the gallery and the salon, tends to become exclusionary when determining the design of the public realm. It is not democratic.

—Andres Duany
Miami, Fla.

Museum addition sedition

J. Carter Brown, in his critique of museum additions [October 1999, page 35] is clearly taken to enormous understatement. In his review, he wonders if perhaps Daniel

Libeskind's proposed addition to the Victoria and Albert Museum in London might be uncomplementary to the adjacent existing building, suggesting that it is "too early to say." Too early? How about too late?

The directors of the famed Victoria and Albert have decided to proceed with the construction of Mr. Libeskind's completely uncomplementary, dominating white composition of intersecting cubes jammed into an inadequate space between the existing stately brick buildings along Exhibition Road. This is the wrong place for this addition! It is an addition that contains not a single obvious reference to its neighboring structures, and it is a project that the Victoria and Albert Museum directors and visitors will surely grow to regret. There is a place for buildings such as Mr. Libeskind's, but this is not it. The powerful forms of this structure need space and distance for full expression, and the adjacent buildings deserve more respect.

—Eric Lassen, AIA
Santa Barbara, Calif.

A rumble by the bay

I was confused by the placement of Lisa Findley's article regarding the ruckus over the design of San Francisco's de Young Museum (which is to be placed on the Music Concourse in Golden Gate Park) in December's RECORD News [page 55]. I'd like to share another view.

The article is mistaken in categorizing those concerned about de Meuron's design of the new de Young as if we are only preservationists. We have coalesced under the name "People for a New de Young" specifically to show that we're looking for a new design—one with the timeless quality of Lou Kahn's Kimbell in Fort Worth. We're concerned that the current proposal is not one for welcoming, but for separating the

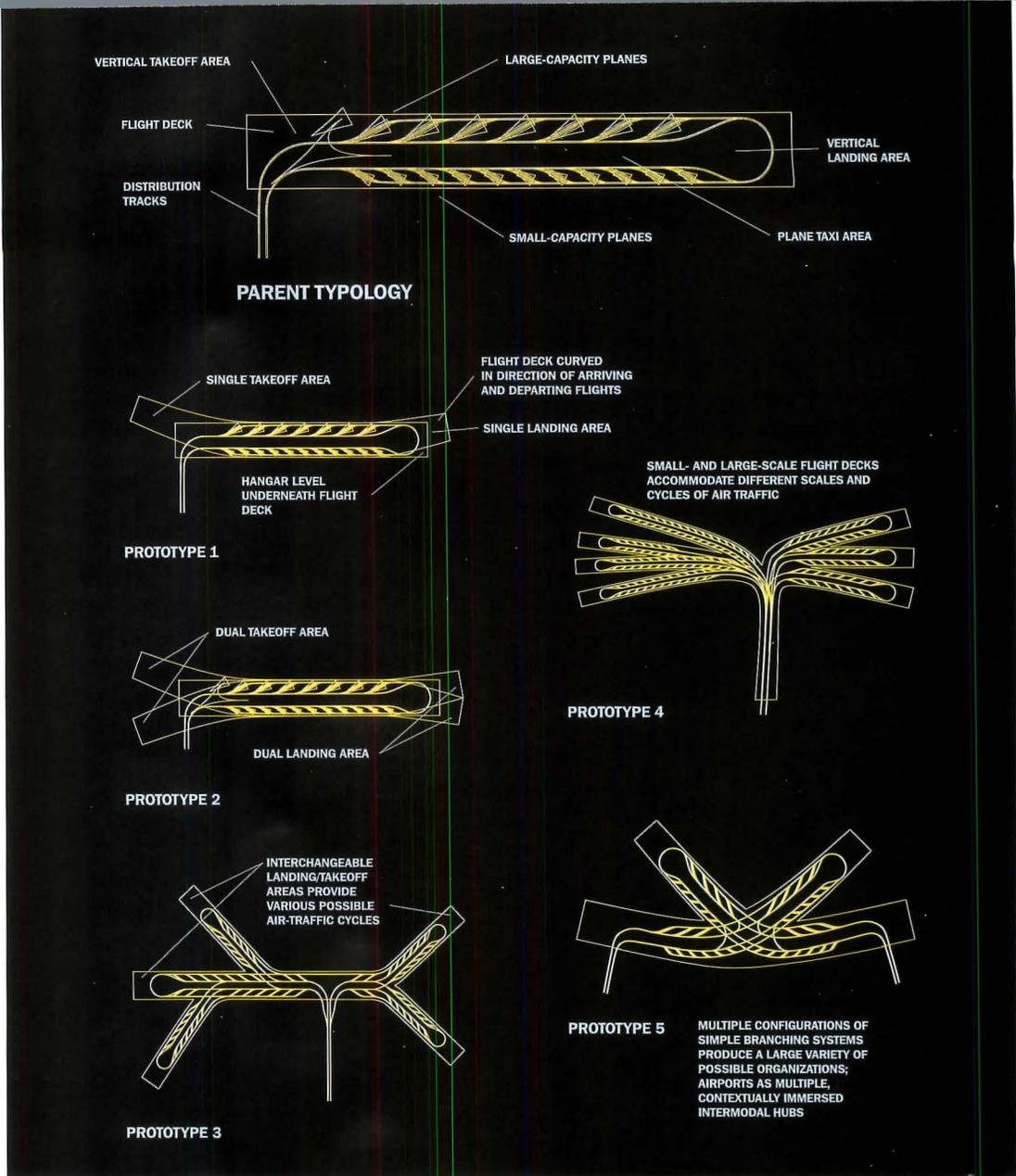
Letters

effete from the rabble with its intellectually lofty design. Further, the Music Concourse is the formal core of the wonderful soft landscape of Golden Gate Park, and the buildings that surround it should play a transitional role bridging these contexts.

The article is mistaken in stating that the AIA supports the project. The board of directors of the San Francisco chapter of the AIA (on which I have sat for the past two years) sent a formal letter of support for the process the Fine Arts Museum board set up to obtain public input. The letter took no position on the design.

Those of us concerned about what the current design does to its environment are trying to assure that we have a new museum with which all of San Francisco can identify, rather than one, which the author admits, "is not easily understood."
—Bruce Bonacker, AIA
San Francisco

Lisa Findley responds: Bruce Bonacker is correct in stating that the letter of support sent by the AIA board of directors to the de Young Board supported the process rather than the design. The letter commends the de Young for its open and responsive public process and states that the process has influenced the design. The chapter did, in fact, endorse the design, however, through a letter from its Design Committee, read into the public record at the museum board meeting where the design was approved. Incidentally, 82 percent of those who spoke that evening were in favor of the project, 18 percent were against. It seems most trust that the talented, proven firm of Herzog and de Mueron, regardless of its nationality or architectural style, will develop its intriguing design concept into an excellent, site-sensitive building.



Prototypes for Reiser + Umemoto's airport, were printed incorrectly on page 121 of the December 1999 issue.

The butler did it

Brave new world, indeed! Where have I seen projects like those featured in your December issue [page 85]? In my library! *Kinetic Architecture* by William Zuk and Roger H. Clark, 1970, and *Arthropods* by Jim Burns, 1972, are two books that attempted to foresee a future that looks a lot like the daydreams in your millennium issue.

Architecture has little to do with technical possibilities that may prove to be impractical. It has to do with Vitruvian propriety, common sense, and craftsmanship.

After 40 years of practice, I have come to realize that architects are not saviors of the human condition. We are more like valets—we want to make sure our employers look their

best within their means. Jeeves I am, I am not Albert Schweitzer.

—James A. Gresham, FAIA
Tucson

Corrections

Plans for Reiser + Umemoto's prototypical airport for New York City were printed incorrectly on page 121 of the December 1999 issue. In December's Product Reports [page 167], a description of Pilkington LOF's Arctic Blue float glass was mistakenly pictured with the company's new Solar E solar control glass. The pictured project (above right) uses Pilkington's Arctic Blue Eclipse reflective and tinted float glass. The December article about Jim Cutler's residential detailing



[page 170] should have stated that Cutler used 280,000 board feet of salvage lumber. In the January 2000 issue, Jury Alvarez and Cono DiZeo of Ian Schrager Hotels were omitted from credits for St Martins Lane Hotel [page 91]. They were design coordinator and project manager, respectively. ■

Letters may be E-mailed by clicking **Letters** on our Web site at www.architecturalrecord.com.

Record News

Bulletin **Albert Kahn plant demolished** p.29
Nordic embassies shine in Berlin p.30
Chattanooga goes green p.32
New home for Liberty Bell p.34

NEW PIANO TOWER TO SHINE IN SYDNEY FOR THE OLYMPICS, WHILE FOSTER WAITS IN WINGS



Just in time for the Olympics this summer, Sydney will have a new building to help define its skyline: Renzo Piano's tallest high-rise to date (above), a 41-story office tower the architect says will "wave to" the Sydney Opera House a half-mile away. Lord Norman Foster, HON. FAIA, also plans to contribute to Sydney's new look with an office tower (top, center building), though the project is on hold.

Piano's tower, in a prime position overlooking the Sydney Harbour

and Botanic Gardens, is part of a \$440 million development that also includes a Piano-designed 18-story luxury residential tower. The taller tower has almond-shape floor plates that increase in size with each floor. Wrapped in a curved skin of fritted, low-iron glass, the tower will be less opaque toward the ends and top, making the building visually dematerialize. Each floor will have a 430-square-foot winter garden on its north and south corners, with glass louvers that open to let in the breezes.

The lower tower, with 62 units, will also feature glass louvers and winter-garden spaces. Linking the two buildings will be a plaza covered by a column-free, glass canopy with a web of stainless-steel cable—a kind of "spiderweb," says Piano.

Foster's foray

Close by, a high-rise designed by Lord Norman Foster, in conjunction with the Sydney firm Hassell Architects, has been put on hold by its new owner, Principal, following the acquisition of the former client, BT Funds Management. When work

THE AIA'S HONOR ROLL The AIA has recognized 38 projects with its 2000 Honor Awards, to be doled out at the AIA National Convention in Philadelphia in May. Skidmore, Owings & Merrill captured three awards in the regional and urban design category, while Weiss/Manfredi Architects, Shelton, Mindel & Associates, and Richard Meier & Partners garnered two awards apiece. In addition, Meier's Smith House, completed in 1967 in Darien, Conn., earned the Twenty-five Year award. The Topaz Medallion, for contributions to architectural education, will go to Alan Balfour, dean and professor of architecture at Rensselaer Polytechnic Institute. (In December, the AIA announced that Ricardo Legorreta will receive the Gold Medal and Gensler the Firm of the Year Award).

This year's honor awards for architecture will go to the Kaufmann House Restoration by Marmol and Radziner Architects; Neugebauer House and the Getty Center by Richard Meier & Partners; Olympia Fields Park and Community Center and Women's Memorial and Education Center by Weiss/Manfredi Architects; Massachusetts Museum of Contemporary Art by Bruner/Cott & Associates; Methow Valley Cabin by James Cutler Architects; the Hill County Jacal shelter in Texas by Lake/Flato Architects; Le Fresnoy National Studio for Contemporary Arts by Bernard Tschumi Architects; the U.S. Port of Entry by the Miller/Hull Partnership; Mashantucket Pequot Museum by Polshek Partnership Architects; desert housing for low-income seniors by Studio E Architects; Center Street Park and Ride by Herbert Lewis Kruse Blunck Architecture; Grand Central Terminal restoration by Beyer Blinder Belle; and Kuala Lumpur City Centre, Phase I, by Cesar Pelli & Associates.

The interior architecture awards will go to the San Francisco City Hall Improvement Project by Heller - Manus Architects (on behalf of a joint venture); SHR Perceptual Management Workspace by Morphosis Architects; Helmut Lang Flagship Retail Boutique by Gluckman Mayner Architects; Long Meadow Ranch Winery by Turnbull Griffin Haesloop; the preservation of Farnsworth House by Lohan Associates; Seiji Ozawa Hall at Tanglewood by William Rawn Associates; St. Jean Vianney Catholic Church Sanctuary by Trahan Architects; Iwataya Passage by WalkerGroup/CNI; Colleen B. Rosenblat Jewelry Showroom by Gabellini Associates; Ocean Liner Dining Room and Lounge and Fifth Avenue Duplex by Shelton, Mindel & Associates Architects; Greenwell Goetz offices by Greenwell Goetz Architects; Ackerman McQueen Advertising Executive Offices and Video Conferencing by Elliott + Associates Architects.

The AIA will also hand out 10 awards for regional and urban design.

starts again, says architect Ken Maher of Hassell, it will be the next in a global lineup of sustainable towers designed by Foster.

Air drawn in through glazed roof terraces will feed into the tower and channel through voids or atriums that run the length of the

building, instead of using conventional ducts. This system will lower energy costs. The tower will step down in an arc, somewhat like the nearby Harbour Bridge, and an illuminated roof garden will glow as a beacon in the night sky.

Anne Susskind



Products:
EFCO TerraStille™ Door and Frame,
Series 810 and 510 Fixed
Windows, Series 3500 Sliding
Windows, System 403 Storefront,
Series 5600 Curtain Wall,
and D-300 Doors

Building:
Golf World Resort and Convention
Center, St. Augustine, FL

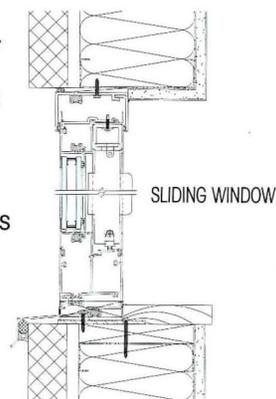
Architect:
Gould Evans Goodman Associates

Erector:
Carter Glass Systems, Inc.

LOOK TO EFCO® FOR A COMPLETE LINE OF COMPATIBLE GLAZING SYSTEMS FROM A SINGLE SOURCE.

Many products, one manufacturer. It's the perfect way to ensure that all of your glazing systems will combine effortlessly.

With EFCO, you can choose from an extensive line, including windows, storefronts, entrances, and curtain walls. We'll custom-build your systems to coordinate flawlessly with each other—from matching paint colors and finishes to easy installation. And project coordination is easier too, since you're working with a single manufacturer.



Best of all, you don't have to sacrifice quality for

compatibility. Every EFCO product will perform to the highest standards. To find out more, talk to your EFCO representative, call EFCO direct at 1-800-221-4169, or visit our Web site at www.efcocorp.com.

CIRCLE 14 ON INQUIRY CARD



WINDOWS
CURTAIN WALLS
ENTRANCES
STOREFRONTS

Record News



TORONTO'S CITYPLACE CLAIMS A VACANT SITE

A nine-hole golf course with a driving range and clubhouse at the edge of downtown Toronto's financial district? This conjunction of commerce and caddies may seem implausible, but the course will open this spring to promote the \$1.4 billion, 5.4 million-square-foot CityPlace mixed-use development, recently begun on former railyards.

The public course, which isn't permanent, is meant to generate publicity for the project, whose first 28- and 32-story towers, with a total of 642 apartments, should reach completion next year. As many as 6,000 apartments in 20 towers, some with low-rise and townhouse condos, are planned for the 44-acre vacant site over the next 10 years.

Marc Hewitt, a landscape architect, urban designer, and senior vice president of Concord Adex Developments, the project's developer, says some of the architectural features typical of high-rise condominium towers built on North America's West Coast have been adapted to the Toronto market. Glass and steel high-rise condominiums are popular in Vancouver, whereas masonry or precast concrete often clads Toronto's high-rise condos.

CityPlace will employ the western aesthetic. The two inaugural towers (left) were designed by Page + Steele Architects/Planners of Toronto. Sol Wassermuhl, the firm's president, says the design "had to make a bold statement to be noticed, and in a modern vocabulary, because of the proximity to SkyDome and CN Tower, with no historical context in the neighborhood." The elliptical tinted glass-and-aluminum towers will overlook the lakefront and share a podium, providing street-level retail and a recreational/fitness center on the second floor.

Hewitt says the next two towers—28 and 35 stories, respectively, with up to 650 units—will be designed by Architects Alliance of Toronto (not the U.S. practice with the same name). About half the sprawling CityPlace site has been set aside for parks, bike paths, jogging trails, and other open spaces, as well as for an elementary school, community center, and two day-care centers. *Albert Warson*

ANOTHER SCENE FROM THE DEMOLITION OF DETROIT: AN ALBERT KAHN PLANT FROM 1903 BITES THE DUST

The Packard Plant, designed by Albert Kahn in 1903, was the first reinforced-concrete factory in Detroit and the model for Ford's groundbreaking Highland Park Plant. Early on, it was celebrated for inaugurating a new style of factory that improved both efficiency and working conditions. Much later, in 1970, it was still being lauded: the Detroit Institute of the Arts' house publication praised the "bright, clean and cheerful aspects of the different departments."



Now, the Packard Plant is disappearing portion by portion, a casualty of city demolition of decrepit structures abandoned in the wake of Detroit's glory days. The space where it stood (top, the factory with one wing destroyed) holds few signs of its long history—the plant flourished until World War II, when Rolls Royce airplane engines were manufactured there, and then into the 1950s, though it stopped producing automobiles in 1957. Other tenants arrived, and, until recently, the plant hosted

more than 100 small businesses—but the city had other ideas and began tearing it down. Demolition of the 3.5 million-square-foot facility could cost the government around \$15 million. *Camilo Jose Vergara*



PICK. CLICK. QUICK.

More than 7,000 products for the design professional. Right at your fingertips.

charrette.com

CIRCLE 15 ON INQUIRY CARD

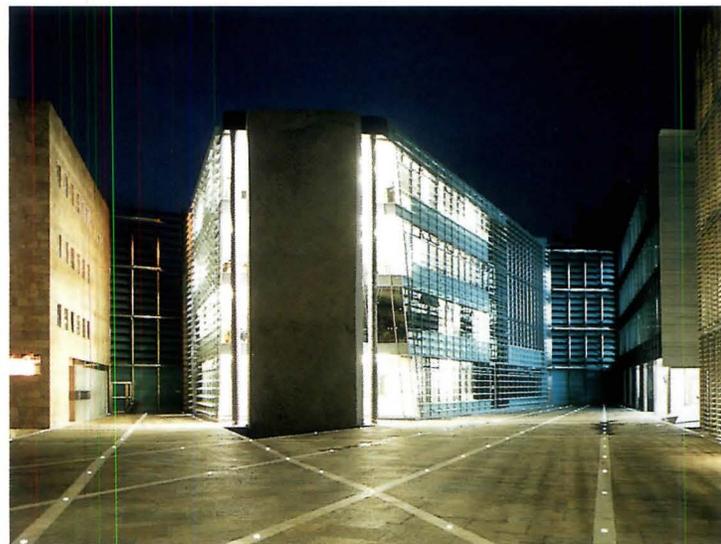
Record News

NORDIC EMBASSIES STAY CALM IN BUSY BERLIN

In the heart of rapidly changing Berlin, next to its central park called the Tiergarten, stands a new oasis of Scandinavian serenity. Coinciding with the reconsolidation of the German government in the country's historic capital, the five Nordic countries have banded together to share a complex of embassies for the first time anywhere. The result is a grouping of structures that express the unique characteristics of the host countries while blending into a cohesive whole.

The process began when the five countries—Denmark, Finland, Iceland, Norway, and Sweden—launched a competition for a master plan for their chosen site. The Austrian/Finnish team of Alfred Berger and Tiina Parkkinen got the job with a design that ties the complex together by wrapping a wall of 4,000 copper louvers around the exterior, providing a connecting skin for the structures within. The wall curves through the site skirting clusters of existing trees. Berger and Parkkinen also designed the shared reception and exhibition building, the Faelleshuset. The individual embassies were then designed by an architect based in each country, using native materials when feasible.

On entering the complex via a gate near the Faelleshuset, which was inaugurated in late October, visitors encounter the Finnish embassy, designed by VIIVA of Helsinki. A forest of wooden slats forms a minimalist pattern over the facade. Next to the Finnish building is a shallow pool of water that marks the transition to the Swedish Embassy, designed by Wingårdh of Göteborg. Inside, a spiral staircase anchors one side of a soaring all-wood atrium where diplomats meet on cantilevered balconies.



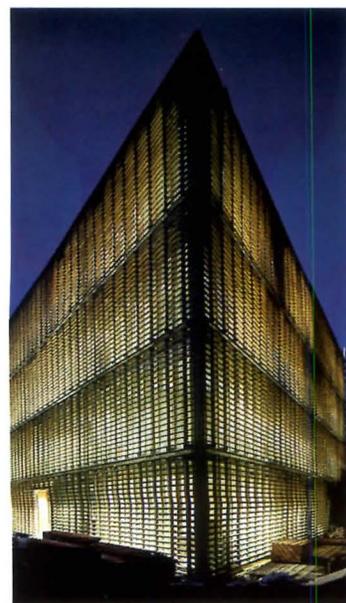
Across the courtyard, in the middle of the complex, stands the Norwegian embassy, by Architect Snøhetta of Oslo. A monumental, 120-ton slab of gray Norwegian granite on the main facade provides a weighty focal point for the complex. As with the other embassies, the structure's corridors, lobbies, and conference areas were conceived to maximize daylight and views, while a garden atrium at the north end provides a contemplative environment. The east and west facades are glazed.

In the corner sits the Icelandic Embassy, designed by Architekt Palmar Kristmundsson of Reykjavik—smaller than the rest, as

befits the country's population, but made solid by a granite facade.

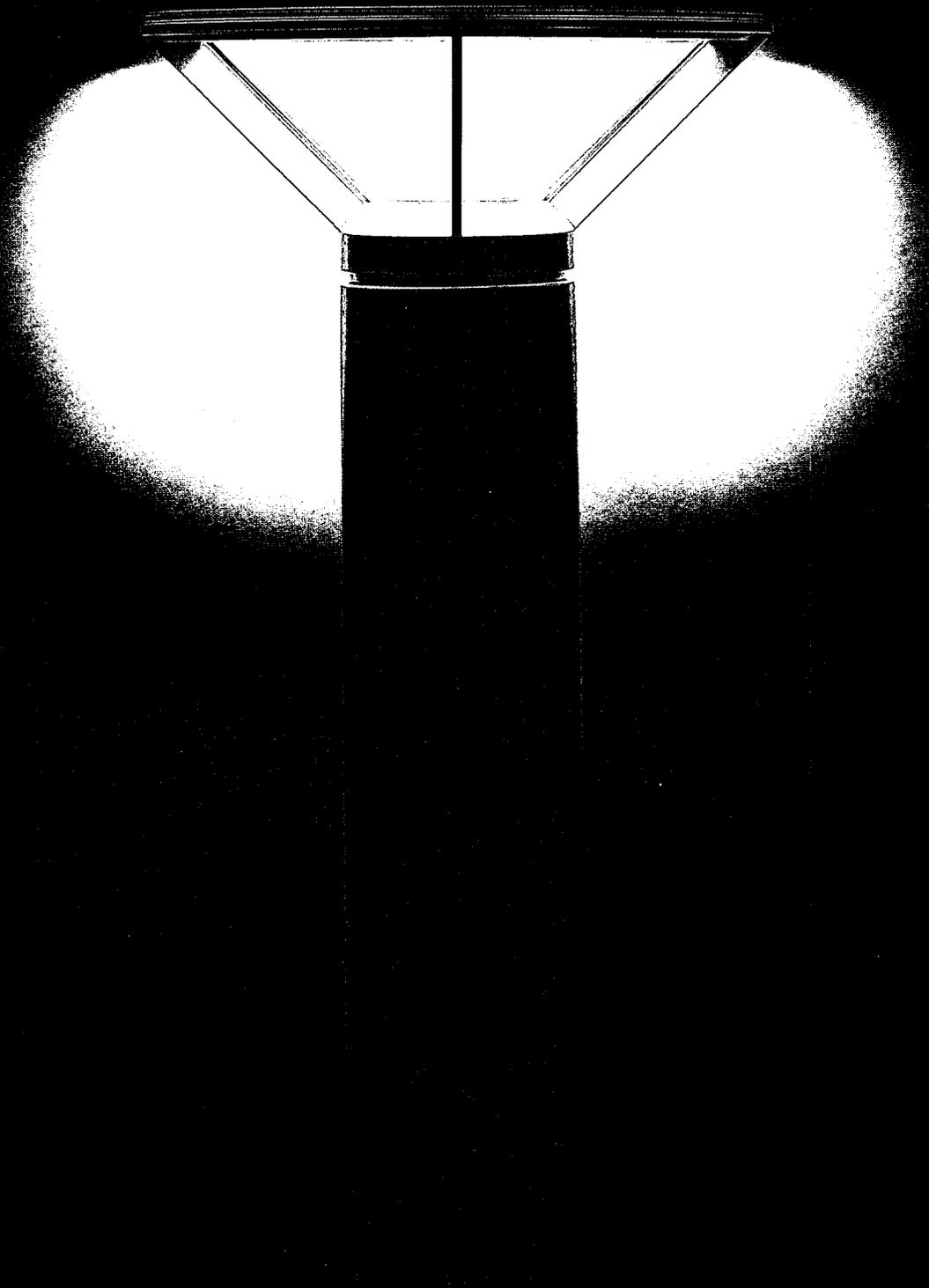
A stroll by the wood and stainless steel-clad Danish embassy, by Architekten Nielsen, Nielsen & Nielsen of Aarhus, leads back through the gate next to the Faelleshuset and into Berlin's forest of clamoring construction sites. *Soren Larson*

Top row: The Icelandic and Danish embassies. Middle: The Swedish embassy, with its lower-level pool that separates it from the Finnish embassy, and the Norwegian embassy, between the Icelandic and Swedish embassies. Bottom: The Finnish embassy.



Anything less than **BEGA**, is.

www.bega-us.com



Circle No. 16

Record News

A SUNDIAL IN ST. CROIX MARKS THE MILLENNIUM

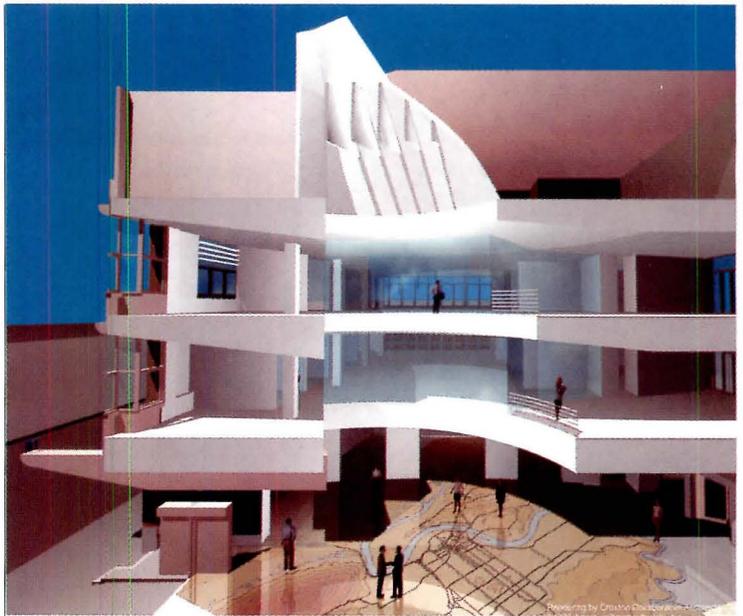
Point Udall, an isolated promontory on St. Croix, is the easternmost land in the territorial U.S. Historically, the spot was seldom visited, except for occasional sightseers who drove up a dusty road to enjoy the point's views of the Caribbean. Yet the point's geography gave it a millennial distinction as the first U.S. land to see the sunrise on January 1, and last year, the U.S. Virgin Islands' government, with the local AIA chapter, decided to hold a competition for architects practicing in the Virgin Islands to design a monument for the site and the moment.

The winning design came from C. William Rich, AIA, an architect from the neighboring island of St. John, who fashioned a sundial that bears a permanent mark indicating

the shadow cast at the first dawn of the new millennium. Four 18-foot-high triangular stone piers surround the sundial's circular center and abstractly suggest the Latin numerals for 2,000: MM. In the center, a bronze finial, also 18 feet tall, works as the shadow pole. On the periphery of the podium, beyond the center piers, are four bronze pins designating north, south, magnetic north, and the point of the sun's azimuth at 6:52 A.M. on January 1, 2000.

The monument owes its existence to the guidance of a Virgin Islands public works official, Aloy Nielsen, who saw it through a tangled bureaucracy and two hurricanes that swept devastatingly across St. Croix. As for the architect, Rich says he was trying to make a "small statement" with his sundial, rather than an overpowering design. "To me," he says, "it is significant that time and the passing of time have always been measured by the sun."

Beth Dunlop



CHATTANOOGA, ONCE A HEAVILY POLLUTED CITY, TURNS TO GREEN DESIGN FOR NEW CENTER

Chattanooga is going green. The city has picked a joint venture team of New York City's Croxton Collaborative—known for sustainable architecture—and Artec of Chattanooga to create a sustainable design for the city's new Development Resource Center. The new office building will consolidate the majority of city and county government agencies and divisions related to the built environment, including planners, architects, and engineers.

The 85,000-square-foot structure, slated for completion in 2001, will rise in an aging industrial zone that the city has targeted for revitalization. The architects will

promote pedestrian traffic by incorporating 5,000 square feet of retail space into the site, while the building itself will have a number of environmentally conscious features. Customized daylighting controls will be installed, bringing direct sunbeams into some areas and more low-impact, diffused lighting into others. Apertures in public and work spaces will be coordinated to conserve energy and create varied environments. The "smart" landscaping will enable rainwater recycling.

Chattanooga was infamous 30 years ago as one of America's most polluted cities, according to Croxton. Now, it is making amends. S. L.

GOVERNOR'S ISLAND: A PLAN AT LAST? In 1995, President Clinton offered Governor's Island, which the federal government had used for military purposes since 1755, to New York City and New York State for \$1. The catch: the city and state had to come up with a joint redevelopment plan for the island, including provisions for preservation and public use, and have Congress approve it before the exchange could take place.

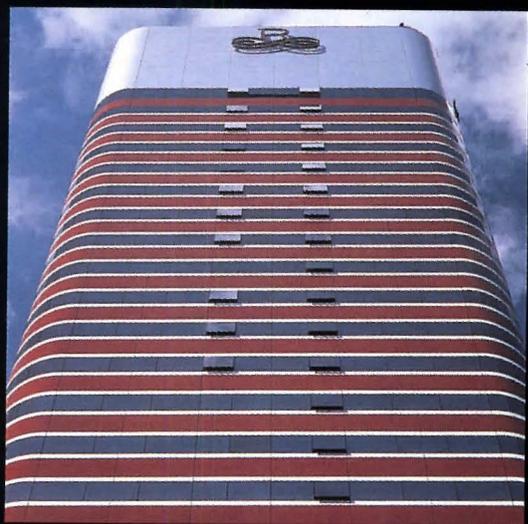
Now, city and state officials think they have the desired plan for the 172-acre island in a prime spot in New York Harbor off the southern tip of Manhattan. The ideas, presented by Mayor Giuliani and Governor Pataki at a January press conference in New York City, include ballfields and tennis courts; small museums for art, ecology, and military history; an inexpensive motel; and artists' studios. The entire 2-mile circumference would be circumscribed by a public esplanade. The island's southern end would be the site of the proposed art and ecology museums and playing fields. The military history

museum is proposed for the north side, an area dotted with historic fortifications and mansions protected by the federal government. No permanent residents will occupy the island.

The scheme has to generate enough income to cover the estimated \$22 million annual maintenance budget and some of the estimated \$150 million that the state and city will contribute to the projected \$350 million development cost. To that end, many of the biggest and most important existing buildings would be used for a conference center, with retail outlets nearby. Architects have yet to be chosen for the projects, and developer bids have yet to be proposed—though the Guggenheim Museum is rumored to be interested in building a new museum on the island. The biggest hurdle facing the plan is to persuade Congress of its worth. When asked if the \$1 offer was still on the table, Pataki said he wasn't sure, quickly adding, "But we'll take it!" S. L.



A Panel Discussion



When you're talking design flexibility, contemporary appearance and affordability, you're talking

Alucobond® Material.

Created 30 years ago as

the first-ever aluminum

composite material or

ACM, Alucobond Material

has contributed to the

design excellence of more than 50,000 buildings

worldwide. Alucobond Material's success is due

in part to its

network of

distributors/fabricators—clearly the best in the industry.

These partners offer unequaled knowledge and

expertise regarding all aspects of fabricating and

installing aluminum composite material.

And that translates into unequaled benefits for you.

So consider

ALUCOBOND®
MATERIAL

Alucobond

Material for your next design challenge.

You'll experience the confidence that comes only with

the best product and people in the industry.



alusuisse
composites

Alusuisse Composites, Inc.
P.O. Box 507 • 208 W. 5th Street • Benton, KY 42025 • 0507
800-382-6445 • 270-527-4200 • Fax 270-527-1552
www.alusuisse-comp.com

CIRCLE 17 ON INQUIRY CARD

Record News

VANCOUVER FIRM TRIES NATIVE COLLABORATION

Silence does not imply consent. This was one of several design lessons learned by Acton Johnson Ostry Architects of Vancouver when designing community structures for two American Indian tribes in British Columbia, the Skidegate and the Mount Currie.

An elementary school for the Skidegate (above), serving both native and nonnative children, reached completion in September, followed in December by a day-care and health center for the Mount Currie tribe. The firm's Russell Acton describes the design process as "unusually long and col-



laborative—there was lots of back and forth. We took their traditional expression and then expressed it in a contemporary medium."

Extensive research was required to understand the American Indians' background, traditional building types, relationship to the land, and spiritual values. And because the elders are greatly revered, their input was considered invaluable.

Frequently, the tribes were silent in their response to a design proposal, but according to Acton,

their silence did not necessarily signify approval. Thus, the architects had to continually question the group to gain final consent.

Final design for each new building responded to both tribes' desire for cedar as a prominent material. The 30,000-square-foot Skidegate school features cedar for ceilings, as well as structural and partition wall finishes. Roughly turned cedar columns throughout the building support framing. The classroom corridor, with an exposed

"vertebral" roof structure, is crowned by a dramatic skylight. The daylit corridor has benches for small group instruction. Students and elders from the community are encouraged to gather here and use the adjacent Haida Studies Room, where they can practice traditional teaching methods.

The 7,400-square-foot Mount Currie Day Care and Health Center had a more limited budget than Skidegate, but the architects were able to apply the idea of a structural wood-carved interior space, based on the tribe's traditional "pit house," which uses a wooden pole framework. Wood was critical to maintaining the visual integrity of the building, says Acton. "If the same thing was done with gypsum board, it would be like a shopping mall," he adds. "You need the wood to get the traditional idea through." *John Gracey*

NEW HOME FOR LIBERTY BELL RINGS CLEAR AMID REVAMPED INDEPENDENCE MALL PROJECTS



The new Independence Mall is taking shape. The design for the last of the major new projects in Philadelphia's historic area, Bohlin Cywinski Jackson's new home for the Liberty Bell, was revealed in January, and construction should begin in August.

Philadelphia first assembled the three-block tract that became Independence Mall a half century ago, but has struggled to find a

proper housing for the Liberty Bell, which attracts more than 1.6 million visitors a year. The architects have proposed a new \$11.2 million light-filled building with a view of Independence Hall, to be constructed along Sixth Street between Market and Chestnut Streets. The glass, steel, granite, brick, and wood complex will include the bell's chamber, an area for exhibits and talks, and a shaded outdoor interpretive area. As in the present location, visitors will be able to touch the bell; they will also be able to see it through the glass even when the building is closed.

The \$200 million renovation of the three-block Independence Mall includes three other major projects. A design by Pei Cobb Freed & Partners is already in place for the new National Constitution Center, which will celebrate the U.S. Constitution. Also in the works are the \$32.3 million, nearly block-long Gateway Visitor Center and the Independence Park Institute, both designed by Boston firm Kallmann, McKinnell & Wood. *S.L.*

BUSY IN BUDAPEST AND BEYOND Unlike the majority of Hungarian architecture firms, Aula-Planconsult Kft. is finding extensive work outside the country's borders, and more is in the offing. The key: the Budapest firm's biggest client is German development giant Mahler Project International; Aula-Planconsult is designing for Mahler in Poland, the Czech Republic, Romania, and the Canary Islands, as well as in Hungary.

One of the first major development projects in Poland following the collapse of Communism, Aula-Planconsult's 950,000-square-foot Ochota Office Park for Mahler stands in the heart of Warsaw's commercial district. "Before, there was just open ground and a few houses," says János Bördi, Aula-Planconsult's general director. "Mahler led the way; now, others are building in the area."

Construction began in 1996 and three of the complex's four buildings have been completed and are occupied. Costs so far are estimated at \$60 million. The first three buildings are stepped, with four, five, and six levels, respectively, while the fourth structure will include 140,000 square feet on eight floors and two levels of underground parking. All four will be connected by a common ground floor and a pedestrian walkway. The main pedestrian area will have restaurants, a fitness center, and an atrium over an interior court. Bridges will link the upper levels.

"The architecture," says Bördi, "is a very simple modern style with a Scandinavian influence: clean lines, correct geometrical forms, and simple materials such as stone, glass, stainless steel, and plaster. Stone is used on the ground-level elevations and plaster on the upper levels." The fourth building, he continues, "is interesting because of its curved form. It will feature structural glazing on the main elevation and wrap around a square grid of interconnected reinforced-concrete columns."

Also in Warsaw, Aula-Planconsult designed the approximately \$18.5 million, 150,000-square-foot, eight-story Wspolna Office Building now under construction. *Carl Kovac*



Now You Know the Secret!

For Lasting Protection, Specify Tyvek® CommercialWrap™

There's no secret, Tyvek® protects! Tyvek® CommercialWrap™ offers strength, performance, and ease of handling for breathable membranes in light commercial construction. Its spunbonded polyolefin resists air and water penetration with a non-perforated continuous microfiber web, which has microscopic pores large enough for moisture vapor to pass through, but small enough to resist air and liquid water. For more information, or to speak with a DuPont Tyvek® Specialist, call 1 800-44-TYVEK® (1 800-448-9835).

www.tyvekconstruction.com

CIRCLE 18 ON INQUIRY CARD

DuPont Tyvek® CommercialWrap™ Performance:

- Protects installed R-value
- Superior moisture vapor transmission
- Water holdout 2 1/2x to 3x better vs. 10- and 60-minute building papers
- 2x better than #15 felt and almost 1 1/2x better than building paper during wind load testing



Tyvek®

CommercialWrap™

© 1999 DuPont. Tyvek® is a DuPont registered trademark for its brand of spunbonded olefin. CommercialWrap™ is a DuPont trademark for its brand of weatherization system.

Record News

EXERTING ITS STATUS, KUWAIT GOES COASTAL

Kuwait apparently has no shortage of deep-pocketed clients, including its government. Two massive new projects that take advantage of the country's dramatic 50-mile coastline exemplify the extravagance.



Kuwait's Archicenter/JQE has designed a 1.8 million-square-foot government complex (below left) in Kuwait City to house the offices of the Amir (the country's ruler), Crown Prince, and Prime Minister, as well as the Council of Ministers' buildings. The white, reinforced-concrete structures feature highly decorative facades in the manner of traditional Islamic architecture. Two spines connect the three main building complexes and provide protected access for pedestrians,

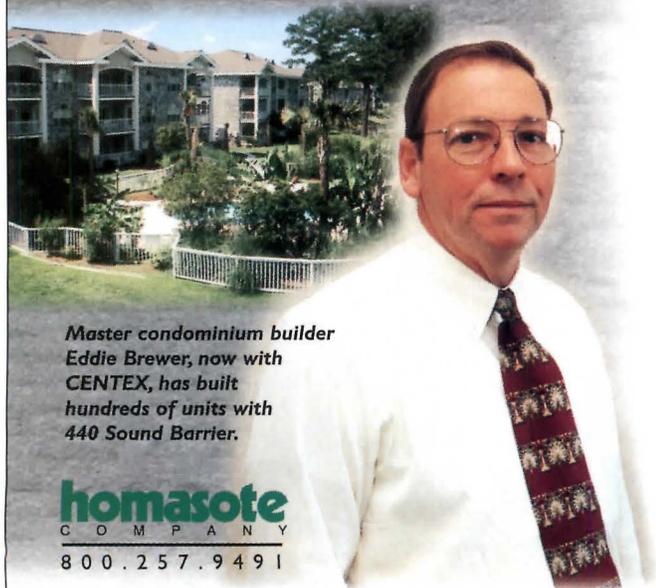
while a new outer breakwater creates a lagoon that helps fortify the complex against any threat arriving via the Persian Gulf.

Meanwhile, Cambridge Seven Associates (C7A) won a competition late last year to design a new public entertainment and shopping center on the 1.3-mile Fehhehel waterfront, south of Kuwait City. The C7A design (below right) includes a beachfront framed by palm-tree-shaded promenades and punctuated by piers that jut

out perpendicular to the coastline. The twin piers will have a 70-meter Ferris wheel at their terminus and will feature markets, cinemas, restaurants, and retail shops. According to C7A, the design includes many traditional Islamic elements—arcades, entry towers, and delicate screens—though contemporary forms and material were also used. C7A knows the territory—the firm has also designed two large science centers in Kuwait. S. L.



Silence. It's music to his ears.



Master condominium builder Eddie Brewer, now with CENTEX, has built hundreds of units with 440 Sound Barrier.

homasote
C O M P A N Y
8 0 0 . 2 5 7 . 9 4 9 1

"440 Sound Barrier gives our customers what they want most: quiet."

Noise control is a big selling point for upscale condominiums, and nothing does the job better than 440 Sound Barrier. Lightweight, nailable and load-bearing, Sound Barrier can be installed directly under carpet pad, laminate floors and many other surface treatments – by the crew laying the floor. Unlike pumped-in concrete, it won't crack, break down or "dust up." Combining compactness and superior sound deadening powers, the Homasote system saves money in design, installation and performance.

Proven in independent tests.

The Homasote system is proven by NVLAP certified labs, and UL fire rated (fire resistance in all L500 floor & ceiling assemblies; call for details.)

Environmentally friendly.

Homasote is made from 100% recycled paper, with no asbestos or urea formaldehyde additives.

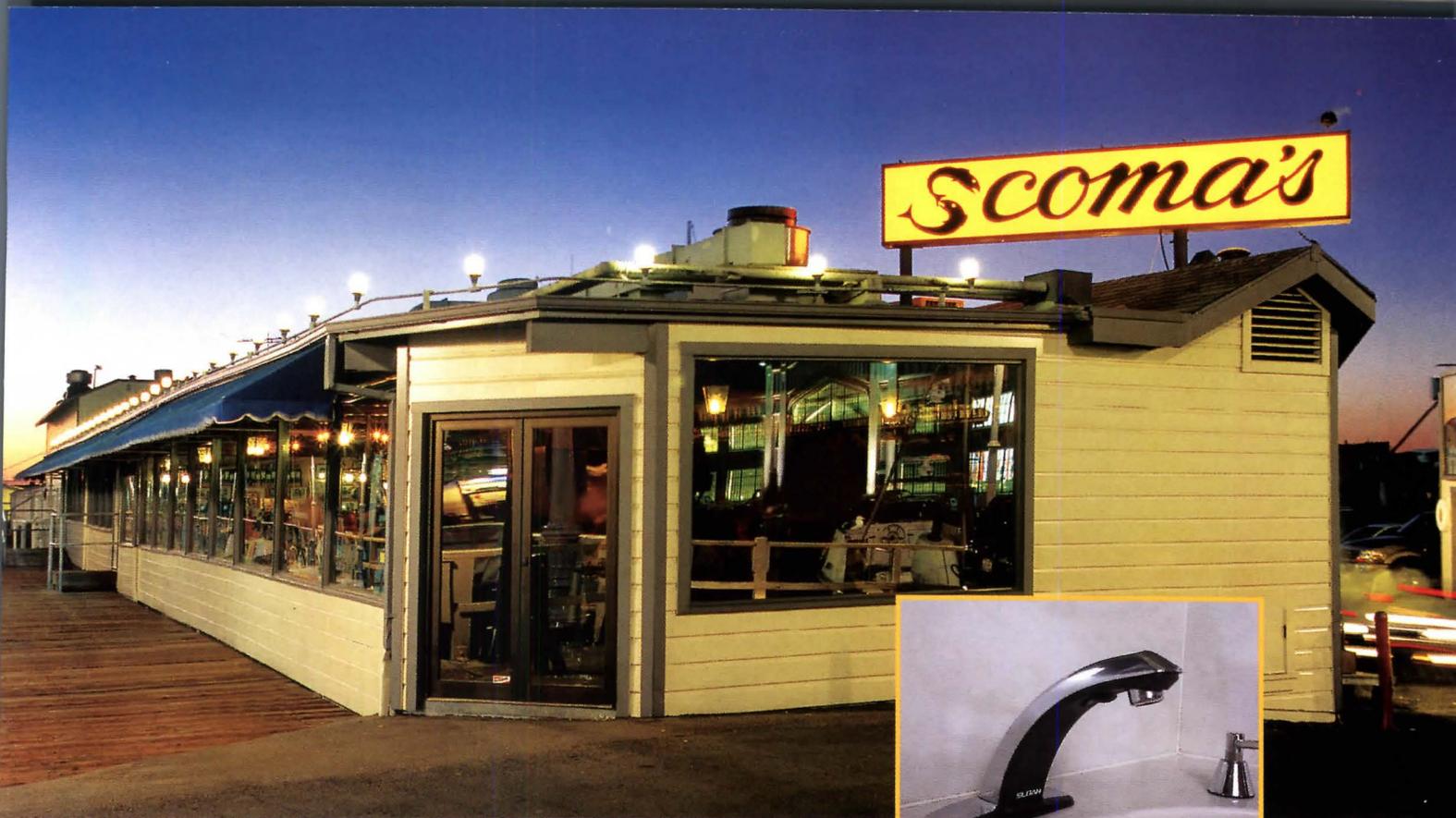
For more information on Homasote 440 Sound Barrier, call **800-257-9491**, or visit us at www.homasote.com.



440 SOUND BARRIER™
Acoustical Control Systems

Sound Deadening That Will Floor You™





WHY SCOMA'S RESTAURANT ON PIER 47 RELIES ON SLOAN OPTIMA FAUCETS

"When you're pressed for space and have one of the most popular restaurants in the area, you have to find faucets that perform AND maintain your image under heavy usage," says Tom Creedon, President of Scoma's Restaurant in San Francisco.

"That's why we chose SLOAN'S Optima® ETF-80, ADA compliant electronic faucets."

Sloan Optima designer styled, hands-free electronic faucets provided the space-savings and good looks that Creedon wanted in the restrooms of his world-famous restaurant. The faucets are mounted on the sink basin where the back and side splashguards intersect, providing a unique, hygiene-rich installation that projects a positive image to customers.

In addition, water savings are realized with Optima's adjustable hand washing time-out settings that meet Scoma's and California's stringent water conservation practices.

"We are on the pier in San Francisco Bay and practice strict water conservation at Scoma's," Creedon says. "I'd recommend Sloan's water-saving faucets to any restaurateur because they save water and have other features important to restaurants."

- *Easy maintenance for continued top performance*
- *Water-resistant and splash-proof circuit housings to protect critical components*
- *Sleek styling for design conscious, upscale new or remodeling applications*
- *Timeless craftsmanship embodying elegance without sacrificing performance*

Learn more about why Tom Creedon also recommends Sloan's Optima Flushometers and why more restaurants and owners rely on the performance of Sloan. Call **800-745-0800** or circle the number below for a copy of our full-line catalog/CD-ROM.



Sloan Valve Company
10500 Seymour Avenue • Franklin Park, IL 60131
Phone: 800-745-0800 • Fax: 800-447-8329
www.sloanvalve.com

CIRCLE 20 ON INQUIRY CARD

News Briefs

Penn's big plans After a limited competition to generate proposals for renovating Hamilton Village, four square blocks of student housing (right), the University of Pennsylvania has picked Patkau Architects, of Vancouver, and Kieran, Timberlake & Harris, of Philadelphia, to contribute designs for the site's northwest quadrant. Patkau is designing 700 new accommodations in low- and mid-rise buildings, organized around courtyards. In addition, the firm will create a "visual arts hub," supporting the practice and study of visual arts, and retail and office space on nearby 40th Street. Kieran, Timberlake & Harris will renovate the high-rise Hamilton College House by dividing the tower into two facilities, with separate elevators and lobbies, and adding new public space with a two- or three-

story "skirt" around the base. Penn hopes to start construction in 2001.

Canadian pride The Royal Architectural Institute of Canada has launched a competition that invites architects to redesign a prime, three-block area in the center of Ottawa facing the national parliament buildings. The middle block has several vacant spaces, and the organizers are hoping to generate innovative ideas that will celebrate the spot's importance.

Library laments Correcting the dysfunctional layout of San Francisco's central library may cost an estimated \$28 million, according to a new report commissioned by the city. The six-story library features a full-height atrium that complicates using and getting around the 377,000-square-foot facility, the report says. Completed in 1996 with a design by Pei Cobb Freed & Partners in association with San Francisco-based Simon Martin-Vegue Winkelstein Moris,

"the building has been well respected as a piece of civic architecture, but it has met with negative criticism with regard to accommodating the typical library functions of a large central city library," the report says. Recommendations include creating storage space next door by renovating a one-story, underground exhibit hall built in 1956 and closed in 1994. The report also calls for spending another \$17.7 million in the central library itself on various interior design, mechanical, and structural reconfigurations. What happens with the recommen-

dations will depend on the city's Library Commission.

Air time Arcwelder Films in Los Angeles has launched a series of architecturally related documentaries on the Discovery Channel. The first of three films—"Skyscrapers: Going Up"—premiered in January, while "Bridges: Reaching Out" and "Tunnels: Digging In" will make their debuts this month and in March, respectively.

Modernist monuments America's National Historic Landmarks, typically buildings from the earliest days of the



Today's environments demand more from their shades...

Style, protection, view and alignment

News Briefs

republic, may soon include some very modern-looking structures. A group of buildings in Columbus, Ind.—where the Cummins Engine Foundation has been boosting innovative architecture since 1957—is under evaluation for landmark status by the National Historic Landmarks division of the National Park Service. The area includes buildings designed by I. M. Pei, FAIA, Eliel and Eero Saarinen, Kevin Roche, FAIA, Robert Venturi, FAIA, Cesar Pelli, FAIA, and a long list of other notables.

Friendly design The Friends of Photography Gallery in San Francisco, which includes the Ansel Adams Center, will open later this year in a new location designed by San Francisco's Pfau Architecture. The new structure, which will provide access to the neighboring SFMOMA, will have a pristine look of white walls

and hardwood floors and will have wood-and-metal shelving systems that stretch from floor to ceiling.

Earth first at Oberlin Work is complete on the Adam Joseph Lewis Center for Environmental Studies at Oberlin College. The center, designed by the Charlottesville, Va., firm William McDonough + Partners, is meant to be a model of sustainability and serve as a practical teaching tool for students. The building and landscape were designed to illuminate underlying lessons about the impact of human beings on the earth, the elimination of waste, and the environmental costs of energy consumption. The 13,500-square-foot complex includes a two-story building with classrooms and offices and a smaller structure with an auditorium and a "Living Machine," which filters the building's waste water through a series of marshlike ecosystems. The main building's north wall is insulated by an earth berm planted with fruit trees, while a pond and wet-

lands filter storm-water runoff.

Not a bridge too far A federal appeals court has rejected opponents' objections to a new Woodrow Wilson Bridge near Washington, D.C., and said federal officials adequately followed environmental and other statutes in their reviews of the \$1.9 billion project. The decision reverses an April ruling by a federal district court. The case centers on plans to replace the existing Wilson bridge, a six-lane bascule bridge constructed in 1961 that is straining under the more than 190,000 vehicles it carries each day. A study has found that, by



Oberlin's center for environmental studies.

about 2004, the existing bridge will require a major overhaul or a ban on heavy vehicles. The replacement plan favored by federal and state officials calls for two new 6,000-foot-long bascule bridges, each with five lanes, plus room for two future lanes for high-occupancy vehicles or light rail.

Hello, Cleveland The Arcade, a shopping and business center in Cleveland since opening in 1890 and the first Cleveland building to be placed on the National Historic Register, will soon have a new life—as a Hyatt Regency. The structure's two towers and the top three floors of the atrium concourse will be a luxury hotel, while the first two floors of the concourse will host a food court and retail shops. The hotel, designed by architect Johnathan Sandvick, AIA, is expected to open in 2001. ■



MechoShades® and ElectroShades® meet the need for a healthier more productive space by providing...

- Solar protection & view
- Assured alignment
- Glare & brightness control
- Energy efficiency
- Controlled daylight
- 10 Year Fit-For-Use Warranty
- Minimal maintenance

Manual MechoShades and motorized ElectroShades are available for standard windows, greenhouses, atriums and skylights—all integrated into a uniform cohesive environment.

For more information call
1 877-774-2572



MechoShade®

MechoShade Systems, Inc.
42-03 35th Street, Long Island City, NY 11101
<http://www.mechoshade.com>

CIRCLE 21 ON INQUIRY CARD



Washington Hall, center stage for theatre and cultural events at Notre Da
Built in 1881, this modern Gothic structure was named by Father Serrin
himself, Notre Dame's founder, in honor of his great hero, George Washington

You've got to be good to go into Notre Dame and leave with a victory.

When the University of Notre Dame decided to replace the windows in two of the more historic buildings on its storied campus, all the major manufacturers wanted the job. But as they learned more about the size and scope of the project, the list began to dwindle. Since both buildings are on the National Register of Historic Places, Notre Dame wanted windows with wood interiors that matched the appearance and profile of the originals. To minimize



The wood interiors of Marvin's windows are virtually identical to those installed a century ago.

For the exterior aluminum cladding, an appropriately-named custom color was created: Irish Bronze.



maintenance, another demand was aluminum clad exteriors. Marvin Windows and Doors emerged victorious. And designed and built 310 windows for the project, not one of which was a standard size. Not only that, but the casings were factory applied and a custom color for the exterior cladding was developed to replicate the 100 year-old originals. If you have a challenging commercial project, contact the company that has a reputation for winning the tough ones.

MARVIN 
Windows and Doors

Made for you.

For a free catalog, call 1-800-236-9690. In Canada, 1-800-263-6161. www.marvin.com

1200002A

Go To

WWW.architecturalrecord.com

• PROJECTS

- Learn more about projects featured in RECORD

• ABOUT RECORD

- Subscribe
- Submit a project
- See the 2000 editorial calendar
- Shop for reprints, books, and back issues
- Index
- E-mail us

• FEATURES

- Business Week/Architectural Record Awards
- Green Architect
- Digital Architect

DIALOGUE

- Submit news
- Write letters to the editors

• CONTINUING EDUCATION

- Continuing-education articles
- Self-report form

• RECRUITMENT

- Employment opportunities

• ADVERTISER & PRODUCT INFO

- Link directly to RECORD advertisers

• PROFESSIONAL DIRECTORIES

- Add your company to this listing of architecture firms and consultants

MEET THE PEOPLE AND THE PRODUCTS

SIMPLY CLICK PROJECTS to contact the people and the product manufacturers involved with the projects in ARCHITECTURAL RECORD. **New university projects this month:** Vontz Center, University of Cincinnati by Frank Gehry; Simon's Rock College; Yale's Berkeley College. **Building Types Study: Revitalized Hotels:** Avalon; Burnham, Ace and Le Germain. Plus, **Record Lighting projects:** San Francisco City Hall; Ingo Maurer showroom; Don Carlson House.



THE GREEN ARCHITECT

The **green products guide** is organized by division, with product descriptions and links to manufacturer Web sites. New "green" products are added each month. Products are evaluated for **durability, recycled content**, and other attributes—making it easier to choose products that are **resource efficient**. Find vital coverage of "green" issues, sustainable design, and newly built structures that respect the environment here.

DIGITAL ARCHITECT

GO HERE to find Vendor Guides and software reviews with links to manufacturer web sites. **NEW this month:** software to help small firms create big projects, with vendor list. You can also refer to past Digital Architect columns, digital product reviews and related Vendor Guides.

GET CES CREDITS ONLINE On architecturalrecord.com, you can read RECORD's continuing-ed self-study courses, do test questions and answers, fill out the self-report form, and hit SEND to file for CES credits. Most articles provide one AIA learning unit and one hour of HSW credit. Go there to find the full list of RECORD courses starting with May 1996.

CLICK ON RECRUITMENT for career opportunities for architects and related professionals, from firms and universities nationwide.

CONNECT TO ADVERTISERS Do you want to get in touch with manufacturers? Go to Advertiser & Product Info to search by advertiser name or product type and link directly to their Web sites.

BUSINESS WEEK/ARCHITECTURAL RECORD AWARDS, sponsored by the AIA, honors the achievement of business goals through architecture and distinguished collaboration between clients and architects. To enter, access registration information in this issue or on architecturalrecord.com. Register by March 16, 2000. Submissions must be postmarked by April 18, 2000.



Fearing runaway sprawl, Silicon Valley heads downtown

Correspondent's File

By Eric C. Y. Fang, AIA

DEPARTMENTS

Driving down Route 101 or Sand Hill Road, two of the main drags in Silicon Valley, it's hard to tell you're in the technology capital of the world. With its jumble of strip centers, parking lots, and tile-roofed office parks, the region—properly known as the Santa Clara Valley—looks much like any other California suburban landscape.

With \$1 billion of venture capital per month flowing into the area and land prices quadrupling in the late 1990s, however, this 50-mile-long strip running south along the San Francisco peninsula between the Santa Cruz Mountains and the Diablo Range is undergoing extensive change.

The local press has naturally looked to the valley's research and development campuses for tangible built expression of the hype surrounding computer companies like Intel, Cisco, and Netscape. Indeed, recent projects, such as those by San Francisco's STUDIOS for 3Com, Silicon Graphics, and Excite@home, have given Silicon Valley R&D campuses their own sense of style.

Nevertheless, a broader transformation is taking place, one that involves regional planning, transit initiatives, and a renewed focus on downtown areas. These strategies promise to alter the valley's landscape much as the influx of industry after World War II transformed the citrus groves and

canneries into a vast carpet of suburban developments and tilt-up industrial buildings.

Nowhere is this change more evident than in San Jose, a city of more than 900,000 people that has cleverly fashioned itself the capital of Silicon Valley. Although historically it was the commercial center of the Santa Clara Valley, San Jose's downtown was decimated by insensitive urban renewal, massive freeway construction, and sprawling residential development after World War II.

A fresh start

In the 1980s, Mayor Tom McEnery appointed architect Frank Taylor to bring new life to the San Jose Redevelopment Agency, known primarily as the perpetrator of urban renewal. Taylor rebuilt the agency into a powerhouse, complete with a 10-person urban design studio, but he still faced many challenges. San Jose has had to contend with a pair of stifling physical constraints: the proximity of the San Jose International Airport, which limits buildings to 27 stories, and a high water table, which effectively eliminates underground parking. Because of the height restriction and the enormous parking podiums, the cost of downtown commercial development has been prohibitive, as the redevelopment agency's Jeff Oberdorfer explains.

A key breakthrough for the agency under its new regime was to merge the city's redevelopment areas into one discrete entity. As a result, the downtown would benefit from tax revenues generated by

other locales, most notably the Rincon de los Esteros industrial redevelopment area to the north. The success of Rincon, dubbed the "Golden Triangle" because of its many high-tech companies, ensured a revenue stream of about \$90 million a year into downtown San Jose.

With its funding scheme in

new arena. More recent projects, such as the iconoclastic steel-clad Repertory Theatre designed by now-disbanded Holt Hinshaw Pfau & Jones, the recently opened Biblioteca Latino Americana by Steven Erlich Architects, and the blue-domed Tech Museum by Legorreta—perhaps the first monu-



San Jose, which calls itself the capital of Silicon Valley, has tried hard to draw residents and businesses back downtown.

order, the redevelopment agency concentrated on the city's cultural and institutional infrastructure. The strategy bore fruit by the late '80s with the construction of the San Jose Museum of Art, designed by Skidmore, Owings & Merrill's San Francisco office; the Children's Discovery Museum, by Ricardo Legorreta, HON. FAIA; a convention center by Mitchell/Giurgola; and a

ment to Silicon Valley's technological culture—have revealed the agency's predilection for innovative, contemporary design and its goal to address the city's Hispanic heritage.

Most important at present is the agency's initiative to revitalize the downtown civic center. The strategy has been guided by an urban design framework developed

Eric C. Y. Fang lived in San Francisco for nine years before moving to New York City to be an urban designer and architect at Beyer Blinder Belle.

Correspondent's File

by Sasaki Associates' Marin County office that calls for incremental growth of a seven-block civic district through a series of infill projects organized around a linked public framework of arcades, plazas, and courtyards. The first buildings in this plan will be a symphony hall, designed by SOM San Francisco, the Horace Mann School by Moore Ruble Yudell, and a public library by Gunnar Birkerts, being developed jointly with San Jose State University.

A new city hall by Richard Meier & Partners will anchor the revitalized civic center—eventually. Meier's preliminary design for the building, scheduled to open in 2003, features a 16-story tower sitting above a double-height arcade and a sculptural city council chamber. Despite efforts by Meier to convince the community of his design's worth, the concept has been roundly criticized and was recently ridiculed by the *San Jose Mercury News* as a "cold, semi-futuristic spaceport." Last fall, Mayor Ron Gonzalez ordered the firm back to the drawing board for changes.

The redevelopment agency has also aggressively promoted the construction of housing units downtown, for which the agency has drawn on the talents of notable San Francisco housing designers: Projects like 101 San Fernando by Daniel Solomon and Paseo Padre by Bruce Ross of Backen Arrigoni and Ross are remaking the character of the city's downtown residential neighborhoods from single-family bungalows to more urban-scaled four- and five-story complexes organized around raised courtyards.

Despite the progress, all is not well with the redevelopment agency, which is receiving mounting criticism from preservationists and affordable-housing advocates. With the state legislature debating the possible expiration of the agency's funding authority, and Taylor's retire-

ment last summer, the golden era may be waning.

Outside San Jose, tax revenues generated by the surge in high-tech development have been harnessed by several smaller cities to revitalize once struggling downtowns. In Mountain View, industrial land formerly occupied by defense contractors is being transformed into R&D parks and residential developments, while the city has built a series of downtown public buildings, including a city hall by the late William Turnbull, a public library, and urban-infill housing projects. Meanwhile, in Palo Alto, the converted industrial buildings in the area south of Forrest Avenue (known, of course, as SOFA) have become favorites of hip product design firms.

The flip side of Silicon Valley's success is an imbalance between jobs and housing that has caused housing prices to spiral out of control. While residential developments continue to sprawl farther to the south and the east, increased land costs and worsening traffic have spurred cities in the valley to try different approaches.

Transit tactics

As a result, transit stations have become focal points for significant residential development. The Santa Clara Valley Transportation Agency has initiated a series of developments that incorporate a mix of uses and densities, creating a walkable, villagelike environment. Several of the smaller cities located along Caltrain, the commuter rail line linking San Jose and San Francisco, have followed suit.

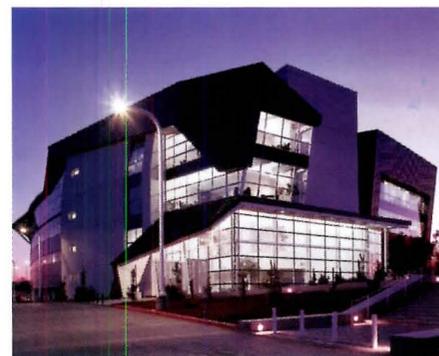
These "transit-oriented developments" are designed to get people off the roads and—for the first time—onto mass transit. Two projects by Peter Calthorpe offer a glimpse of this new suburban future. The Crossings, 400 housing units on the site of a failing strip center, was



Gunnar Birkerts' public library in San Jose will also be a university facility.



The Crossings provides easy access to a neighboring Caltrain station.



3COM's Santa Clara headquarters, designed by San Francisco's STUDIOS Architecture.

designed to create easy pedestrian access to the neighboring Caltrain station and supermarket. Calthorpe's plan for Bay Meadows, on the site of an old racetrack in San Carlos, combines corporate campus housing and entertainment, mainly cinemas, in a pedestrian-oriented development linked to another Caltrain station.

Even a belated focus on transit may curtail the sprawl that is so

deeply etched into Silicon Valley's landscape and lifestyle. Optimistic planners envision a network of villages linked by light rail. Critics of the plan fear that superimposing mass transit on an auto-oriented region may create what San Jose city planner Andrew Crabtree calls a Tokyo-style "transit sprawl." Still, the new urban plans are supported by environ-

mentalists, business leaders, and regional government and non-government agencies—disparate antisprawl advocates and commuters fed up with traffic and rising housing costs. As the gold rush that has become Silicon Valley enters a new decade, the looming question is whether real change can be implemented before, as Daniel Solomon warns, "they strangle the goose that laid the golden egg." ■

Competitions: Opportunity or exploitation?

Practice Matters

By Andy Pressman, AIA

DEPARTMENTS

Architectural competitions have often been likened to a double-edged sword. On one hand, they can provide architects with opportunities, enlighten the public, and advance the design dialogue. On the other, they can exploit architects from financial and intellectual property standpoints. One thing is clear: the stakes can be very high—big money and reputations are often at risk.

Opportunities

Rolf Schnebli, a Swiss architect, views competitions as “continuing education,” because they offer the opportunity to experiment with new technologies and design options. Bruce Kuwabara, principal of the Toronto architecture firm KPMB, is also emphatic: “Competitions are an important way of expanding our thinking. We see them as part of our body of work.” Indeed, architects can push the design envelope in competitions because they encourage an open and inventive approach to projects. Even losing schemes can enhance a firm’s marketing portfolio, particularly in difficult economic cycles. Moreover, competitions provide a chance for small, evolving firms to have a shot at large-scale commissions.

Roger Schluntz, FAIA, a noted professional advisor for competitions, suggests that one of the biggest beneficiaries of design competitions is the public. The

Andy Pressman, AIA, is associate professor of architecture at the University of New Mexico and leads his own architecture firm in Albuquerque.

educational consequences of presentations, exhibits, and the media can be extraordinary. Schluntz says, “as a result of the increased awareness of the value of design and heightened expectations, both the profession and public can profit.”

Regardless of the outcome, participating in competitions can benefit a firm. New York City-based Kohn Pedersen Fox (KPF) used a competition to pursue its first project in the health-care industry, an effort that earned a third-place award. Even though KPF didn’t win, the partners were delighted; the experience increased the firm’s knowledge of this market and positioned it for similar future projects.

In theory, competitions provide the possibility to secure commissions on pure merit. KPF’s London office entered 30 competitions (and won a staggering 17) in its first four years, giving the firm an almost instant reputation and workload. Competitions in Europe tend to be more frequent, shorter in duration, and less costly than those in the States, thus minimizing the risks and increasing the potential return for the architect.

The down side

Still, all competitions involve some risk for the professional. The biggest problem, according to New River, Ariz.-based architect Will Bruder, FAIA, is politics. Jurors frequently have personal agendas. Bruder cites a competition in which he participated where all five finalists were either former students or employees of jurors. “How can jurors be objec-

tive under those circumstances? It’s a travesty!” exclaims Bruder.

In the most egregious examples, clients or juries have chosen an architect before the competition begins. Architects have also charged that their ideas have been used even when they did not win. RECORD has received numerous complaints from architects who felt that their intellectual property had been appropriated without credit or remuneration.

For architects who don’t win, the costs can be substantial. Even if an honorarium is given, it rarely covers all the architect’s expenses. Michael Graves, FAIA, deems this “a hideous way to select an architect.” Notwithstanding the aforementioned successes of his firm, KPF, Gene Kohn, FAIA, believes it’s unfortunate that architects are eager to do competitions without a fee. He says these professionals are giving away their most valuable assets: creative ideas.

Because good buildings require the consensus of users and designers, competitions are further criticized because there is no dialogue between client and architect. Hugh Hardy, FAIA, of Hardy Holzman Pfeiffer Associates in New York City, believes the process is inherently flawed. Lacking “proper access to the client,” he says, “an architect alone cannot represent all the values required for the best buildings.” Schluntz suggests this may not always be the case: “Development of a detailed program for the competition should help distill the issues. After the architect is select-

ed, the dialogue begins anew.”

Recommendations

Entering competitions requires vigilance on the architects’ part. Critical assessments of selection criteria and jury predisposition are essential to understanding the politics. The financial risks are too high if a firm has no chance to win.

The architect should also understand the competition’s rules regarding intellectual property. Typically, the architect owns the “Instruments of Service” and grants the sponsor a nonexclusive license to publish and display submission drawings and models. Once ideas have been published and displayed, however, they can creep into the subconscious, making it difficult, if not impossible, to prove plagiarism. Having an agreement that binds the sponsor and each firm to the competition’s schedule, requirements, and honorarium prior to the start of the competition is a must.

The very best competitions result in better designs than the RFQ process and provide ways for architects to excel based on talent alone. Poorly run competitions, on the other hand, can mire architects in a political muck, which can be costly and unnerving.

The notion of the architectural competition is analogous to a Shakespearean play. In addition to the rarefied layer of design excellence, there’s an abundance of subtexts: power struggles, political agendas, and financial issues. Indeed, the Bard might have been “in love” with architectural competitions. ■

formz

3D FORM SYNTHESIZER



A multi-use stadium located in Guadalajara, Mexico, by Morphosis, Santa Monica, California. All modeling and rendering by Ung Joo Scott Lee.

The most complete set of modeling tools for 3D design.

Thom Mayne, Principal of **Morphosis**: "One of the most significant benefits derived from the integration of computer technology in the design studio is the ability to create both presentation material and construction documents out of the same epigenetic material. The 3D model utilizing **form•Z** is the initial departure point of the design process. A continual refinement of the 3D model both informs the design and brings another level of precision and coherence to the project. It's a tool which assists us greatly with the issues of simultaneity, which might be seen as the consistently singular issue of the 20th century."

3D solid and surface modeling software at its best, with
Visit us at www.formz.com to download a free demo.



photorealistic rendering, radiosity, and animation.
Call (614) 488-8838 or fax (614) 488-0848 for information.



CIRCLE 27 ON INQUIRY CARD

Does the “starchitect” system promote good design?

Critique

By Cynthia Davidson

Architects are normally called in when one intends to build a beautiful building: this is what we may well affirm architecture consists of today . . . all the rest of architecture, other than ornamentation, is of so little importance and of so little glory for architects that few of them are proud of it.

—G. B. Piranesi, *Parere su l'architettura* (1765)

These days, hardly a week goes by without a mention of Frank O. Gehry, FAIA, in the mass media. In late June and July alone, for example, the *New York Times* ran four articles, respectively, in the metropolitan, arts, and home sections, describing Gehry's current work in Chicago; Spain; Washington, D.C.;

Cynthia Davidson is editor of ANY magazine and a series of books documenting the Anyone Project conferences.

and Panama. Each article was illustrated with a photograph of the architect, not of the architect's work, in effect equating Gehry's thoughtful, slightly ruffled visage with the already well-known, shiny image of his Guggenheim Museum in Bilbao.

This media attention, clearly owed to the fantastic image and related success of the Bilbao building and not to the unrealized designs of the new projects being reported, cannot hurt the career of Frank Gehry. Name or face recognition may even help him get the power table at a good restaurant. But, is celebrity good for architecture? And for the many in the profession who have disparaged the so-called “starchitects,” can we argue that fame can also lead to good architecture?

I, for one—and I take myself to be in the minority—say yes to both questions. If the fame game is not played in architecture, then the pro-

fession is not engaged in contemporary life.

A celebrity culture

That celebrity drives the aesthetic and economic engines in America today is obvious to anyone who follows current events. Just recall the August launch of *Talk*, yet another celebrity magazine, only this time the editor, Tina Brown, is a celebrity herself. Or take last summer's show at the Museum of Modern Art in New York City, “Fame After Photography.”

Mounted in galleries more reminiscent of the celebrity-inspired Hard Rock Cafe than the midtown bastion of high culture, the exhibition featured images of celebrities—all made famous by the power of the pervasive image—in and on everything from newsreels to magazine covers to cereal boxes.

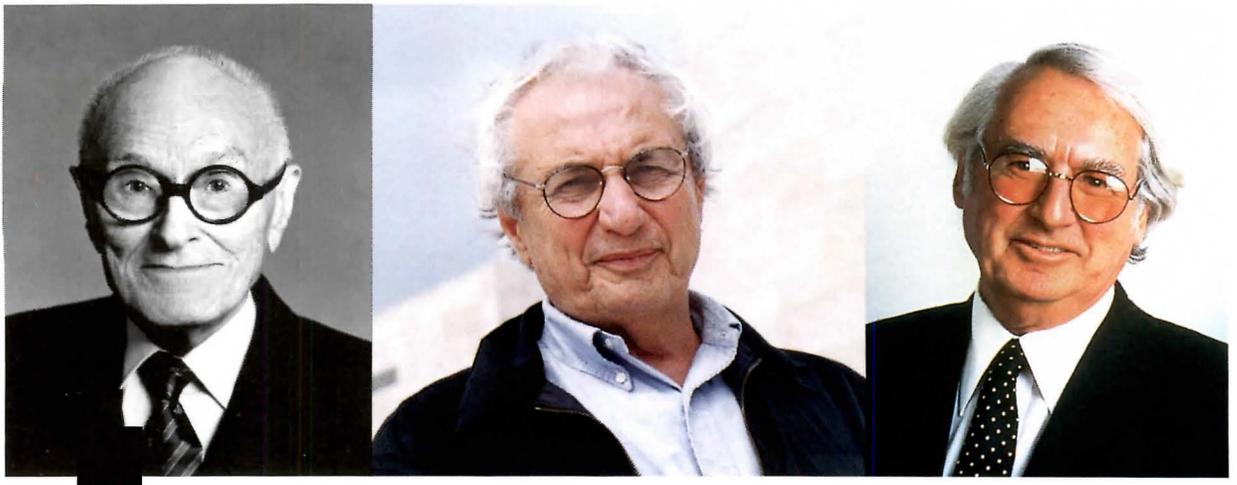
Nowhere in this popular show—which to the crush of viewers on a July morning appeared to

be simply a trip down memory lane—was there a photograph of an architect. No Frank Lloyd Wright in his signature cape and porkpie hat; no Philip Johnson, FAIA, or I.M. Pei, FAIA, in their iconic owly glasses; not even Michael Graves, FAIA, hawking shoes or Target tea kettles. By comparison, “The Un-Private House,” an architecture exhibit in the adjacent galleries, was sparsely populated that day, with most viewers gathered around an interactive image-producing dining-room table.

Architecture and architects may not have a history in the image banks of mass-market media, but as “Fame After Photography” curators Marvin Heiferman and Carole Kismaric write, “In the visual culture we live in, there's no relief from fame.”

The image-driven media clearly has become the staple of the American cultural diet. The most powerful illustration of media's

Known by the masses
(left to right): Philip Johnson, FAIA, Frank O. Gehry, FAIA, and Richard Meier, FAIA.



Critique

increasing manufacture of and reliance on fame for its own sake was its coverage of John F. Kennedy Jr.'s death last July. As photographs and video clips of the young Kennedy were endlessly replayed across TV screens and tabloids, one realized that, given his relative youth, JFK Jr.'s primary contribution to society had been his celebrity status itself.

As Heiferman and Kismaric write, "Human achievement doesn't appear on schedule, but newspapers, television shows, movies, and magazines have to." In his life and in his death, JFK Jr. served the media's voracious need to fill air time and column inches.

A different animal

Architecture moves too slowly for media's schedule. It is seldom seen as media material unless a roof collapses, leaving a dramatic photo opportunity in its wake, or, in the case of the Guggenheim Bilbao, something extraordinarily different and beguilingly photogenic rises on the landscape.

Neither scenario, however, occurs with any frequency. As a result, such an occurrence brings a certain degree, unwanted or not, of fame to the architect involved. It is simply the media's—and society's—way of assigning blame and/or credit

and a human face to an inanimate object. Yet architecture as a profession has seemed reluctant to claim a piece of media space or otherwise seek celebrity. For example, the AIA's managing director of communications, Charles Hamlin, declined to discuss the subject of fame in relation to the AIA's long-studied television advertising campaign, saying he thought the concept relatively unimportant.

But it may be to its own detriment that the profession continually denies rather than recognizes the power of the media image, whether it be of a famous face or a famous facade.

Signs of the times

How did fame become such a pervasive value of our culture? Times were simpler when architecture functioned as a sign, when a steeple signaled a church, or columns and a pediment the strength of society's basic institutions. The changes in social and economic values that accompanied and even fostered the Modern movement eventually reduced the power of the sign to an abstraction. The new "sign" became the image, the logo, or the cover photo, which in turn helped to spawn the visual culture that now predominates in the Western world.

As if unaware of the changes, architecture has relinquished its role as meaningful icon to the 30-second sound bite, becoming primarily a mute background to media's

visual cacophony. As a result, architecture's significance in the public eye was lost to the cult of the image and, concurrently, the cult of celebrity.

When Philip Johnson beamed from the cover of *Time* magazine in 1979, cradling his Chippendale-topped AT&T tower, he unwittingly ushered in a new era of architectural celebrity. Perhaps eager to recognize leaders of the new, image-making Postmodern style—an architectural movement that

REPEATED EXPOSURE CAN LEAD TO WORK OPPORTUNITIES FOR ARCHITECTS WHO MIGHT OTHERWISE REMAIN INVISIBLE.

reintroduced signs like the column and pediment—the media tapped Johnson, Graves, and Robert A.M. Stern, FAIA, each of whom became nationally recognized. "Pomo" passed quickly, lasting maybe a decade, but the famous architect syndrome did not; indeed, there are more "starchitects" than ever. Richard Meier, FAIA, has been one since the 1970s, and the media hoopla surrounding his Getty Center in Los Angeles solidified his place in the public eye. Across the Atlantic, London's Lord Norman Foster has achieved a similar status.

The most recent is perhaps Peter Zumthor, the Swiss "recluse" whose celebrity status was announced in 1999 with a slim volume of thoughts, a richly printed, oversized picture book, and a *New*

York Times profile. As the proliferation of media demonstrates daily, fame is not the provenance of the few. But it is the few who achieve sustained celebrity, a status architects earn by consistently producing not only work that creates an image but also, in the case of Gehry and Rem Koolhaas, for example, original and important work.

The influence of media is a fact of life that architecture must learn to use. Repeated exposure may lead to a kind of celebrity sta-

tus, but it can also lead to work opportunities for architects who might otherwise remain invisible. Today, clients who want not just a building but an image that can be used for market advantage—the new IBM Headquarters in Armonk, N.Y., by Kohn Pedersen Fox is one example—often seek "stars" who attract media attention to bring their projects notice.

When architects use their celebrity to also bring such commissions to a level of distinguished design, this can only benefit the public and the profession as a whole. The media spotlight puts pressure on architects, for it raises public awareness, and expectations, of architecture, and in so doing it keeps architecture culturally at play. In this task, media and fame, are architecture's allies. ■

Star quality (left to right): Michael Graves, FAIA, Robert A. M. Stern, FAIA, and Lord Norman Foster, HON. FAIA.



Snapshot



By Elizabeth Harrison Kubany

Designed in 1964 by Kevin Roche, FAIA, and the late John Dinkleloo, the Fine Arts Center at the University of Massachusetts at Amherst is a Brutalist mass of cast-in-place concrete that houses a concert hall, black-box theater, and art gallery.

In between the volumes that contain the concert hall and theater, an open plaza formerly ran from north to south. Instead of creating one clearly identifiable entrance into a central lobby space, Roche and Dinkleloo put separate theater entrances on either side of the plaza. Their use of an architectural void to signal an entryway was problematic for several reasons.

The open plaza took the place of lobby space for the two theaters—an inappropriate solution for this temperate climate. Particularly in winter, this open space became a vortex and sucked in wind off the pond on the north side of the building, making it an uncomfortable place to be. Moreover, the entrances were shallow, with only about 12 feet between the entrance doors and the far walls of the

A trio of glass boxes makes a colorful entrance

Snapshot

theaters, giving patrons no place to gather before, during, or after performances. Finally, water leaking from the plaza into the art gallery below it was a constant problem.

The challenge for Perry Dean Rogers & Partners of Boston, commissioned in 1997 to solve these problems, was to define a 5,000-square-foot entrance that would act as a marquee—announcing the building's presence on campus—and a gathering space. Like a bejeweled howdah on the back of a two-ton elephant, the tiny shelter commands far more attention than the original 250,000-square-foot structure.

Conceptually, the project consists of three glass boxes—one large, central box and two smaller boxes—that connect the concert hall and theater and make a large gathering space while maintaining a link between the upper and lower parts of the campus. Two types of glass—semitransparent, cast channel glass (a German product where one piece of C-shaped glass interlocks with an adjacent piece) for texture and standard shop-front glazing—offer differing levels of transparency and direct the viewer's eye through the entrance.

In clear contrast to the massive opaque concrete volumes of the existing building, the new lobby is luminous and colorful. As design principal Peter A. Ringenbach, AIA, explains, "amid the dull, monochromatic mass of the concrete structure, the use of light and bright colors was intended to attract people to this object and announce it clearly as the entrance."

Plaster sculptural lanterns—the northernmost one painted bright yellow and the one in the center bright red—hang from the structure of two of the glass boxes. During the day, their bright colors are visible through the glazing. At night, the illuminated, painted surfaces fill the glass boxes with saturated color. At the south elevation, colored lights provide a continuously changing spectacle.

The new entrance, while of a different time and style, completes the existing building. Where

the original architects left only a void, Perry Dean Rogers & Partners has designed something powerful, which functionally and aesthetically fulfills its purpose and does so with flair. ■



Two types of glass offer differing levels of transparency to direct the viewer's gaze through the building (above and below). Colored lights animate the south elevation at night (below right).



FVS Architects, Inc., Atlanta, GA
 Director Of Design and Architect In
 Charge: Clarence T. Vinson, AIA
 Design Associate: Preston Bennett
 General Contractor: Dudley Barrett,
 Atlanta, GA • Fenestration: Andersen®
 Flexiframe® and casement/lawning
 structure windows in white color with
 Perma-Shield® low maintenance
 interiors and energy efficient Andersen
 High-Performance Sun™ glazing



Architecture Defined.

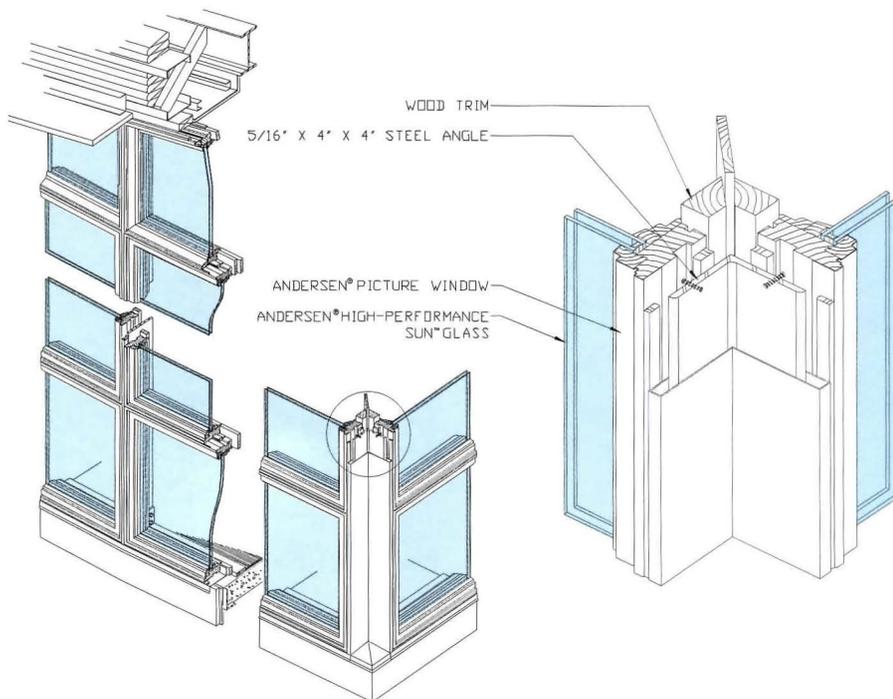
Andersen® Flexibility Refined.

"We wanted our new offices to be a
 statement about what we do as architects,"
 said Director of Design Clarence Vinson.
 The result? Using interlocking forms,
 vertical planes and contrasting materials,
 the firm defined its profession, and
 defined the role of Andersen® windows in
 commercial design.

"We used the Andersen Flexiframe®
 windows in a truly flexible way," said Mr.
 Vinson. "Below the curved roof soffit, we
 specified the height for each vertical
 column and the windows were made to
 follow the arc without curving themselves.
 Show them, Andersen helped us create a
 chainwall look by using their standard
 fixed windows with low maintenance
 interiors and energy efficient glazing."

Andersen people were flexible, too. Said
 Mr. Vinson, "From the expert support of
 the architects in the Andersen Commercial
 Group, SM to on-time delivery by the local
 distributor, everyone was incredible."

This is how Andersen helps architects
 achieve imaginative, flexible window
 solutions. Call on us to play a definitive
 role in your next project.



For a cd-rom project portfolio featuring this
 design and more than 150 other projects, call
 1-800-426-7691, EXT. 2617



Also ask for our catalog or visit
WWW.ANDERSENWINDOWS.COM

"Andersen", the AW logo, and all other marks herein are marks of Andersen Corporation. © 1999 Andersen Corporation. All rights reserved. 92333-AR

CIRCLE 31 ON INQUIRY CARD

bulthaup Kitchen Architecture

For architects in Europe, the kitchen has long been understood as a personal and professional challenge, an opportunity to express architectural concepts, combined with personal expectations and preferences. An opportunity to transport architecture into the interior space. An opportunity to expand the scope of professional services. In Europe, architects' preferred affiliation for kitchens is bulthaup.

bulthaup Kitchen Architecture is different, not only in design, but also in the entire approach to kitchens. bulthaup understands kitchens as modern architecture, a total life-style, an unmistakable look with free-standing elements, a mix of materials such as stainless steel, wood, aluminium and glass, as well as the most technologically advanced systems. For more than 50 years, the name bulthaup has stood for Kitchen Architecture.

Now bulthaup is introducing Kitchen Architecture to America. The principles of architecture applied to the design and construction of kitchens in a residential environment. Reduced to the essential. Esthetically minimalist. Perfect balance of materials and dimensions.

Residential kitchens have become a highly specialized and sophisticated business in America. If you see the potential, we would like to talk to you to explore the opportunities in the market.

Please contact Ute Mack, Manager Trade Relations, in NYC at 212 966 7183 or one of the regional bulthaup partners listed below to arrange for a personal contact and a presentation of how you can benefit from the affiliation with bulthaup Kitchen Architecture.

New York

bulthaup corporation 578 Broadway 212.966.7183

Philadelphia

bulthaup studio Inc. 132 North 3rd Street 215.574.4990

Boston

bulthaup @ repertoire 114 Boylston Steet 617.426.3865

Los Angeles

bulthaup showroom LA 153 S.Robertson Blvd. 310.288.3875

San Francisco

bulthaup @ LIMN 290 Townsend Street 415.543.5466

San Diego

bulthaup La Jolla Inc. 7629 Girard Ave 858. 456.8530

Salt Lake City

bulthaup/Utah 801.323.1175

Florida

Hope Sound 921 Cypress Way 561.546-1306

bulthaup

CIRCLE 32 ON INQUIRY CARD





GSA: Uncle Sam speaks up for high design

The nation's biggest landlord just found style

By Andrea Oppenheimer Dean

If you want to see how American public buildings are changing, just look at Ed Feiner's walls. Edward Feiner, FAIA, is chief architect of the General Services Administration (GSA), landlord for 350 million square feet of space and director of the federal government's biggest building boom since the New Deal. On one wall in Feiner's Washington, D.C., office are images of Great Society-era federal building projects: isolated, faceless boxes, most of them designed by interchangeable firms. On the adjoining wall are drawings and photographs of recently commissioned projects. Most are urban-oriented and as diverse as their designers, among them Richard Meier, FAIA, Kate Diamond, FAIA, Henry N. Cobb, FAIA, Thom Mayne, AIA, Frances Halsband, FAIA, Mehrdad Yazdani, AIA, Robert A.M. Stern, FAIA, and Andrea Leers, FAIA.

What happened to effect this extraordinary change in course? At

Andrea Oppenheimer Dean is a contributing editor for RECORD based in Washington, D.C.

the turn of the last decade, two forces were pushing in the same direction. One came from the outside, from a new courthouse building program and the example of a couple of judges intent on nabbing the best architect for their new building. A similar impetus came from within GSA, largely instigated by Feiner, an unlikely bureaucrat. "If he didn't exist, we would have had to invent him," says Robert A. Peck, GSA's Commissioner of Public Buildings. Feiner—shod, as always, in cowboy boots and coiffed in a crew cut—will tell you excitedly in a Bronx accent that he was "always interested



Project: Oklahoma City Federal Campus
Architect: Ross Barney Jankowski
Consulting architect: The Benham Group
Budget: \$25-\$30 million
Completion date: 2002

in finding the basis of how design molds culture.” He arrived at GSA in 1981, charged, he says, with changing the quality of government design.

Opportunities to do so were scant during the Reagan and early Bush years, until 1990, when the government launched a \$10 billion building program. By coincidence, the government’s building boom began during the economic recession of the early 1990s when even widely published architects were short of work. Since the 1960s, the number of federal judges had nearly quadrupled; criminal cases alone had increased by nearly 200 percent between 1980 and 1990. Most old courthouses, bulging at the seams, were nightmares for the federal marshals in charge of security, mainly because existing circulation forced the public, judges, and defendants to traverse the same corridors and use the same restrooms. The courtrooms, themselves, were ill-equipped to cope with increasingly complex trials that often involved teams of attorneys, multiple expert witnesses, and sophisticated information technology. And so the bulk of new construction, about \$8 billion worth, would go to building 159 courthouses, of which 25 have been completed. An additional \$700 million a year was slated for modernizing existing courthouses.

Reinventing the standard

In Boston, district judges Douglas P. Woodlock and Stephen Breyer (now a Supreme Court justice) insisted that their planned courts building be exemplary and, consequently, helped reshape GSA’s criteria for selecting designers. Until then, GSA had favored large, unadventurous firms. Woodlock, an architectural history buff, says he was convinced that “government architecture is to architecture what military music is to music,” and that GSA, left to its own devices, would not select an architect worthy of the commission.

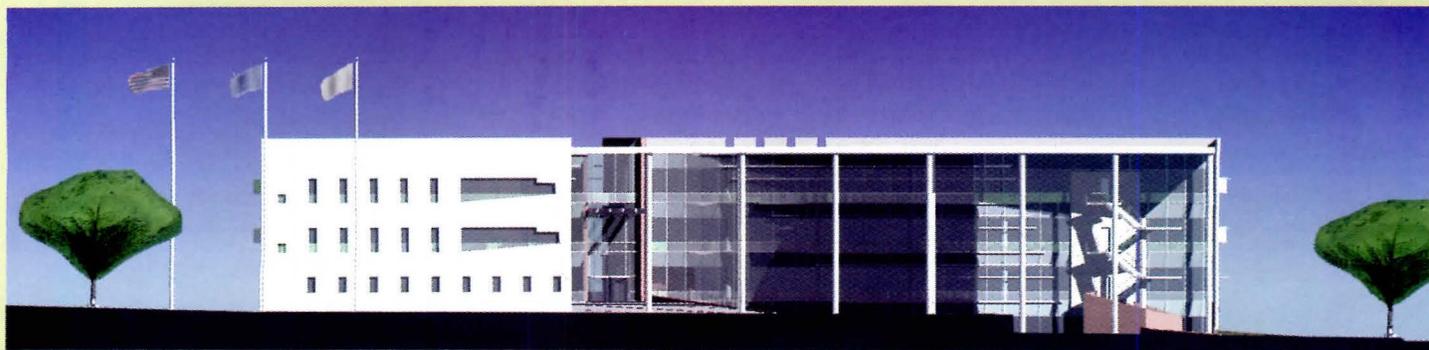
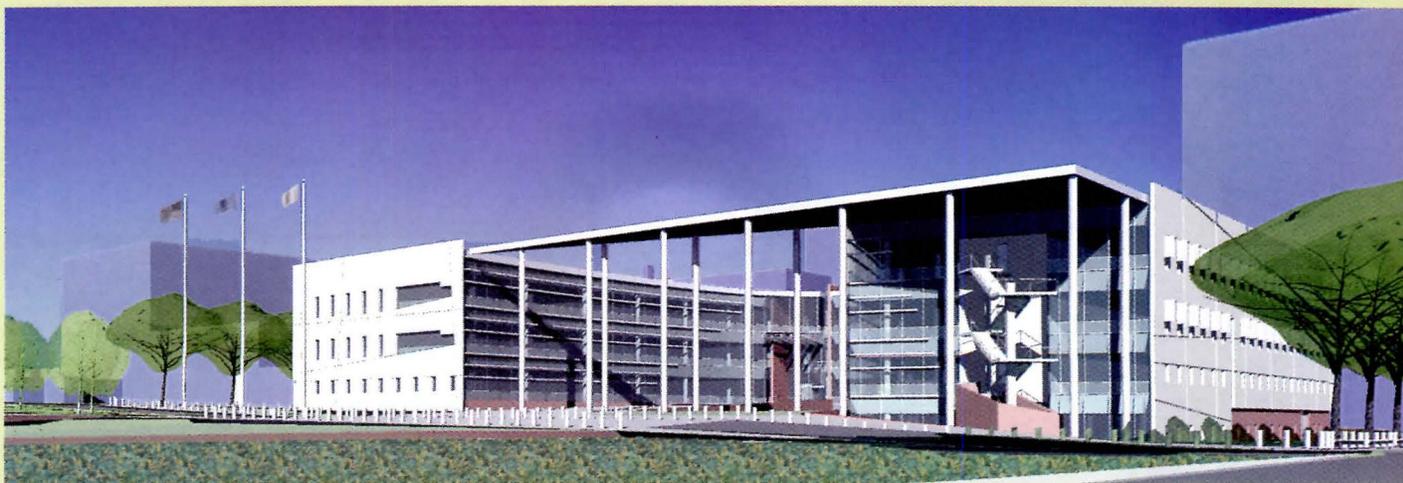
Observing an architect-selection process for another courthouse persuaded Woodlock that judges should be included. In 1991, Woodlock and Breyer took matters into their own hands. They insisted that Feiner be a member of their selection panel, an experience that opened his eyes,

Feiner says, about how the process should be conducted. The judges placed advertisements in *Progressive Architecture*, *ARCHITECTURAL RECORD*, and *Architecture* magazines “to inform the profession that this was not to be business as usual for GSA,” recalls Woodlock. And he and Breyer hired William Lacy, FAIA, secretary to the Pritzker Architecture Prize jury and an architect-selection consultant. Lacy helped draw up a shortlist composed of Gerhard Kallmann, FAIA, and Michael McKinnell, FAIA; David Childs, FAIA; Robert Venturi, FAIA, Moshe Safdie, FAIA, Cesar Pelli, FAIA, William Pedersen, FAIA, and Henry L. Cobb, FAIA. Cobb was the panel’s choice.

Feiner, meanwhile, had begun to make significant changes within GSA. In 1990, in an attempt to elevate the profile of design within the agency, he revived GSA’s design awards, which had been suspended for more than a decade. For three years, few new buildings made the final cut. Hoping to find ways of improving GSA design, Feiner brainstormed with all three years’ award winners and jurors. Hugh Hardy, FAIA, advised that if GSA really wanted to attract the best and brightest, it needed to shift the emphasis of architect selection to design talent, simplify the process, and add outsiders to the selection panel. Moving with uncharacteristic speed, GSA replaced its cumbersome and costly application procedure with a boiled-down, two-stage system that sought the best designer for the job. Feiner dubbed it the Design Excellence Program.

Number-one priority: Can you design?

By late 1993, architects answering proposal requests in the *Commerce Business Daily* faced a selection process that began by winnowing applicants on design-ability criteria. Competitors submitted a design portfolio accompanied by a statement of the lead designer’s intent and qualifications. Gone was the requirement for previous experience with the same building type. Gone also were the four-inch-thick application forms asking for lists and qualifications of every subcontractor. The reforms reduced the cost of applying and opened the door to new designers. Not until the second stage did specifics of the project team, the designer’s



track record, and the firm's experience with similar government buildings—formerly GSA's main selection criteria—become important issues. Now, a lead designer could compensate for inexperience—on, for example, a courthouse complex—by partnering with a seasoned firm that would act as architect of record. Similarly, a national firm new to an area could join forces with a local firm. All selection panels for projects estimated at more than \$25 million now include “peers”—GSA's moniker for accomplished nongovernment professionals, who participate in selecting designers and assessing their work during design review.

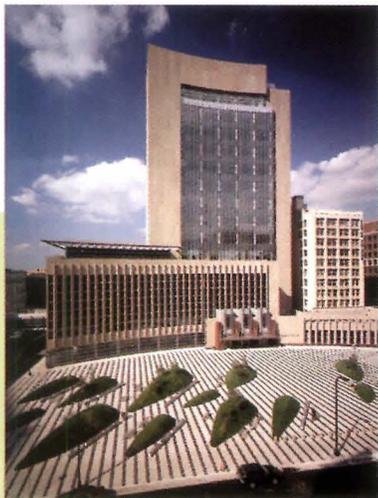
Since initiating the Design Excellence Program in 1994, GSA has extended it to all its construction programs. In addition to courthouses, it is building 20 to 22 office and laboratory structures a year, most of them under a lease-construction program, and spending \$30 million a year for new border installations. Jim King, director of the Border Station Center of Expertise in Fort Worth, says that although GSA will build only three stations in 2000, “there's potential for 30 to 40 projects in the future.” GSA is also applying its new approach to the renovation of 1,800 existing buildings—400 of which are listed on the National Register—especially to their interiors, “which send symbolic signals to the American people—many of them embarrassing,” says Commissioner Peck.

Dignity has no formula

The list of design architects recently commissioned by GSA suggests a laissez-faire attitude toward style. A minority view is represented by John Paul Carlhian, FAIA, who believes that historical styles are the most appropriate for public buildings. But GSA stands by a characterization of public architecture expressed by Senator Daniel Patrick Moynihan (D-N.Y.) in a Senate subcommittee report he authored in 1962, as special assistant to Secretary of Labor Arthur J. Goldberg. The report opposed prescriptions while



“We want a broad range of talent,” says Peck (above), “which means getting the right people on our selection panels and doing better outreach.”



Project: *United States Courthouse, Minneapolis*
Architect: *Kohn Pedersen Fox*
Associate architect: *The Alliance*
Total project cost: *\$91.5 million*
Completion date: *1997*



Project: *Mark O. Hatfield Courthouse, Portland, Ore.*
Architect: *Kohn Pedersen Fox*
Associate architect: *BOORA Architects*
Total project cost: *\$129.4 million*
Completion date: *1997*



Project: *Federal Building and United States Courthouse, Omaha*
Architect: *Pei Cobb Freed & Partners*
Budget: *\$49 million*
Completion date: *2000*

PECK SEEKS “ADVENTURESOME” DESIGN

Shortly after being appointed commissioner of GSA's Public Buildings Service four years ago, when the phrase “distinguished new public buildings” seemed an oxymoron, Robert A. Peck threw his support behind the fledgling attempt to upgrade GSA design from mediocrity to model. Peck, an attorney, had honed his design advocacy skills working for the National Endowment for the Arts' federal design improvement program during the 1970s, overseeing GSA's building program as Sen. Daniel Patrick Moynihan's chief of staff during the late 1980s, and serving as the AIA's chief lobbyist during the early 1990s.

“There were certain folks here who thought design excellence was silly,” he says. “To me that flew in the face of the history of federal architecture from the time of [George] Washington until the end of World War II. Then, something went seriously off the tracks. Take the Helena, Mont., federal building at the end of Last Chance Gulch. The building is ugly, and that's been the image of the federal government in Montana.”

To blame until recently, he believes, was the architect-selection process. “It used to be,” he says, “that we'd think, ‘I know I won't get into trouble if I pick a big firm that I know is safe.’ Since we changed our selection process, it's become, ‘I know I won't get into trouble as long as I pick a real star.’ But we want a broad range of talent, which means getting the right people on our selection panels and doing better outreach. We have to convince regional and emerging talent that it's worth their while to come in. We're not there yet.”

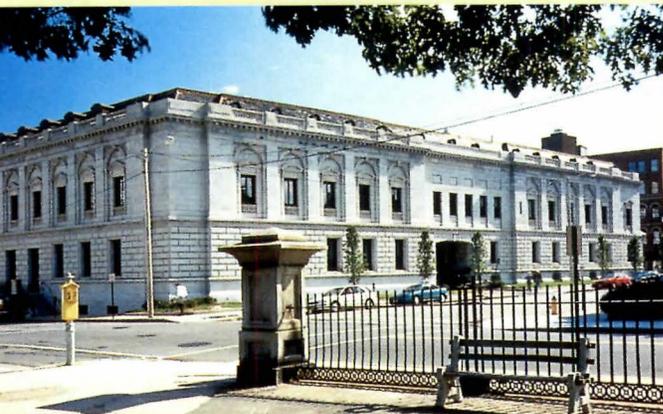
Peck regards design review by “peers”—GSA lingo for high-caliber non-government design professionals—as critical for proving the agency's commitment to quality. “Even if you select the best designers,” he says, “they may be tentative until they're sure you'll actually go along with their best work. At times in the past, GSA selected some pretty good designers,

but they wouldn't put their best people on the project or give it their best work because they were afraid to be too adventuresome for the government. It's good for them to have someone looking over their shoulder saying, ‘No, that's not good enough. Give it your best shot.’”

What about government agencies or departments that don't care about quality design or are leery of it? “The profession needs to make it clear that quality design is not distinct from design that works,” he says. “And you have to say, ‘Do you really want to be on the trailing edge of public image or do you want to be out there with something up-to-date, creative, a little adventuresome?’”

Peck dismisses charges that good design costs too much. “We may be paying a little bit more for good design,” he says, “but on a \$60 million project, the difference is maybe a tenth of a percent of the total. The design fees are, in some cases, tragically low and capped by statute. We've set up a system of cost benchmarks. Where we're clearly paying more—and I don't apologize for this—is in the construction.” GSA recently extended the design excellence program to construction, and Peck recounts that when a crooked contractor complained to his senator about being eliminated from consideration for a project, “I told [the contractor], ‘for 20-plus years you've been a low-ball artist, a change-order artist, and we're not going to hire you 'til you change around.’”

A big design issue, he says, is providing security without sacrificing openness—“a huge opportunity for architects. It's up to them to help us prevent security from overwhelming everything else, to the point that buildings aren't attractive or friendly or inviting.” If failure results, he says, “a time will come when the public reacts with, ‘Those damn bureaucrats are walling themselves off from the people they're supposed to serve.’ We can't let that happen.”



Project: U.S. District Courthouse
(Edward Gignoux Federal Courthouse), Portland, Maine
Architect: Leers Weinzapfel Associates
Cost: \$13 million
Completion date: 1996



Project: U.S. District Courthouse
(Harold D. Donohue Federal Building and Courthouse), Worcester, Mass.
Architect: Leers Weinzapfel Associates
Cost: \$14 million
Completion date: 1995



recommending “an architectural style and form which is distinguished and which will reflect the dignity, enterprise, vigor, and stability of the American National Government.” In courthouse design, observes William Pedersen, GSA’s attitude toward aesthetic expression is, however, often sabotaged by “more conservative judicial clients,” namely judges.

Tweaking the new, improved system

For Feiner, the matter is simple: he wants his agency’s buildings to pass muster with the aesthetic sensibilities of design professionals and for the public to like them. In fact, one of his favorite trophies is a telephone book for Berkeley, Alameda, and Oakland; gracing its cover is the Oakland Courthouse and Federal Building, designed by Kaplan McLaughlin Diaz. “Imagine,” Feiner says, “Berkeley with a picture of a government building on its phone book.”

GSA’s amended selection has, in fact, attracted firms such as Thom Mayne’s Morphosis that would not have applied for government commissions or, perhaps, even been considered under the old system. Still, very few minority firms apply for commissions, a failing that Feiner is attacking mainly by spreading the word about GSA. More small firms will be attracted, Feiner believes, as jobs for smaller courthouses and more border stations come on line.

Another weakness in GSA’s push for design excellence is inescapable: the staffs of the agency’s 11 regional offices are not uniformly knowledgeable or interested in design. For example, asked his opinion of GSA as a client, Richard Meier remarked, “The judges were the client.”

The peer-review process has been evaluated and criticized during annual discussions between Feiner and the peers. As a result, GSA now introduces review earlier in the design process and has expanded a single review session to three. Feiner concedes that, in some cases, review can be a mere formality, especially when the reviewer may fear antago-

nizing an eminent designer who can ignore recommendations anyway.

To architects’ complaints that they are prevented from seeing their designs through to completion, Peck responds that he, too, is concerned with follow-through. GSA employs construction managers, who, he says, stepped into the void left when “someone gave architects bad advice, telling them not to supervise construction. You get sued anyway; lawyers sue everyone in sight once they decide to go for it.” Feiner says he’s open to any changes that can improve the final product.

The main criticism from officials, the public, and the press has had to do with—you guessed it—costs. Kohn Pedersen Fox’s 1996 Foley Square Courthouse in New York City was censured as a wasteful folly, and Cobb’s Boston courthouse of 1998 was castigated as “a Taj Mahal” while

“IMAGINE,” SAYS FEINER, “BERKELEY WITH A PICTURE OF A GOVERNMENT BUILDING ON ITS PHONEBOOK.”

in construction. Architecture critic Robert Campbell, FAIA, who reported on the Massachusetts controversy for the *Boston Globe*, recalls that a congressional subcommittee “accused the architect of seeking to do a distinguished building, as though that was a crime. That’s what architects should be trying to do.”

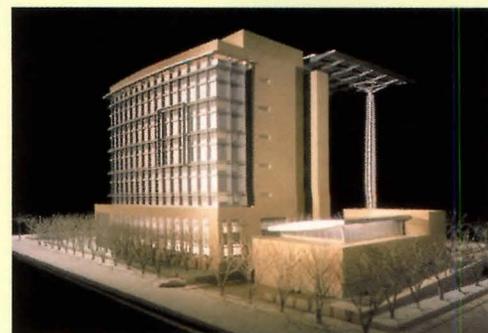
GSA, whose erratic budgets are vulnerable to congressional impulse, responded by establishing benchmarks for construction costs that are updated every couple of years. As a group, however, courthouses are 15 percent more expensive than office buildings because of security



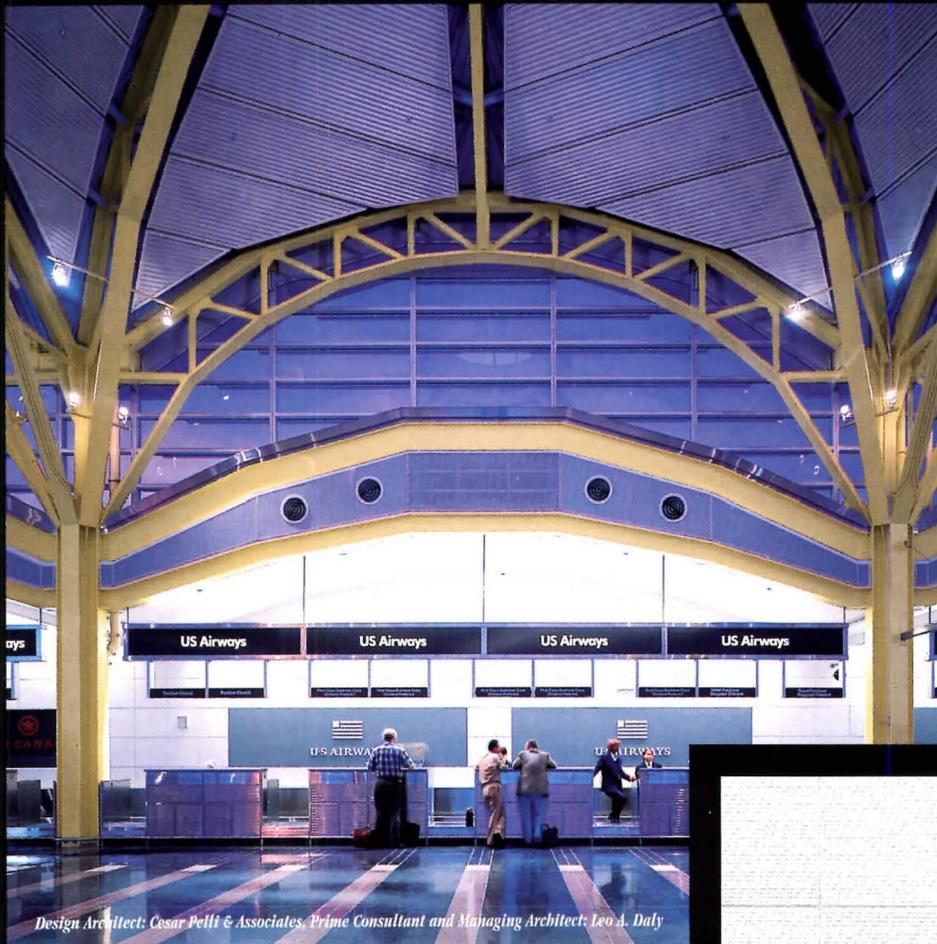
Project: U.S. Courthouse (Sen. Robert C. Byrd Courthouse), Charleston, S.C.
Architect: SOM, New York
Associate architect: Gandee/Kreps Associated Architects
Cost: \$80 million
Completion date: 1997



Project: Federal Building and United States Courthouse, Las Vegas
Architect: Dworsky Associates
Associate architect: HCA
Executive architect: Langdon Wilson
Budget: \$90 million
Completion date: 2000



Ronald Reagan National Airport A Marvel of Glass, Metal, Terrazzo and Acrovyn.® Yes, Acrovyn.



Design Architect: Cesar Pelli & Associates, Prime Consultant and Managing Architect: Leo A. Daly

With 90,000 square feet of Acrovyn High Impact Wall Panels throughout the baggage, ticket, and concourse levels, it's difficult to find a surface not covered in Acrovyn.

C/S custom designed this system consisting of 10,000 individual panels capable of being removed and replaced, and able to handle the daily abuse of 45,000 suitcases. For free literature and samples, call **888.621.3344** or visit our web site at www.c-sgroup.com.



C/S Acrovyn® Wall Panels

CIRCLE 33 ON INQUIRY CARD

measures and information technology, not aesthetic extras.

Most of the remaining challenges to improving public building design have to do with risks and the willingness to take them. One obvious threat to maintaining GSA's momentum is government inertia. "If you stand still, you die," says Feiner, warning that it's important both to go slowly and to take risks. The inherent conflict of security needs for a building accessible to the public is, perhaps, the thorniest problem. Last December, Sen. Moynihan, while introducing a symposium on the subject, insisted, "We will not let Timothy McVeigh be our most influential architect. Worrying is a lot easier than learning that we cannot do anything about risk but move it around."

The experience of Carol Ross Barney, FAIA, designer for Oklahoma City's new federal courthouse and office building, highlights the issue's ambiguity. She recounts that when prospective tenants—people displaced from the former Alfred P. Murrah Federal Building—were surveyed, they said their primary concern was security; second most important, they said, was having a parking space next to the building.

The Feiner effect, its problems notwithstanding, is spreading to state and local governments, first to courthouse construction, which gratifies Feiner. "Someone once asked me if we're creating great buildings," he says. "I think there probably are some in the pile, though we can't predict which ones. But if you took a baseline and asked, in toto, Is this better than before? I think the answer would be yes." It's hard to disagree. ■



Project: U.S. Border Station, Sault Sainte Marie, Mich.

Architect: Ross Barney Jankowski Architects

Budget: \$10 million

Completion date: 2001

WHAT ARCHITECTS SAY ABOUT GSA

Andrea Leers, FAIA: "The GSA process has improved tremendously. I think GSA is looking to cut through the cumbersome procedures, but they're up against a mountain. When we begin a GSA project [her firm has done three], we get a carton full of loose-leaf notebooks with guidelines. It's daunting."

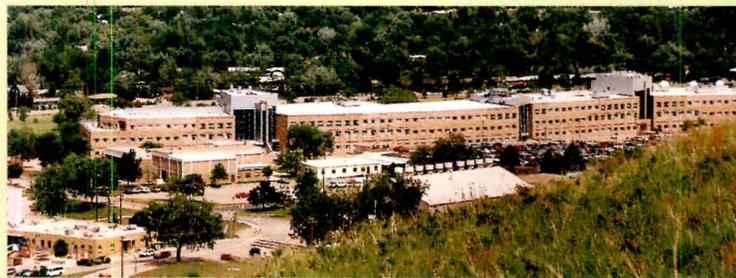
William Pedersen, FAIA: "GSA compares favorably to the best institutional clients. There's a genuine attempt to find a legitimate architectural expression for government buildings."

Carol Ross Barney, FAIA: "The Design Excellence Program eliminated the need to have experience in the building type. Also, the regional GSA officers have become more sensitive . . . There are frustrating things: you can't get a slower-moving client. But the current regime is willing to look at unorthodox ideas; in some ways, they may be at the cutting edge."

Henry N. Cobb, FAIA: "It's a process with an attitude of openness, of testing things, getting feedback—things you don't associate with bureaucracies. That said, not enough responsibility and authority is placed in the hands of the design architect . . . It's a problem; not a fatal flaw."

Thom Mayne, AIA: "When my office shows up with two commissions at once, I suspect that must signal something. At the beginning, I was enormously skeptical. But you sense you have someone who knows who you are and wants you. You can't get a better start than that."

Richard Meier, FAIA: "I thought the selection process went pretty well; I was chosen. Of course, they put monkey wrenches in our way; that's how the government works. [During the process] the budget for our courthouse in Islip [N.Y.] was reduced 12 percent. The program wasn't reduced 12 percent. But they do come out with a better building than any other group in government."



Project: David Skaggs Research Center, National Oceanic & Atmospheric Association, Boulder, Colo.

Architect: Fentress Bradburn Architects

Cost: \$57 million

Completion date: 1999

Changing The Way You Think About Walls™

textra™
Glass Textile Wallcoverings

Johns Manville's glass textile wallcovering adapts to various surroundings as easily as a chameleon. Durable *Textra™* is offered in a choice of woven-in patterns. Yet it's also designed to be painted and can be repainted up to 8 times. This unusual combination of texture, color, and performance opens up infinite possibilities.

Now available in North America, glass textile wallcovering has been used for decades in Europe - where it even hangs in the Louvre museum. Easy to install, *Textra* camouflages minor wall surface irregularities. It holds up in high-traffic areas, hides dirt, and can be quickly patched if ever necessary. Non-toxic and flame-retardant and strong, it actually increases the dimensional stability of the wall. And unlike vinyls, *Textra* is porous and is an ideal component of a breathable wall system.

Visit the JM web site at www.jm.com/textra or call 1-800-654-3103 for more information on *Textra*. You'll start changing the way you think about walls.



Johns Manville

CIRCLE 37 ON INQUIRY CARD

Petite Herringbone
#T8035

Sand Pebbles
#T9070

The Steinberg Pavilion
Steamboat Springs, Colorado

Dare To Dream...

For 85 years, children with dreams of performing have attended the renowned Perry-Mansfield Performing Arts School and Camp. Now the oldest, continually-operated dance and theatre camp in the country, its distinguished alumni include;

Doris Humphrey, Merce Cunningham, Agnes de Mille and Dustin Hoffman.

"The Pavilion", a focus of great pride for the school, was designed with wide, open-air spaces and symbolizes life's essentials: a person, the land, and the sky. Expansive walls of hinged patio and sliding doors frame the structure,

and windows with small, divided-lite patterns represent trees and leaves.

EAGLE® windows and doors were chosen to showcase the project having intricate, hand-crafted patterns of Modern Divided Lights® and natural, warm wood interiors. EAGLE's willingness to customize products to exact design specifications contributed to making "The Pavilion" a success.

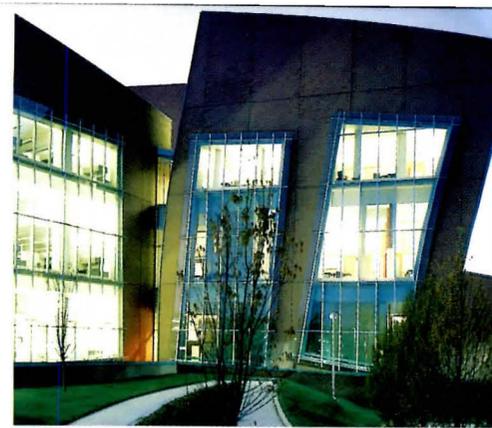
EAGLE...Shaping a dream, like music shapes a dance. For more information, call EAGLE Window & Door, Inc. at (800) 453-3633, or visit our website at <http://www.eaglewindow.com>



CIRCLE 38 ON INQUIRY CARD

© 1998 EAGLE Window & Door, Inc.

THE AMERICAN CAMPUS



Universities and colleges, such as the University of Cincinnati, are devising architectural and planning strategies for dealing with the pressures of growth.

By Suzanne Stephens

The construction boom at colleges and universities in the last decade has been good for architects. And, it goes on: F. W. Dodge reports that \$4.4 billion was spent on college facilities in the U.S. in 1999, up 54 percent from the previous year. *American Schools and Universities* magazine reports that more than \$24.3 billion will be spent from 1999 to 2001. About 70 percent is for new construction. But what has the boom done for the architecture and planning of campuses?

To accommodate their undergraduate and graduate students, who in 1995 numbered about 14.3 million, schools and universities have been rethinking their planning strategies and are trying to rectify mistakes made in the last growth period in the 1960s and 1970s. At that time, many colleges and universities, once considered models of community cohesion and architectural identity, devolved into a chaotic hodgepodge of mediocre buildings surrounded by parking lots. Correcting past errors, retaining continuity with existing architectural heritage, and allowing for growth obviously takes imagination, critical judgment, and (let's be real) money. There is also another important ingredient: clients prepared for the long haul.

The University of Cincinnati, which has spent more than \$1 billion on capital construction in the last 10 years, illustrates this point particularly well. Faced with reshaping an overbuilt campus, university officials brought in architects with high-design reputations, as well as a master planner in the vanguard of landscape design. In addition to affirming the desire for improved architectural quality, the new master plan calls for designing infill buildings that leave more open space, create pedestrian connections between campuses, and change parking lots into green areas.

We love the halls of ivy

Until about 1940, colleges were paradigms of architecture and planning, as John Venable Turner shows in his book *Campus, an American Planning Tradition* (AHF/MIT, 1984). In the 17th and 18th centuries, they were built around open quads or yards, such as Harvard, or malls, such as the University of Virginia. During the 19th century, more informal landscape planning and a relation to nature were favored, especially where land was plentiful. The Beaux Arts influence in the early 20th century reintroduced a formal order, and the English medieval enclosed quadrangle came back. But after World War II, the modern campus, arranged according to circulation patterns, and new buildings, conceived as objects in space, predominated. By then, many campuses, once so unified in image, had grown into messy compilations of architectural and planning typologies.

Even paradigms aren't perfect

Even the most revered campuses, over time, have experienced problems that sound familiar today. In October 1909 in *ARCHITECTURAL RECORD*, Montgomery Schuyler called Harvard a "higgledy-piggledy" grouping of "raw and bald brick edifices." Schuyler's description of 19th-century Harvard could be applied to the University of Cincinnati in the early 1980s. Except that Cincinnati's far worse situation would have made Schuyler roll over in his grave. Cincinnati had been founded as a city university in 1819, starting with a law school and medical college. Michael Graves, FAIA, who studied there in the 1950s, remembers it as a "streetcar school," where most students commuted from home. It had one main quad (Baldwin) and old Colonial or 1920s Beaux Arts brick buildings enhanced by the patina of age. "You walked everywhere," Graves recalls, "it was very domestic in scale." Any potential charm he remembers was all but eradicated by the growth in the 1970s. By the beginning of the 1980s, about the only common denominator was brick. "There was no architectural statement," says Ron Kull, AIA, the university architect, "you couldn't do much except plant kudzu."

Give me architecture over kudzu

Burgeoning enrollment had prompted ungainly construction at Cincinnati. When the school became a state university in 1977, its student population mushroomed from 15,000 students to 35,000. In the early 1980s, the incoming president, Joseph Steger, decided to deal with its second-rate architectural image right away. Steger explains his approach today: "With a diverse student body and curricula, we said 'Why not enhance the diversity with architecture?'" The school, he knew, could never have the cohesion of the University of Virginia. "Even if it did," he says, "That would be boring." Fortunately, he found a knowing ally in Jay Chatterjee, then the new dean of the School of Design, Arts, Architecture, and Planning (DAAP).

Chatterjee had already been agitating to have a nationally known architect renovate and expand the DAAP building. Starting in the 1980s and continuing to the present day, Chatterjee and Steger, joined by Kull and the vice president of finance and administration, Dale McGirr, have brought in big-name architects to work with local firms to design a group of buildings for the West Campus. The architects included Peter Eisenman, FAIA, who got the commission to design the Aronoff Center for Design and Art (1996); David Childs, FAIA, of SOM, who designed the Edwards Center (1992); Michael Graves, who did the Engineering Research Center (1995); and Henry Cobb, FAIA, of Pei Cobb Freed, who



2



3



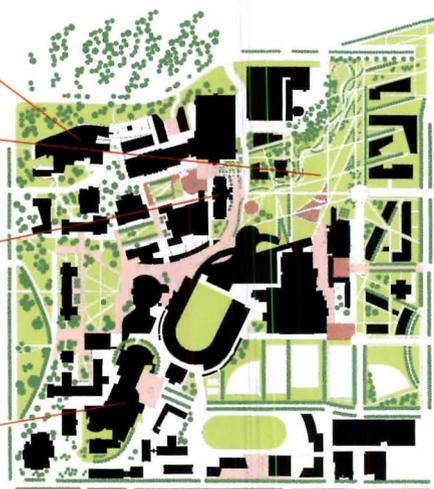
4



5



1



UNIVERSITY OF CINCINNATI/WEST CAMPUS



EAST CAMPUS



The master plan by Hargreaves Associates shows proposed new construction (near left and bottom edge) and new buildings on campus: 1. The Vontz Center (Gehry); 2. Aronoff Center (Eisenman); 3. Walker Memorial (Machado Silvetti); 4. Engineering Research Center (Graves); 5. C-CM (Cobb)

just finished the College-Conservatory of Music (1999). Now Frank Gehry, FAIA, has designed the Vontz Center for Molecular Studies on the East (medical) Campus [see page 80]. Machado and Silvetti Associates was commissioned to create a 60-foot-high monument for Sigma Sigma honorary fraternity in the open space designed by Hargreaves Associates, a landscape firm with offices in San Francisco and Cambridge, Mass.

A new kind of plan

George Hargreaves, a landscape architect known for his geometrical earth forms and unusual textures, was hired to conceive the master plan for Cincinnati in 1989, after he had come to Chatterjee's attention. "Here was a young man on the rise who would give us a different product," says Chatterjee. Hargreaves had never done a master plan for a campus before, but the clients were willing to take a risk. Hargreaves and his project landscape architect, Mary Margaret Jones, went to work to provide the connective tissue between the West and East campuses and create a sense of place out of the 168 acres. Also needed was 2 million square feet to be added to the physical plant, which would mean a total of 12 million square feet of buildings. As a result of the plan, Cincinnati has managed to increase its open space by about 25 percent over the last 15 years. Some buildings were razed, others were converted to different uses, and new ones were fit into densely packed clusters. Parking lots, however, remain an asphalt blot, which the university is still in the process of removing, as more linked pedestrian walks, transit, and garages are put in place.

Hargreaves' sculptural landscaping—in evidence in the Sigma Sigma Commons, the medical center's University Commons under construction behind the Vontz Center, and three other such public spaces—is a far cry from the elm trees, ivy, and rhododendrons in campuses of yesterday. His landscapes stress manipulating the earth and precisely trimming low vegetation in geometrical patterns that often relate to buildings nearby. "Landscaping is the fifth facade of the building," Hargreaves states.

Still Hargreaves' design stamp has its critics. Graves, whose building overlooks the Sigma Sigma Commons and forms a link to Hargreaves' Library Square, comments, "Traditional landscaping and walkways for the spaces between buildings would work better in putting the Humpty-Dumpty of the Cincinnati campus back together. "We're not looking for avant-garde here."

On the other hand, Rodolfo Machado, a colleague of Hargreaves at Harvard, who designed the distinctive, 60-foot-tall, concrete, stainless-steel, and wood Walker Tower for the Sigma Sigma honorary fraternity in the Commons, defends the concept: "A figural architectural ground plane helps make a place and define it."

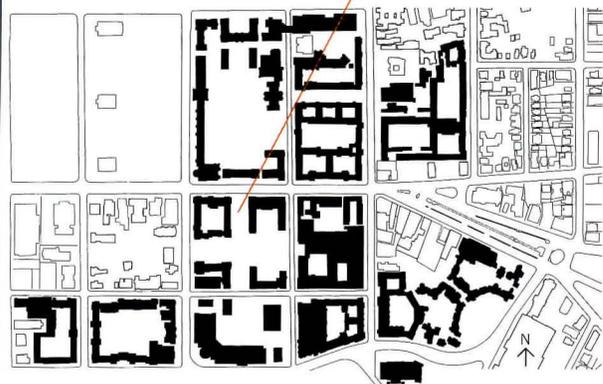
Planning strategies elsewhere

Other universities share some of Cincinnati's planning principles (but do not necessarily embrace their sculptural approach to open space). Having executed master plans for the University of Virginia, Emory University, and Johns Hopkins University, the Baltimore firm Ayers Saint Gross is a strong proponent of high density (but not high towers) and expansion through infill. "Density makes sense because it cuts down on infrastructure needs, reduces crime and encourages walking," says Jim Wheeler, AIA, a principal in the firm. Another principal, Adam Gross, AIA, adds that parking is the most severe problem on campuses. Housing students on campus can cut down on cars and "goes hand-in-hand in creating a collegial feeling."

Dorms make a comeback

The University of Cincinnati has been revising its master plan to entice more students to live on campus. It is not alone. Colleges and universities across the board are realizing that the best way to promote a sense of community and reduce dependence on cars is to build new residential halls or renovate old ones [such as the Berkeley College at Yale, page 94] and to make them more attractive to students by adding food courts, more bathrooms, and other amenities. An architecturally appealing stu-

The plans of Yale and Simon's Rock show the different approaches to campus design evolved since the 17th century, from the open and enclosed quads (below) to buildings in the landscape (right). New work includes: 6. Berkeley College (Kieran Timberlake & Harris); 7. Fisher Center (Bohlin, Cywinski, Jackson).



YALE UNIVERSITY



SIMON'S ROCK COLLEGE OF BARD

dent center also helps promote that old collegial feeling. At Penn, Venturi Scott Brown has been designing Perelman Quadrangle, a student center complex that involves renovating three historic buildings and designing a new addition to another. Although towers have proved to be unpopular with students (and university officials), the existing high-rises at Penn's Hamilton Village are being renovated by Kieran Timberlake & Harris of Philadelphia [see RECORD NEWS, page 38].

Housing and other student services in the revised master plan at the University of Cincinnati involve more brand-name architects. The projected construction (another 400,000 square feet) will take place along a not-yet created Main Street situated, for the most part, on the West Campus. Gwathmey Siegel is designing a student union there, Leers Weinzapfel is doing an enrollment services building, and Moore Ruble Yudell a student services facility. In addition, Morphosis is drawing up a student recreation hall that will incorporate residential space, and William Rawn Associates, with Centerbrook, is designing a dormitory. Because Main Street will have shops and cafes where students gather, Kull sees it as a strong link. "In three years, all this will hang together as a street that goes diagonally across two superblocks connecting the east and west campuses," he says.

Growth and the client

Despite the pedestrian emphasis, Cincinnati could still use advanced transit. Keeping the ever-expanding campus to a walkable, livable, and teachable size consistently presents a problem for colleges and universities. "We need to put a lid on the total gross square footage of buildings, the number of students and faculty, and the acreage of the campus," says Adam Gross. Yet universities with high student enrollments at one site tend to want to grow to attract more students, revenue, and research money.

Making growth an asset through architecture and planning takes time. And the staying power of the client is crucial. Most architects concur with Chatterjee's assessment that "Longevity is the characteristic

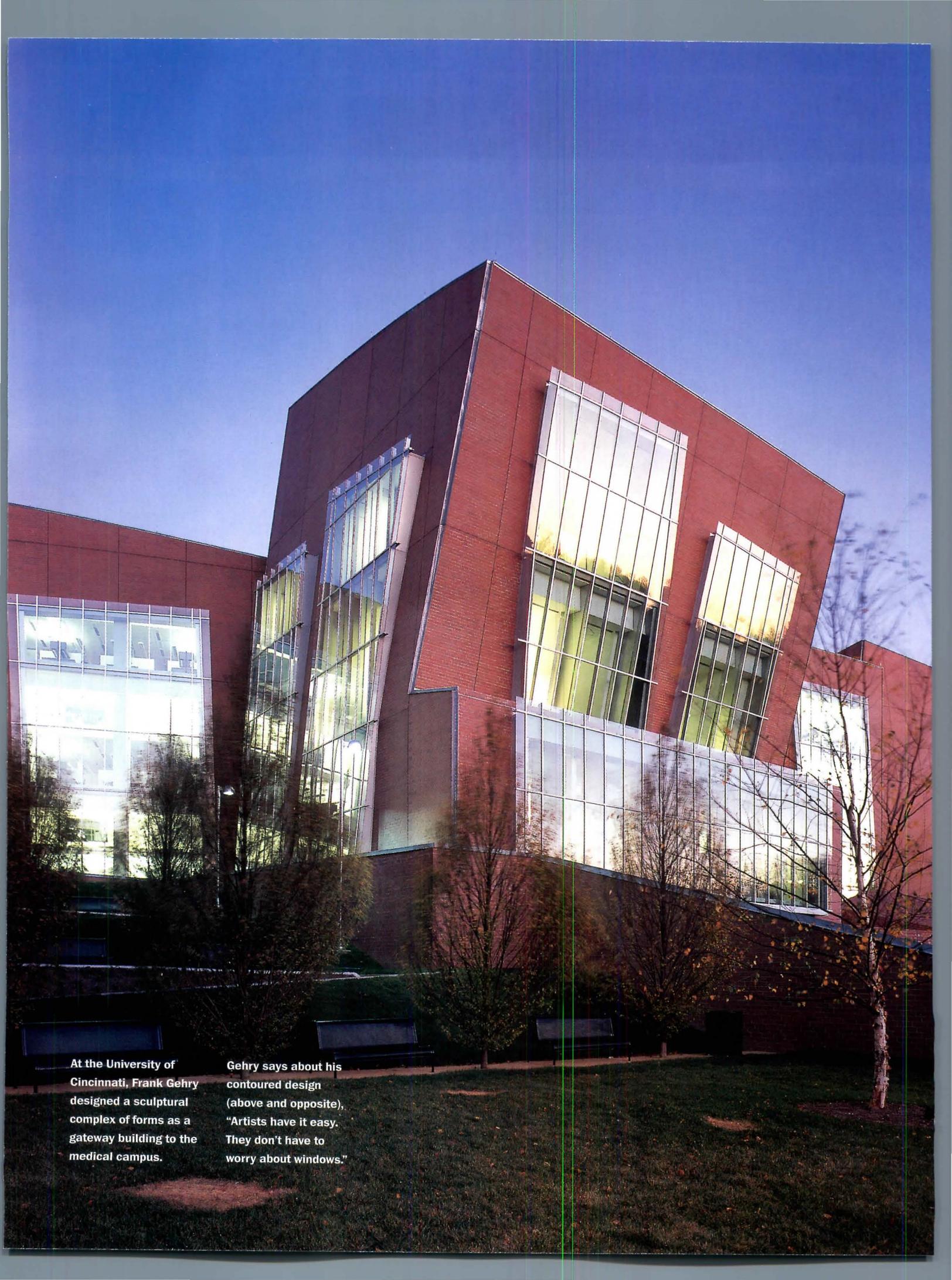
of success." Gross explains, "Mistakes are often made when reacting to an issue that must be resolved in the short run."

Money counts

Focusing on good architecture; low-rise, high-density buildings; pedestrian connections; living on campus; and landscaping means money. MIT will spend \$700 million in construction over the next five years with buildings by prominent architects that include Gehry, Fumihiko Maki, and Steven Holl, AIA. Meanwhile, Yale has commissioned Polshek and Deborah Berke for arts buildings, and it is putting \$500 million into new construction and renovation of its science and engineering buildings.

Stanford University, which has one of the nation's architecturally outstanding campuses, designed in 1888 by Frederick Law Olmsted and Charles Coolidge of Shepley Rutan and Coolidge, is spending \$650 million in the next three years on renovation, expansion, and new construction. Possibly fearing its architectural identity might be weakened by growth, Stanford has launched a competitive design process that has resulted in buildings by James Freed, FAIA, of Pei Cobb Freed; Hardy Holzman Pfeiffer; Ricardo Legorreta, HON. FAIA; Polshek and Partners; Antoine Predock, FAIA; and Robert A.M. Stern Architects. With 16,000 students spread out on a 1,500 acre campus, Stanford hardly has the density problems of Cincinnati. But then again, it has more of an architectural tradition to hang on to.

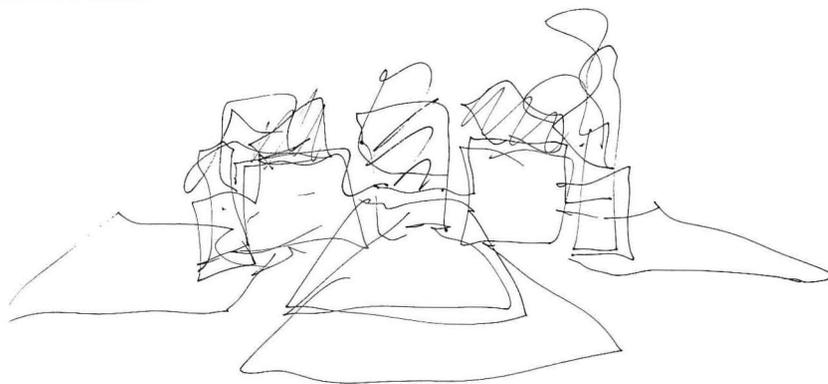
Placing high hopes on architecture can end in disappointment. Montgomery Schuyler criticized Princeton University's architecture for being too individualistic in 1910 [RECORD, February 1910] and blamed this condition on donors' desire to be enshrined by distinctive buildings. As can be deduced given some of the names of new buildings (and now open spaces), rich alums are still important. With this money and effort, let's hope that the right strategies are being adopted. The University of Cincinnati is still very much a work in progress, and even some of the new work could use a little kudzu. Over the years, who knows. Our perceptions today about Harvard and Princeton are not Schuyler's of a 100 years ago. ■



At the University of Cincinnati, Frank Gehry designed a sculptural complex of forms as a gateway building to the medical campus.

Gehry says about his contoured design (above and opposite), "Artists have it easy. They don't have to worry about windows."

ANALYSIS Frank Gehry veers away from the brick box with his dynamic **VONTZ CENTER** at the University of Cincinnati



By Suzanne Stephens

So titanium doesn't wrap the Vontz Center for Molecular Studies at the University of Cincinnati. It's just plain old brick. Nevertheless, the first completed work by Frank Gehry, FAIA, since his shimmering Guggenheim Museum Bilbao opened (October 1997), still screams *Architecture*. The center, like so many of Gehry's designs, demands to be addressed in terms of its form, that is, as an aesthetic object. It is a far cry from the brick boxes that clutter so many American campuses.

It helps that Gehry doesn't use brick in a plain old way. But interestingly, he does not ask a brick "what it wants" à la Louis Kahn, either. If Kahn felt a brick wanted to be an arch, Gehry has decided the brick wants to be a bulge, (even if the bulge lacks the structural rationale of the arch). Going beyond Kahn, he has also gone against the brick's grain. And he doesn't stop there. By splitting up the building into a connected cluster of contoured masses, Gehry further departs from a conventional structure. "It's a still life of brick chunks," he explains. In counterpoint to his curving shapes, Gehry has kept the expanses of glazing flat and pushed the gridded fenestration out from the skin. "This way the sheets of glass look lighter," he explains.

Irony and perversity in Cincinnati

The result is startling, in many ways because it is so volumetric in feeling without being tectonic, that is, without indicating how those volumes are determined structurally. To begin with, the Vontz Center has a concrete column-and-slab frame. Because of the concave and convex surfaces, the brick could not be laid the normal way. Brick panels had to be fabricated off-site where they were assembled in sections, reinforced with rods and grout, and placed in a steel armature. Then the panels were attached to the concrete structure. (Needless to say, the curves required very precise computer drawings.) The irony, of course, is that brick prefab panels are anathema to most architects because they look like cheapo wallpaper. And yet the effect at the Vontz Center is opposite. While the grid for the brick panels is easy to spot, the workmanship and the texture of the brick are both good: they give the contoured skin an unexpected crafted quality. In



sum, the perverse use of brick, the pronounced extrusion of the fenestration, and the lopsided forms create an eye-catching abstract sculptural landscape that retains a sense of scale and context.

Another surprise is that the building is whimsical without seeming to strain to amuse. As R.W. Apple noted in the *New York Times* (October 29, 1999), the Vontz Center "looks like one of those cartoon buildings that are jumping off their foundations, almost ready to burst." This cartoon theme in Gehry's work is discussed in more detail by Michael Sorkin in his insightful essay in *Gehry Talks: Architecture + Process* (Rizzoli). While Sorkin does not refer specifically to the Vontz

Project: *The Vontz Center for Molecular Studies, Cincinnati*

Owner: *The University of Cincinnati*

Architect: *Frank O. Gehry and Associates—Frank O. Gehry, FAIA; principal; Jim Glymph, AIA, Hiroshi Tokumaru, Randall Stout, AIA, Michael Maltzan, Matt Fineout (design team)*

Architect of record: *BHDP—Carl Monzel,*

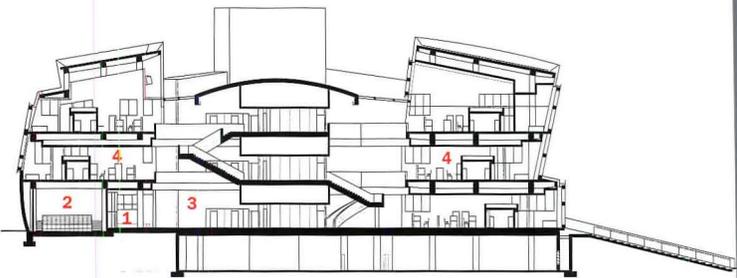
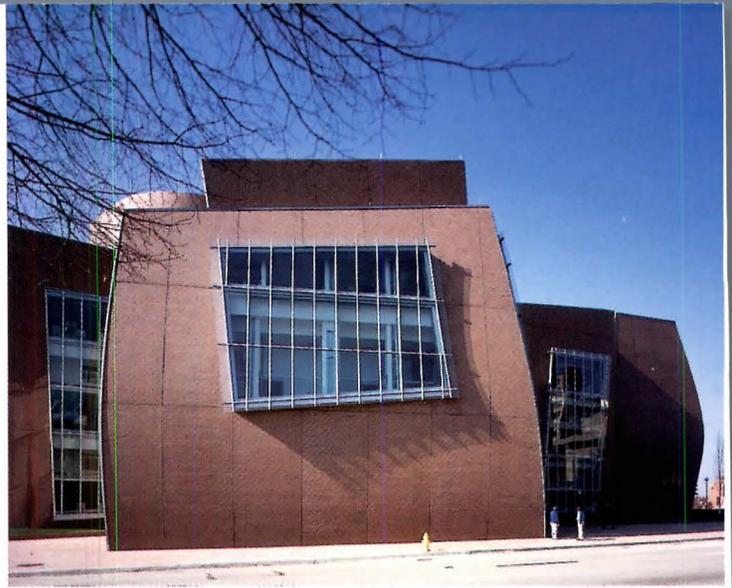
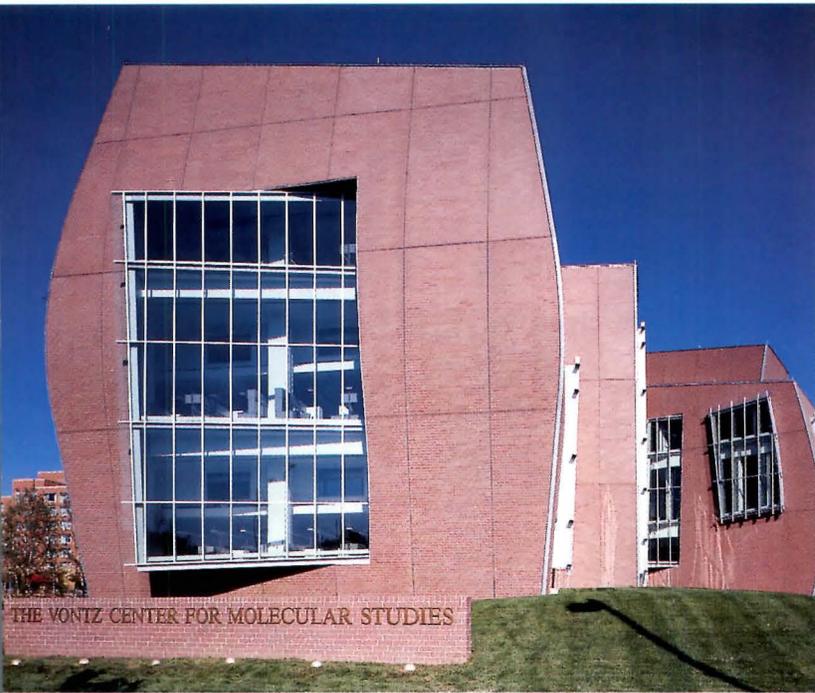
partner-in-charge; Terry Briggs, project architect; Tracy Santoro, George Kemper, Mike Fraser, Pam Lilley, Rick Howard, Greg Hutzel, Jim Knappenberger

Associate architect: *Stallworth Architecture Inc.*

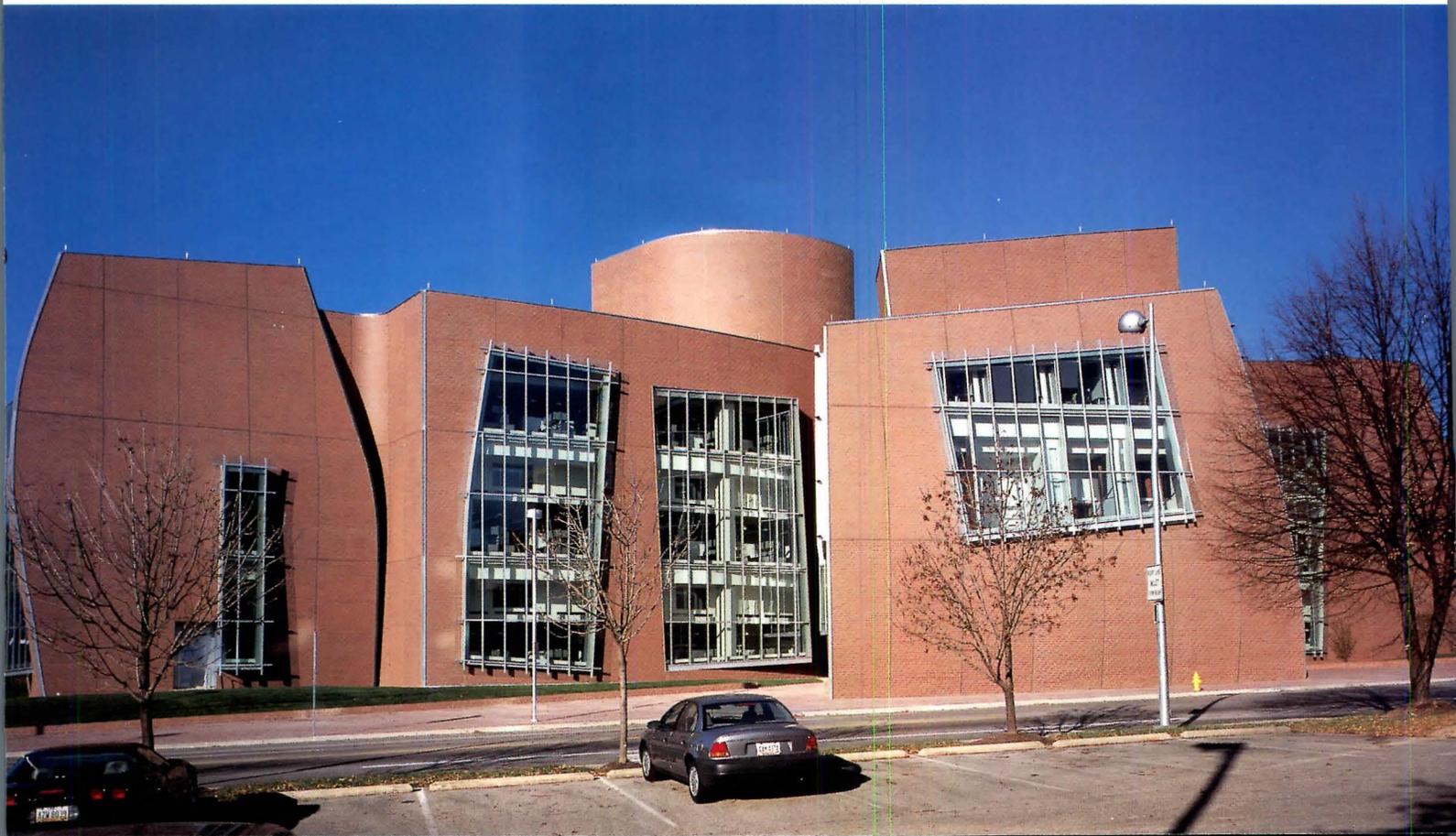
Consultants: *THP Ltd (structural); HAWA (mechanical); Earl Walls Associates (laboratory)*

No elevations are alike at the Vontz Center, on the edge of Cincinnati's medical campus. Glass expanses recede and protrude from the brick-paneled curved walls to enliven the north elevation

(below), the east (bottom and right), and the west one (opposite). The latter opens onto a commons being completed by landscape architect George Hargreaves, the university's master planner.



1. Entrance
2. Lecture hall
3. Atrium
4. Offices





Center, he observes that Gehry often creates a happy tension between the “familiar Platonic solids and a set of spontaneous forms.” Like the balletic hippos in Walt Disney’s *Fantasia*, Sorkin notes Gehry’s shapes “are dancing not-cubes and not-rectangles, distorted away from the familiar.” Still, they don’t lose their connection to reality.

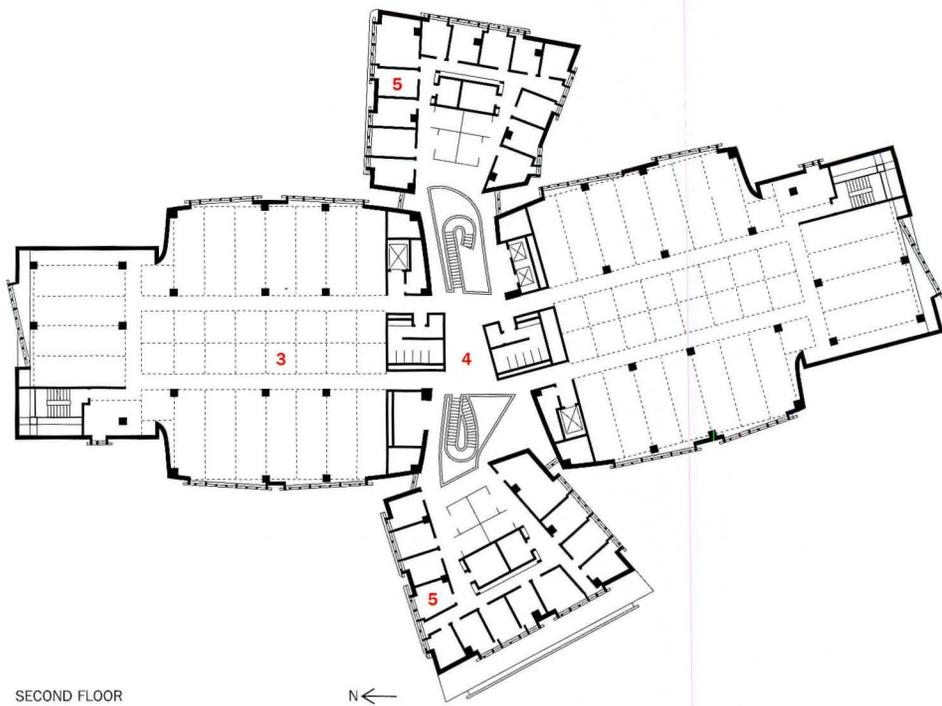
Naturally, Gehry’s bouncy solution for a scientific research center might raise some questions, such as How does the building function for its cancer and neurosciences researchers? Does it generate built-in construction and maintenance headaches? Does the unusual environment inspire scientists to be creative? Finally, what does the Vontz’s idiosyncratic form suggest for future science buildings?

The story behind the bulge

As mentioned, the University of Cincinnati has been implementing a major plan in the last two decades to give some cohesion to its two campuses, the West Campus for arts and sciences and the East Campus for the medical center. Selecting Gehry was part of a process initiated in the 1980s to inject architectural oomph into a dreary setting. The president of the university, Joseph Steger; along with the dean of the College of

Design, Architecture, Art, and Planning (DAAP), Jay Chatterjee; the university architect, Ron Kull, AIA; and the vice president of finance and administration, Dale McGirr, started pairing high-profile architects with local firms. So far designs by David Childs, FAIA, at SOM; Michael Graves, FAIA; Peter Eisenman, FAIA; Henry Cobb, FAIA, of Pei Cobb Freed; and Machado and Silvetti Associates have been completed. More such architects are slated for the future. Providing the “connective tissue” between the buildings is the master plan by George Hargreaves, a landscape architect from San Francisco and Cambridge, Mass.

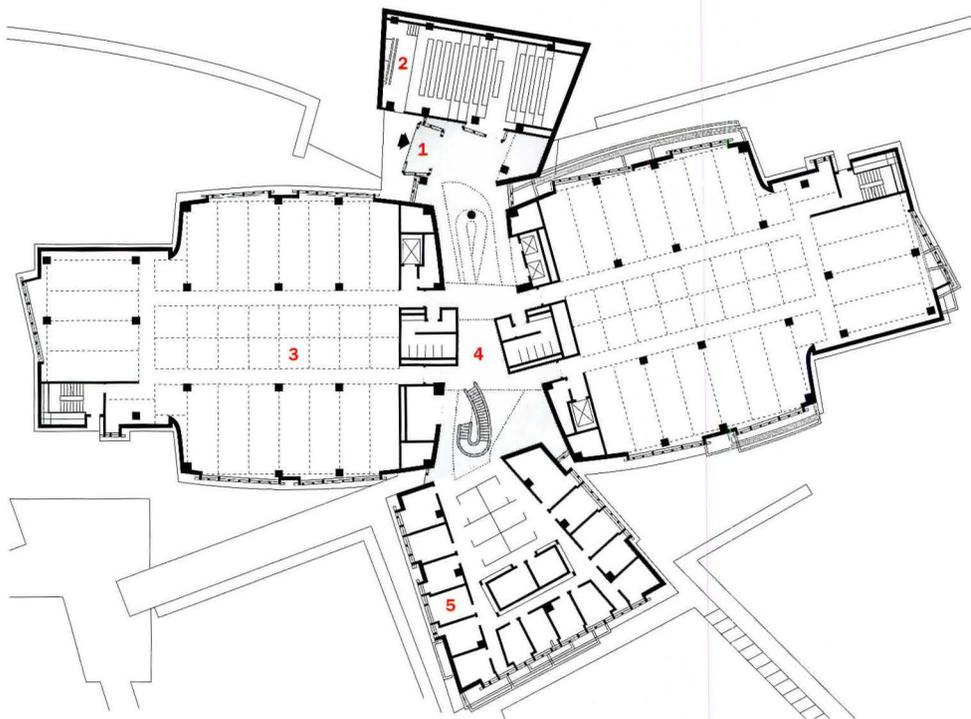
After Gehry was interviewed for the College-Conservatory of Music—a commission that eventually went to Cobb—he was proposed for the Vontz Center. A “gateway” building to the medical center’s campus was desired. Donald Harrison, the senior vice president and provost for health affairs, particularly wanted the architecture to reflect the increasing importance of medical research at Cincinnati, where outside funding has tripled in the last 10 years. The site was at the edge of the medical campus, on land reclaimed from a parking lot and recreation field. Because the Vontz Center would be in a bowl between two hills, even its roof would be visible from a number of vantage points. Furthermore, it was surrounded



SECOND FLOOR

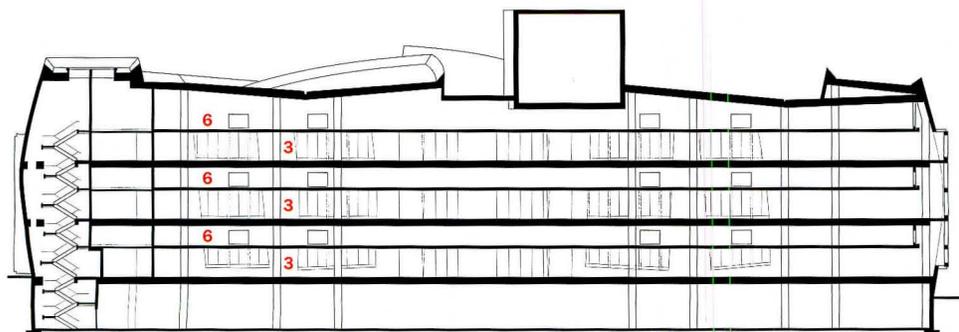


A bent crossed-axis plan (left and below) with a central atrium (opposite bottom) provides the basic parti for the Vontz Center. The three floors of labs, an open grid of concrete columns, and pan-joint floors are served by interstitial spaces. A skylight illuminates the central atrium (opposite top).



FIRST FLOOR

- 1. Entrance
- 2. Lecture hall
- 3. Laboratories
- 4. Atrium
- 5. Offices
- 6. Interstitial floors



LONG SECTION THROUGH LABS AND ATRIUM LOOKING EAST





by other midrise brick buildings. University officials were reluctant to depart from this context, although they were already aware of Gehry's penchant for metal.

Working with a name

Donald Harrison admits to being suspicious of "signature" architects. Above all, he wanted to make sure the 150,000-square-foot building functioned. Fortunately for those concerned, Gehry was amenable to working with Earl Walls, the laboratory designer, who had made his reputation with Louis Kahn's Salk Institute in La Jolla and was consulting on two buildings at Cincinnati's medical center. Walls not only advocated modular, open-plan laboratories, he urged that interstitial space, that is, floors with a 6-foot, 4-inch clearance for mechanical and electrical distribution equipment, be part of the scheme.

"We just followed Walls' lead," says Gehry, even though the three floors of interstitial space would take a slice out of the \$46 million budget, for which Albert Vontz, an alumnus of the university, donated \$5 million. Yet Gehry acknowledged the need for flexibility allowed by the interstitial floors. If he had any thoughts about putting some metal on the outside (and initially he did), Gehry soon agreed that lower cost brick would be the way to go. He started working with sketches and models. "There was a new idea a week," recalls Harrison. At the beginning, the brick exterior walls were slanted and sloped. Then, Gehry added curves. "When I first saw them, I thought, 'uh-oh,'" says Harrison. "They were our only extravagance," replies Gehry. "They are not functional—they are our equivalent of pilasters and columns. But," he goes on, "the bulges give the labs and offices a lift; they aren't just phony stuff on the outside." Harrison admits, "I'm always a functionalist. Yet as we went along, I fell in love with the building."

The interior is organized so that concrete columns are placed on a grid, 31 feet, 6 inches by 29 feet, 8 inches (although it varies: sometimes the grid is 21 feet by 29 feet, 8 inches) for the open-plan labs. Smaller appendages for offices run east to west on one axis while another bent axis goes north to south. The offices, not quite orthogonal in plan, are intimate, quirky but still spacious because their ceiling heights range from 14 to 16 feet at the windows to as high as 28 feet on the upper floors. Both labs and offices are organized around the central atrium, topped by a skylight, through which spirals a staircase like a strand of DNA. Because the atrium was a bit cramped, Gehry gave it spaghetti-like dimensions, arguing that the scientists would be encouraged to interact on this stage.

Scientific creativity and architecture

Can architecture foster creative scientific interaction and discovery? A panel discussion moderated by television commentator Charlie Rose addressed the topic when the Vontz Center opened in September. Earl Walls noted that Harrison had urged him to "keep an eye" on Gehry. In the end, Walls decided the building "is more alive than the Salk. Every turn you make stimulates you."

Two scientists on the panel were more cautious. Farid Murad, a Nobel Laureate and director of the pharmacology department at University of Texas in Houston, contended that the environment was mainly important in enabling researchers to work in peace and quiet and in minimizing fatigue. He wasn't sure that the architectural setting itself spurred creative synthesis. "Creative moments don't necessarily occur behind a desk," he stated, adding that some of his best ideas came to him while repairing automobiles. Still, Murad did suggest that "traffic patterns and accidental encounters lead to productive collaborations." Another panelist and Nobel Laureate, Paul Berg, the director of the biochemistry department at Stanford, said he didn't think creativity was diminished by architecture, but he

felt scientists who worked 18 hours a day should not be distracted by their surroundings.

Just to make sure that the scientists were neither distracted nor discomfited by too much natural light, automatic shades were placed on the lab windows facing east and west. And to prevent water from seeping in through the walls, waterproofing liners were installed inside the brick panels. "So far there are no technical problems," reports Kull. Only time will divulge how the building works, of course, but, for now, accounts are optimistic.

Solving it all

With regard to other expectations, the center fulfills its programmatic requirement to be an "icon." To be sure, the university may not have been thinking of a joint-is-really-jumpin' kind of symbolic statement, but a molecular biology center doesn't need to look like a city hall. Dynamic design seems apropos for the area.

The interior atrium is the most disappointing space architecturally, partially because the stair takes up so much room. As a result, one notices the heavy-handed quality of the wood capping on the balustrade, as well as the 1970s-looking white, blond wood and red-brick aesthetic. Nevertheless, the surprise of entering the bulging exterior and moving through the void to the rectilinear spaces of the labs is varied without being unsettling: you don't feel the need for the consistent expression of structure and program in the facade that was de rigueur in a purer modern era. The masking over of function and structure may be something of a lie, but it does not mystify; it only tantalizes. Part of the secret is in the scale: by breaking down the massing, Gehry has kept the building from being a disorientingly abstract sculpture. Another part of the secret is the retention of the material and the height of the surrounding buildings. Gehry has played the game, albeit unconventionally. Then again, the expanses of fenestration also help, imparting glimpses of activities inside. And you can find the front door.

The design doesn't advance the typology of science buildings. Gehry's architecture is clearly one-of-its-kind. This solution is not easily imitated, nor does it postulate a new parti (such as Kahn's now questionable served-servant spaces at Richards Medical Research Building in Philadelphia). Gehry's contribution, rather, shows you it is possible to take a straight geometrical grid and tamper with it inventively, without an untoward sacrifice to function. It is a fitting testament to the ongoing need for architects to be creative. Forget the brick box. And for now, let tectonics take a rest.

It should be added, that in all honesty, the one-off, or "signature," architecture and landscape design has not solved the chaotic quality of the whole campus. Too many tear-downs remain. Yet, in this mix, Gehry poses another irony: In spite of the admirable commitment by the university for denser, infill architecture, he shows it is possible to insert a free-standing object (with landscaping) and have it alter one's perception and memory of the place. ■

Sources

Computer system and software:

AutoCAD, Prima Vera

Structural system: Cast-in-place concrete frame

Exterior masonry cladding:

Vet-O-Vitz Masonry Systems Inc.

LaBrique Masonry Inc.

Metal/glass curtain wall:

Waltek & Co.

Elastomeric roofing: Carlisle

Metal: Zero Breeze Inc.

Aluminum: Waltek & Co.

Glass: Viracron

Skylights: LinEl

WWW For more information on the people and products involved in this project, go to **Projects at:** www.architecturalrecord.com



The offices (above) and conference rooms (opposite) at the Vontz Center receive ample daylight through changing ceiling heights and

large expanses of glazing. As the labs (below) demonstrate, rectilinear labs are contained within the nonplanar exteriors. Counter

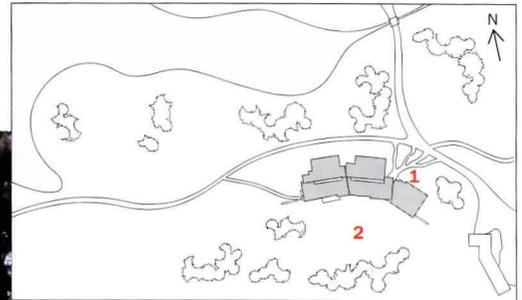
surfaces are an acid-proof synthetic material, while cabinets are metal and wood. Floors are covered in seamless vinyl.



Bohlin Cywinski Jackson's science center for SIMON'S ROCK COLLEGE harmonizes with its rustic surroundings

By David Dillon

Most good buildings tell us about themselves and their circumstances, but few do it so clearly and unaffectedly as the new Fisher Science and Academic Center at Simon's Rock College in Great Barrington, Mass. Designed by the Wilkes Barre, Pa. office of Bohlin Cywinski Jackson, the center is a kind of three-dimensional essay in materials and construction in which individual architectural elements are called out and celebrated, yet the whole blends seamlessly with its rustic surroundings. Expository without becoming dogmatic, it also manages to be lively without being self-indulgent.



the magnificent views of the Berkshires.

From the south, or Siberian, side, the Fisher Center appears as a series of overlapping roofs, which seem about to sail off into the nearby trees. Only a small greenhouse hints at what's going on inside. On the north, however, it becomes mostly expressed structure: wood

columns set at acute angles, as though buffeted by high winds; beams, trusses, and decking all exposed in a seemingly random manner that says "work in progress." The look is appropriately raw and unfinished, underscoring the spirit of exploration and discovery that is the soul of science, as well as the rationale for Simon's Rock. A physics teacher using the front entrance as a textbook on how buildings are put together would look right at home.

The lobby, a tall glazed space that glows like a lantern at night, leads to a 60-seat auditorium on one side and a two-level interior street on the other. The auditorium is used by everyone and is, therefore, turned slightly toward the center of campus, yet with its unpainted concrete walls, thick laminated beams, and intricate wood-and-steel truss, it has the same elemental feel as the rest of the building.

The laboratories, for physics, chemistry, biology, and ecology, occupy two levels, connected by a steel staircase that rises dramatically from the lobby. Housed in lively blue, yellow, and coral boxes, the labs

Simon's Rock, a semiautonomous unit of New York's Bard College, is a four-year liberal arts school for "younger scholars," meaning bright and restless high school students who have been turned off by traditional programs. It is the only institution in the U.S. that allows 10th graders to become full-time college students; no high school diploma is needed. Students can earn a bachelor of arts degree in four years, though most transfer after two years to other colleges. Small classes with an interdisciplinary and experimental focus are the norm. Because the students are so young—the average freshman is only 16—the Fisher Center had to be intimate and engaging. And because Simon's Rock is so small—approximately 350 students—it also had to serve the entire community, not just science majors.

"We told the architects that the building had to break down the perceived barriers between science and the other disciplines," explains Dean Bernie Rogers. "It couldn't be slick or institutional."

To reduce the center's bulk and cost, project architect Peter Bohlin, FAIA, tucked it into a hillside in the middle of campus known as "Siberia." Students use this area for everything from stargazing to kite flying and playing Frisbee, and weren't happy about losing their park to a building, even one that was desperately needed. Keeping its profile low and linear allowed Bohlin to preserve most of the open space as well as

David Dillon is a RECORD contributing editor and architecture critic for the Dallas Morning News. He lives in Amherst, Mass.

Project: Fisher Science and Academic Center, Simon's Rock College of Bard, Great Barrington, Mass.

Architect: Bohlin Cywinski Jackson—Peter Q. Bohlin, FAIA, principal for design; Allen H. Kachel, AIA, project manager; Heather Woofter, project architect

Associate architects: Architecture +

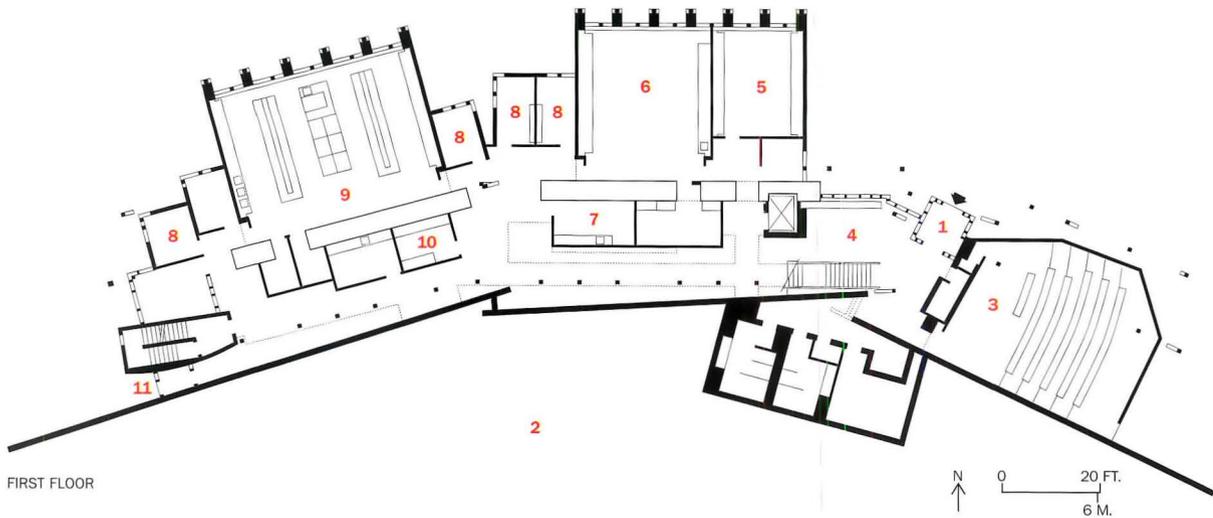
—Frank M. Pitts, AIA, principal-in-charge; Paul R. Lewandowski, project architect; J. Michael Bergen, AIA, principal

Engineers: Ryan Biggs Associates (structural); Van Zelm Heywood & Shadford (MEP)

General contractor: Mullany Corporation, Leominster, Mass.

PROJECTS

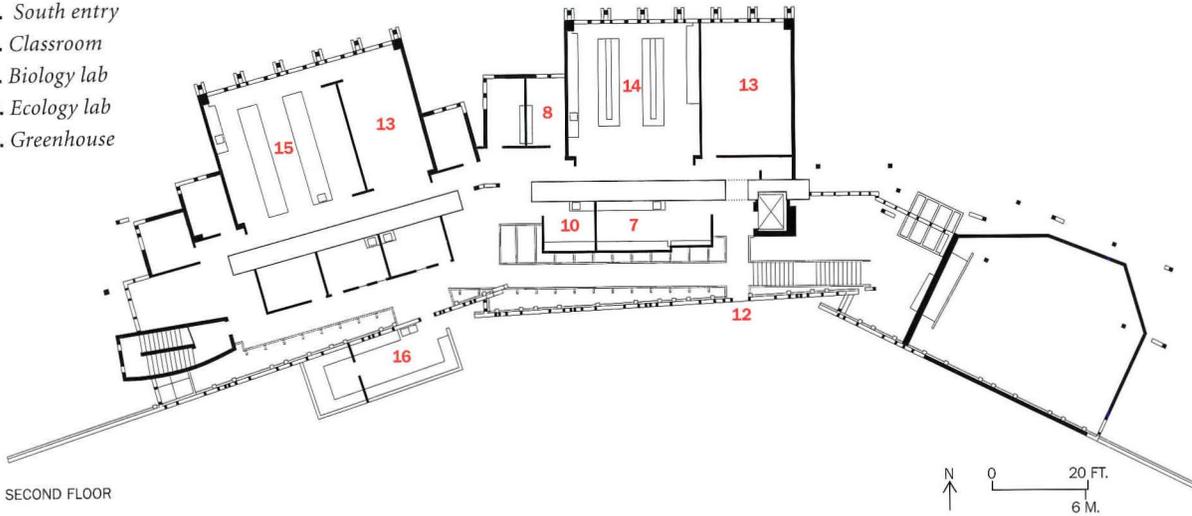
- 1. Main entrance
- 2. "Siberia"
- 3. Auditorium
- 4. Lobby
- 5. Computer lab
- 6. Physics lab
- 7. Research
- 8. Offices
- 9. Chemistry lab
- 10. Storage



FIRST FLOOR

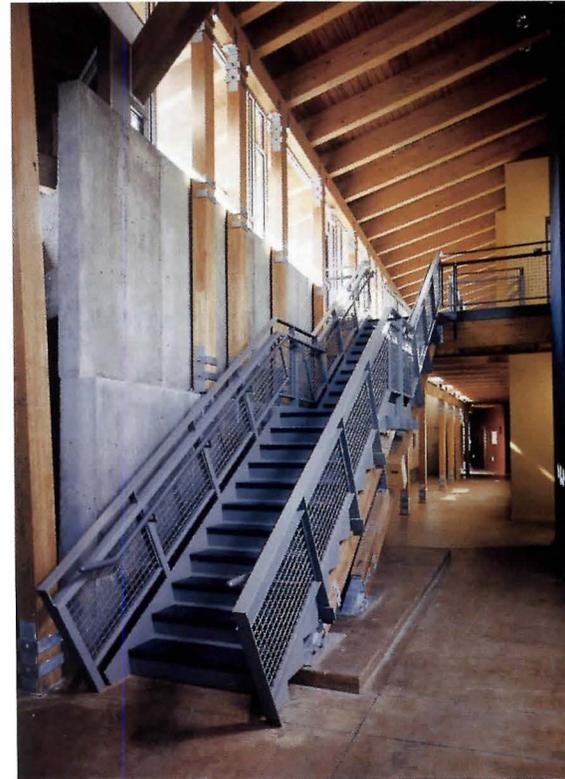


- 11. West entry
- 12. South entry
- 13. Classroom
- 14. Biology lab
- 15. Ecology lab
- 16. Greenhouse

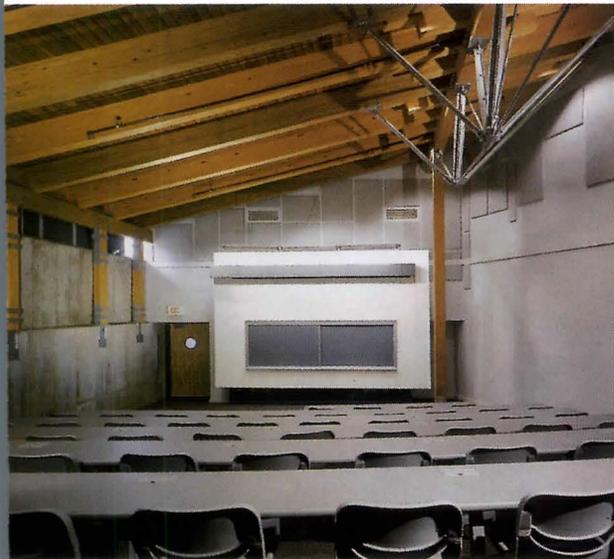


SECOND FLOOR

The glazed main entrance turns toward the center of campus and acts as a lantern at night to draw people into the building (far left); the student lounge is on the second floor (left); a steel staircase (above) ascends from the main entry.



The 60-seat auditorium is used for many purposes (below); pulling the catwalk away from the retaining wall allows light to penetrate to the core of the building (right).



erase all memories of antiseptic science buildings. Those on the second level are entered from a narrow catwalk that twists and turns like a village road. Pulling the catwalk away from the retaining wall allows light to penetrate the core of the building.

Between the labs, Bohlin inserted small classrooms and seminar rooms with tall windows that create the feeling of a tree house. Here and there he added what he calls “mixing and gathering spaces,” where students and teachers can hang out and exchange ideas. “We tried not to program every square foot,” he explains. “We want students to interact with the building and make it their own.” The best of these fluid spaces is a second-floor lounge with comfortable chairs, a handsome maple table designed by the architects, and stunning views of fields, ponds, and the distant Berkshires.

Simon’s Rock was originally a 200-acre farm (the name derives from a favorite gathering place for the owner’s children) that evolved into a country estate with gatehouses and carriage houses and small out-buildings for fishing and boating. Despite a flurry of dreary Pizza Hut dorms and classrooms erected in the early 1970s, the campus has retained a loose, unstructured character. The original family house is still the spiritual center of the campus, where most of the important ceremonies take place. A boathouse has been converted into a health clinic; a chapel, moved from a nearby seminary, now serves as a concert hall.

The Fisher Science and Academic Center is the first new building at Simon’s Rock in nearly 30 years, yet it takes most of its design cues from what went before. Its broad, sloping roofs with large overhangs; its exposed beams; and its shingle siding all belong to the existing campus vernacular, which it transforms, rather than mimics. It is a refreshingly clear and direct building that doesn’t strut or preen or take itself too seriously. Instead, it unfolds gradually, section by section, detail by detail, like an equation; from certain angles it almost disappears into the landscape. Though modern in concept and execution, the Fisher Center celebrates its natural surroundings and the spirit of the institution that it serves. ■

Sources

Structural system: *Glulam by Unadilla*

Curtain wall and entrance doors: *Efco*

Wood siding and shingles: *Western Red Cedar*

Wood windows: *Eagle*

Wood doors: *Weyerhaeuser*

Metal: *Englert*

Resilient flooring, acoustical ceiling,

ing, suspension grid: *Armstrong*

Interior ambient lighting: *Zumtobel*

Cabinetwork: *Wood Metal*

Paints and stains: *Benjamin Moore*

Carpet: *Lees*

Floor and wall tile: *American Olean*

WWW For more information on the people and products involved in this project, go to **Projects at:** www.architecturalrecord.com

Instructors and students enter the second-level labs from a catwalk that twists and turns like a village road.



To differentiate between new and historic fabric, the architect detailed a new balcony and stair using materials that contrast with the existing wood and stone.



Kieran Timberlake & Harris revamps Yale's historic **BERKELEY COLLEGE**, stirring up controversy and clashes over old and new design.

By James S. Russell, AIA

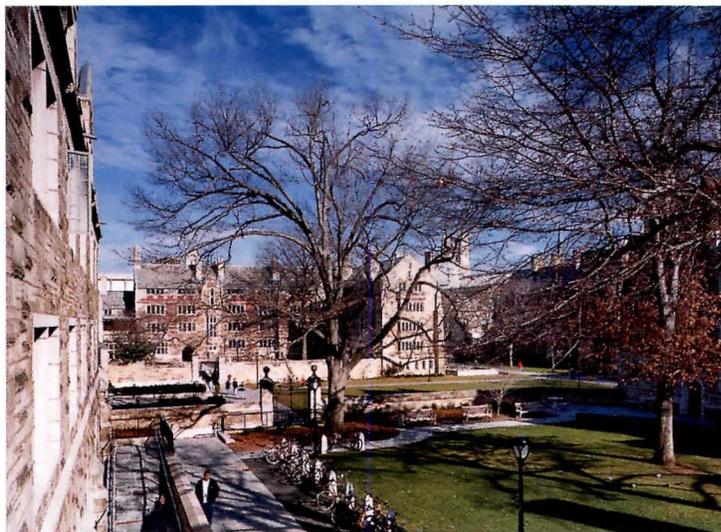
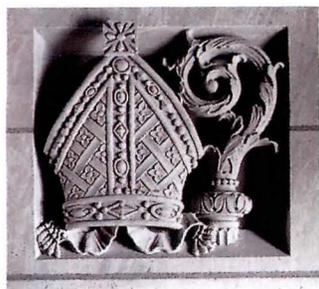
Architect James Gamble Rogers' slate-roofed, carved-stone structures for Berkeley College at Yale University once enfolded a world of almost unimaginable gentility. Though much of the country was wracked by the Great Depression when Berkeley was completed in 1934, undergraduates wore jackets and ties to meals taken in a magnificent Oxford-inspired dining room, where waiters in uniforms with white collars and aprons served them. At leisure, students gathered around a grand piano or a record player, gifts of alumnus Paul Mellon.

T-shirts and backpacks have replaced the jackets and ties, women have moved into the once male-only precincts, and a bowl of cereal now frequently constitutes a meal. Yet the splendor of the dining commons remained intact, if worn, when Philadelphia architect Kieran Timberlake & Harris (KTH) took on the challenge of upgrading the college. As part of what Steve Kieran, FAIA, KTH partner-in-charge, considered a deft and discreet upgrade, his firm added a small mezzanine. To denote the contemporary nature of the insertion, his team detailed it with contrasting materials, and introduced a new fluidity of space by adding an eyebrow window and inserting an opening onto an elaborate, historic lounge.

Even before the balcony was built, this new element became a cause célèbre at Yale. Labeled a travesty by critics, it inspired a petition for its removal and an editorial denunciation in the *Yale Daily News*. It attracted attention from the *Wall Street Journal* and elicited disapproval from Vincent Scully, Yale's celebrated professor of architectural history, and architecture school dean Robert A. M. Stern, FAIA.

The battle of the balcony is only the latest clash in the long-running debate over how institutions can keep a landmark building vital while preserving the original work of art. Our era demands accom-

modation of stringent life-safety regulations, access for the disabled, new technologies, and—in the case of college residences—an expanding panoply of social and recreational possibilities. (Singing around the piano no longer cuts it, even at Yale.) Can contemporary needs and expression find a place within cherished traditional design?



Berkeley College was the eighth of 11 residential colleges underwritten by Standard Oil heir Edward Harkness in a 1930s building spree. Recalling the isolation of his Yale years in a New Haven boarding house, Harkness offered the university the then-vast sum of \$15.7 million to rebuild its student housing in the residential-college mode of Oxford University. His gift enabled Yale to house students in manageable units of about 200, sharing garden courtyards, elegantly appointed lounges, dining halls, libraries, music rooms, and game areas with a master, dean, and fellows. All these features were intended to nurture both lifelong friendships and academic achievement.

With additional gifts, mainly from Harkness, most of Yale's academic structures rose in a relatively short period of time, meeting a very high standard. Rogers designed most of them. By the mid-1930s, Yale possessed an architectural quality and completeness arguably unequaled in America.

Project: Berkeley College Renovations, New Haven, Conn.

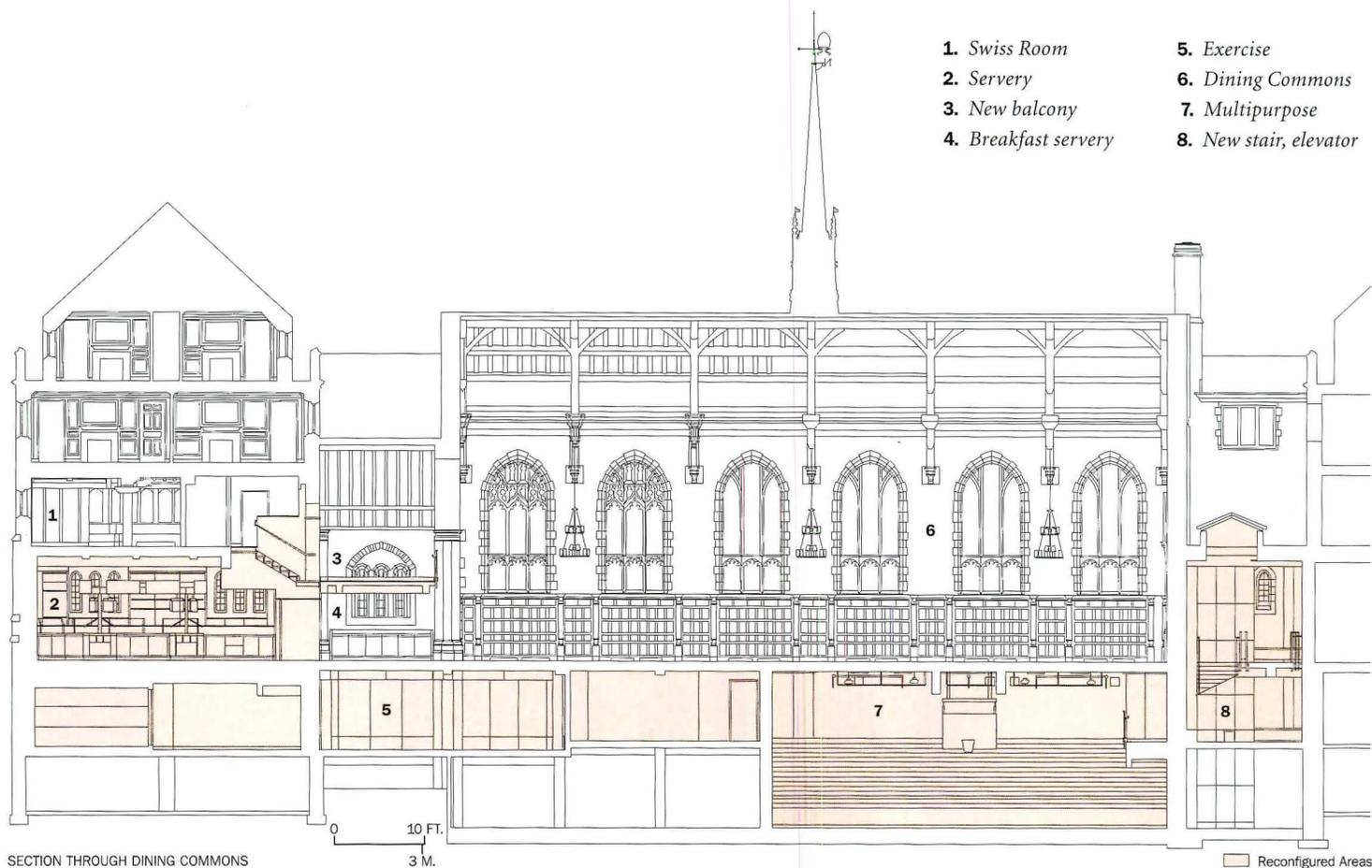
Owner: Yale University

Architect: Kieran Timberlake & Harris—Stephen Kieran, FAIA, partner-in-charge; James Timberlake, FAIA, Samuel Harris, AIA, Christopher Macneal, AIA, Amelia Floresta, AIA, Steven Johns, Patreese Martin, Ron Crawford, Clifton

Fordham, Yves Gauthier, Kimberley Jones, Vanessa Keith, Catherine Moy, Lisa Neely, Alix Peck, Jane Pfaff, John Poros, Dana Reed, Marie Reichardt, Nicole Rittenour, Anne Roderer, Amanda Sachs, project team

Engineers: Robert Silman Associates (structural); Lev Zetlin Associates (mechanical, electrical, plumbing)

Construction manager: Linbeck



SECTION THROUGH DINING COMMONS

When an institution possesses a campus of such singular character and when it has graduated thousands of influential people who cherish their highly individual memories, the prosaic process of bringing older structures up to date can resemble tiptoeing through a minefield. To many teachers, students, and alumni, altering the buildings means tampering with the university's very identity.

A rare architect who actually cares how cavity-wall drainage works and who can derive aesthetic inspiration from the performance of materials over time, Kieran Timberlake & Harris seemed an excellent choice for the first of the Rogers-era colleges to receive a long-overdue rehabilitation. The extraordinary high quality of the 1934 structures meant that much of the building fabric needed little more

CAN CONTEMPORARY EXPRESSION FIND A PLACE WITHIN A CHERISHED TRADITIONAL DESIGN?

than spot repairs. Still, almost all the \$35 million budget (made possible by a gift of Ann T. Bass and Robert M. Bass) went to conventional historic restoration. Much of the work, such as air-conditioning in public spaces, sprinklers throughout, wheelchair ramps, and screened trash-disposal areas, called for a high order of sophisticated detailing and design discretion.

Among the subtlest interventions was the reconfiguration of the floor plans. KTH created more single dorm rooms while maintaining a bed count higher than Rogers had originally designed. Using alarmed communicating doors, the architect also assured two means of egress from each suite, while permitting building managers to reconfigure suites (by switching the door alarms and locks on and off), to

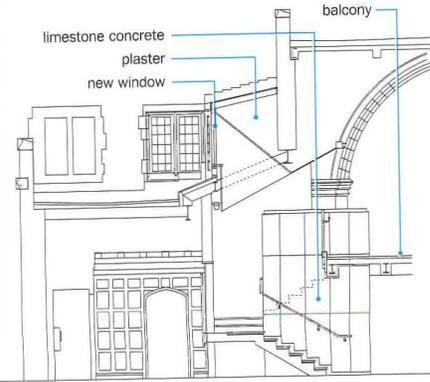
accommodate groups of varying size.

The thousands of panes of leaded art glass set in standard steel sashes presented the greatest technical challenge. Replacing the windows with insulated units in aluminum sashes would have met current energy codes while depriving the building of a key aspect of its original design personality. From neither a functional nor aesthetic point of view could the rusted sashes be restored. The architects considered a weatherstripping retrofit and the equivalent of interior and exterior storm windows, and finally settled on an interior-glazed vented steel frame that matches the existing windows' exterior profiles. This alternative nearly equals the energy performance of insulated units, yet aesthetically, it is barely distinguishable from the originals.

Following the mandate of a planning study by architect Herbert S. Newman and Partners and consultants at Bovis Management Systems, KTH placed new social and recreational spaces in the basement. A laundry, an exercise room, and a multipurpose area surround a small cafe. In converting former storage space, the architects made no attempt to emulate lofty above-grade grandeur. Instead, they exposed brick walls, cut discrete openings for skylights, cast quotations from the college's namesake George Berkeley (a figure prominent in Yale's early history) into the black stones that trim the tinted-concrete floor, and disguised surface-mounted conduits, sprinklers, and light fixtures with overlapping grids of blackened metal.

Only two contemporary elements intrude into the areas of the building most richly detailed by Rogers. KTH placed a new stair leading to the basement social spaces adjacent to the Dining Commons, filling a former cloakroom and washroom and thereby avoiding the alteration of important Rogers-designed areas. The stair's combination of concrete, steel, and stone eschews neo-Rogers style, proclaiming

The controversial mezzanine was added at the far end of the Dining Commons (right). The stair is semiconcealed (below) and skylit (bottom).



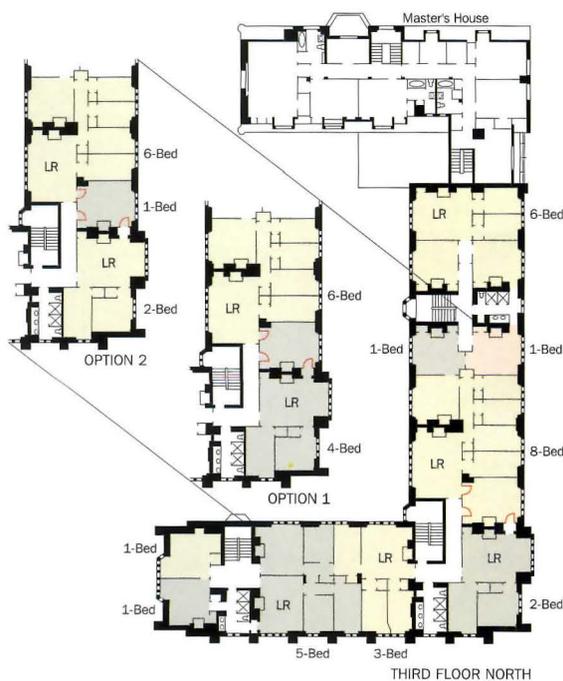
NEW STAIR AND BALCONY





A niche with a view (above) was added at the new stair (above right), which leads to a new cafe (opposite, top left) and multipurpose

room (opposite, top right). Battens, holding insulation, screen stairs and chair storage. Wood panels reverse to dance-studio mirrors.



instead a design approach akin to that of Carlo Scarpa, the Italian architect known for modern insertions into historic buildings, such as the Castelvecchio museum in Verona.

The stair has attracted little criticism. By contrast, the inclusion of the balcony in the Dining Commons, which shares the stair's design vocabulary, was excoriated because it altered an important Rogers-designed space. Kieran says it was needed to reconfigure the kitchen and food-service areas. It also added 30 seats and improved access to the Swiss Room, a period interior given to the college for private dining.

Now that Kieran's work is complete, Yale has given it mixed reviews. Robert A. M. Stern professes himself happy with the result. "What they did was not all that bad," adds Scully. Robert Irving, an architectural historian who led the protesters, remains an unrepentant critic, still hoping Yale will remove the mezzanine, which he calls, "a major and irrelevant architectural intrusion in materials, style and proportions, as insensitive as was the Kodak mural in Grand Central Terminal's main hall."

Tiny as it is, the mezzanine has become a larger symbol in the preservation debate, especially as Yale has contemplated alteration and even destruction of a number of older structures. Says Scully, "Should we be able to butcher really beautiful buildings to serve changes that are not fundamental? If we change the building every



time we make a slight functional change (which is how he regards the mezzanine), pretty soon there won't be much left."

"A generation ago, the world was far too ready to demolish and dramatically alter our past," says Kieran. "Today, the pendulum has swung too far the other way. We place all too many buildings and land-

SHOULD RENOVATIONS RECOGNIZE "REAL TIME" OR "LEAVE NO FINGERPRINTS"?

scapes beyond time, where no change is acceptable." He wonders whether the university today would have demolished the substantial 19th-century buildings that Berkeley replaced, or whether it would now build anything as daring as Paul Rudolph's celebrated—and still controversial—1963 Art and Architecture building.

A further irony, Kieran adds, is that "Gamble incorporated a multiplicity of styles and times in the design of Berkeley," ranging from 16th-century English Tudor to 19th-century American-style Gothic. "We had an opportunity to add real time to the design in the way we addressed program needs."

"No one wants to harm these buildings," observes Thomas H. Beeby, FAIA, of the Chicago firm, Hammond, Beeby, Rupert & Ang. He has for several years advised the corporate body governing Yale on architecture. "But surveys of the faculty show that user groups want first-rate

facilities. So you have a convergence of not necessarily common interests."

Irving argues that the preservation community does not want the landmarks to be unchangeable museums. Instead, he argues, new functions should be placed "behind closed doors," not intermingled with historic fabric. That no contemporary expression can be allowed to coexist with historic expression, Kieran feels, is to embalm the buildings. Must new spaces, functions, and design be relegated only to leftover spaces, he asks. Out of the Berkeley controversy has apparently come a new consensus if not a new orthodoxy: architects are to leave "no fingerprints." Kieran calls this "the dogma of total retention."

Beeby, for one, sees neither side of this argument prevailing: "To be fair to the buildings, you have to deal with each situation as you come to it. I think, in the end, most architects are forced to do a little bit of everything." Expect more aesthetic fireworks. ■

Sources

Slate and stone: Vermont Structural Slate, Indiana Limestone

Replacement windows: Crittall Steel Windows

Glazing: Rohlf's Studios

Custom steel doors and frames: E. H. Friedrich

Stile and rail wood doors and cabinets: Modern Industries

Hardware: Best, Stanley, Rixon, LCN, Von Duprin, Detex Haëfele

Reception furniture: Trouvailles, Chairmasters

Chairs: GF, Dakota Jackson, ICF

Special lighting: Edison Price



New Hi-Abuse™ Wallboard Ensures Tommy Makes His Mark In The World. Not On Your Walls.

If you need gypsum panels that are specially designed for high-traffic areas like classrooms, dormitories and day-care centers, you can't beat Gold Bond Hi-Abuse wallboard. It's ideally suited for use anywhere surface durability and impact-resistance are major concerns.

Hi-Abuse wallboard combines a specially formulated fire-resistive core with a scuff-resistant face paper to protect against surface indentation and impact. So if you're looking for a versatile alternative to fiber-reinforced gypsum panels, you can't beat Hi-Abuse wallboard.

National 
Gypsum
COMPANY

GOLD BOND® BUILDING PRODUCTS

2001 Rexford Road, Charlotte, North Carolina 28211
For technical information, call 1-800-NATIONAL or fax 1-800-FAX-NGC1
www.national-gypsum.com

CIRCLE 41 ON INQUIRY CARD

More than 100% growth in the number of firms we insure

More experience

More than 40 years of service to the AE community

More professional liability policies in force

More local claims specialists

More pre-claims assistance

More ways to help you manage risk

More services that help your business grow

More coverage

More professional liability programs

More than \$300 million in underwriting profits returned to insureds

More on-line information from our web site

More ways for you to save money

More premium credits for mediation

More design-build coverage

More international business consulting

Sometimes, **more** is more ...

When someone tells you less is more, make sure they're not talking about your insurer's claims and risk management services.

For more information on our insurance programs for design professionals, contact your independent agent or broker, or call 301-951-9746. Visit us at Schinnerer.com

This advertisement is for illustrative purposes only and is not a contract. Only the insurance policy can provide terms, coverages, amounts, conditions and exclusions. CNA is a registered service mark and trade name of CNA Financial Corporation. This program is underwritten by Continental Casualty Company, a CNA company, and is managed by Victor O. Schinnerer & Company.

More coverage available to design firms in all 50 states

More claims service

More programs for landscape architects

More property and casualty coverage

More circumstance reporting

More legal defense attorneys

More success in defending design professionals

More loss of earnings reimbursement

More and higher limits of liability

More premium credits for good claims experience

More regional risk management seminars

More voluntary education program services

More continuing education credit

More contract reviews

More professional liability newsletters

More legislative and regulatory updates

More joint venture coverage

More programs for specialty consultants

More pollution liability coverage

More worldwide coverage

More construction management coverage

More equity interest coverage

More programs for architects and engineers

More programs for land surveyors

More first dollar defense coverage

More programs for environmental consultants

More premium credits for longevity

More split limits

More and wider ranges of deductibles

More prior acts coverage

More employment practices liability coverage

More than a promise

More optional coverages

More multi-year policies

More guaranteed premiums

More premium credits

More simplified applications

More premium payment plans

More features that offer program flexibility

More premium credits for risk management

More reasons why we're the market leader

More financial strength

More professional society commendations

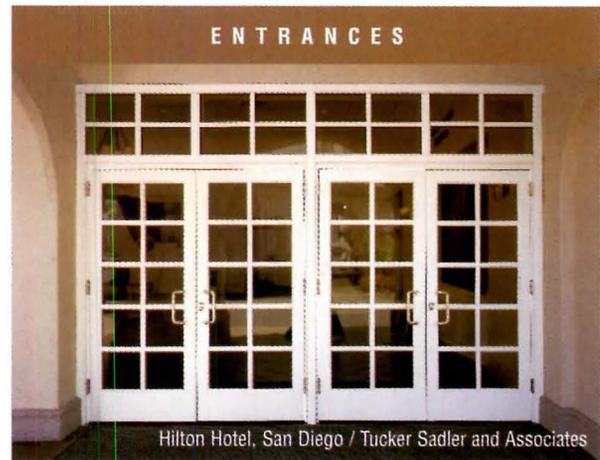
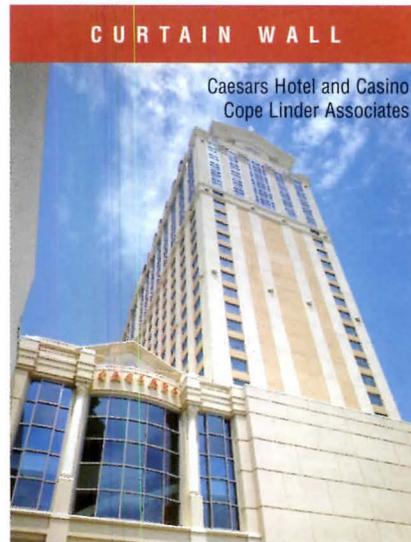
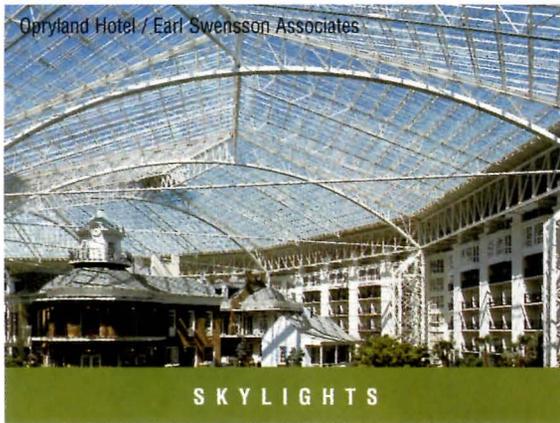
More than a policy

Victor O.
Schinnerer
& Company, Inc.

CNA PRO

CIRCLE 44 ON INQUIRY CARD

SUPERIOR INN-TELLIGENCE



Whether for business or pleasure, it's always good to travel to a destination that's memorable.

At The Vistawall Group, we help create destinations of distinction from Connecticut to California.

From our curtainwall and skylights to our custom windows and doors, we help develop hotels that are INN-spirational.

The Vistawall Group has provided architectural products for some of the finest hotels in the country. We're your single source supplier: designing, engineering and manufacturing custom products for everything from roadside inns to major convention hotels.

The Vistawall Group. We're the INN-telligent choice.



800-869-4567
fax: (972) 551-6264
<http://www.vistawall.com>

THE VISTAWALL GROUP
BUTLER MANUFACTURING COMPANY

VISTAWALL
ARCHITECTURAL PRODUCTS

MODULINE
WINDOW SYSTEMS

NATURALITE
SKYLIGHT SYSTEMS

SKYWALL
TRANSLUCENT SYSTEMS

CIRCLE 45 ON INQUIRY CARD

BOUTIQUE HOTELS

The Second Wave

YOUNG ENTREPRENEURS AROUND THE CONTINENT ARE TAKING OUTDATED BUILDINGS, ADDING STYLE AND ATTITUDE, AND TURNING THEM INTO ONE-OF-A-KIND HOTELS.

By Clifford A. Pearson

1.

Beverly Hills, Calif.

Koning Eizenberg Architecture and Kelly Wearstler Interior Design bring a trio of postwar buildings back to life as the Avalon.

2.

Chicago

Daniel Burnham's Reliance Building trades its office cells for guest rooms with the help of McClier and Antunovich Associates.

3.

Seattle

Minimalist spaces mix with organic forms and a few campy touches to create a small hotel for style-conscious travelers on a budget.

4.

Montreal

Lemay Michaud Architecture Design shows how the small floor plates of a 1960s office tower work just fine as a new hotel.

It may have started with Ian Schrager, who opened Morgans in New York City in 1984 and then the Royalton in 1988, but the boutique hotel wave has now hit both coasts and looks a lot like a full-fledged movement. Inspired by Schrager and other hip hoteliers such as André Balazs (the Mercer Hotel in New York City and the Chateau Marmont in Los Angeles) and Anouska Hempel (Blakes and the Hempel in London), a flock of young entrepreneurs is taking the boutique concept to smaller, less trendy cities where a runway is still what planes land on. In the process, this second generation is finding intriguing ways of adapting the boutique model to fit new markets and making it available to design-hungry travelers who can't afford top-of-the-line.

The second half of the 1990s has been a boom time for all hotel construction. After hitting bottom in 1991 when only \$1.775 billion of construction contracts were in place, hotel building jumped to \$8.674 billion in contracts in 1998, according to the F.W. Dodge Division of the McGraw-Hill Companies. Although construction dipped slightly to \$8.134 billion in 1999 and is forecasted by Dodge to ease a little further to \$8.083 billion this year, it remains at a plateau that is more than four times the nadir reached during the last recession.

Boutique hotels' share of the total market "is tiny but growing," reports Nancy Novogrod, editor in chief of *Travel & Leisure*. Novogrod sees boutique hotels "fanning out geographically" from their epicenters in New York and Los Angeles and affecting larger hotels and chains. "Their sense of style and design is having a significant impact on the whole industry," she says. And Novogrod doesn't think these quirky inns are just a passing fad. "The small hotel has always existed in places like London. The new boutique hotels are a response to the mass-produced experience. They're trying to deliver a more authentic experience, along with a sense of place and intimacy."

Some of the large hotel groups have responded by developing their own lines of hip establishments. For example, giant Starwood Hotels & Resorts Worldwide (which owns the Westin and Sheraton chains and many other properties) is rolling out a string of W Hotels that are too large to be considered boutique but clearly borrow the genre's sophisticated use of high design. Targeted at style-conscious business travelers, the first W Hotel opened in New York in December 1998 and quickly drew hordes of 20- and 30-somethings who turned its comfy lobby into an all-night hangout. Key ingredients in the hotel's success include a casually elegant design by David Rockwell, a hot restaurant run by Drew Nieporent (of Montrachet, Nobu, and TriBeCa Grill fame) and a



The decor of the lobby of the International House in New Orleans changes seven times a year (above and right).



Chip Conley turned an old motor lodge into the Hotel Del Sol (above) and built a new luxury campground called Costanoa (above right).

celebrity-infested Whiskey Bar run by Rande Gerber (who also has the Skybar in Los Angeles and other Whiskey Bars in New York to his credit). And like many boutique hotels, the first W inherits much of its character from the older building that was renovated to house it. By borrowing the skin of an early 20th-century building, the hostelry quickly assumes a certain patina and individuality that otherwise would take years to develop.

Finding the essence of New Orleans

Independent developers like 34-year-old Sean Cummings in New Orleans, however, aren't worried about the big guys squeezing them out. "A real boutique hotel is by definition a one-off," states Cummings, whose 119-room International House occupies a 1906 bank building across Canal Street from the French Quarter. Opened in 1998, International House is the first in what Cummings hopes will be a collection of unique hotels around the country. "Real innovation doesn't come from large organizations, it comes from individuals," asserts Cummings. "The trick is to build things that can't be readily repeated. Chains, on the other hand, are based on the concept of repetition."

At International House, Cummings wanted to introduce guests to the peculiar ways of his home town, not give them plagiarized Philippe Starck. "This hotel is fundamentally about its time and place—the culture and spirit of New Orleans." This is expressed, says Cummings, in the building's recreated lanterns on its street facade, the restored 23-foot-tall pilasters in its lobby, and the guestrooms' 12-foot ceilings, which let the steamy local air rise out of the way.

While the building's bones follow the timeless lines of traditional Southern architecture, the hotel lobby's decor changes seven times

a year to call attention to local events or customs. So artwork, flowers, and colors in the lobby morph from Mardi Gras (late January through early March) and St. Joseph's Day (mid-March) to Summer Dress and All Souls/All Saints Day (early November). "The lobby is a stage where we can observe local rituals and customs," explains Cummings.

Working with New Orleans architect Brooks Graham and the interior design firm Chrestia, Staub & Pierce, the developer restored the building's historic exterior, while creating a more contemporary interior. "Like New Orleans itself, the hotel mixes old and new," says Cummings. Two of the new pieces are the Lemon Grass Café, a French-Vietnamese restaurant by chef Minh Bui, who epitomizes the changing ethnic mix of southern Louisiana, and Loa, a Voodoo-inspired bar that echoes recent interest in some of the lesser-known aspects of African-American culture. "Loa" means "divine spirit" and the bar, which is usually packed with people, "represents the sexy, sophisticated side of Voodoo," says Cummings.

Hotels that jump off the page

In San Francisco, Chip Conley has spent the last 13 years applying consumer-marketing principles to the boutique-lodging business. Conley, who is the president of Joie de Vivre Hospitality, which owns or runs 16 small hotels and five restaurants and bars in the Bay Area, believes that establishing brand identity is the key to creating a successful boutique hotel. "Brand identity reflects the identity of the guests," says the 39-year-old entrepreneur, who earned an MBA from Stanford University.

Conley and his staff model each of the company's hotels on a particular newsstand magazine. "We use the magazine to create an identity for the hotel." For example, when Conley bought a down-on-its-heels



The old Chemists Club in Manhattan is being converted into the Dylan Hotel, with restored stained glass and Jeffrey Beers interiors.



motel in San Francisco's rough Tenderloin district in 1987 and turned it into the oh-so-hip Phoenix Hotel, he saw it as a check-in-and-spend-the-night version of *Rolling Stone*. "We came up with five words to characterize *Rolling Stone*—young, irreverent, funky, adventurous, and hip," says Conley, and then incorporated these traits in the design of the hotel. The result is a small hotel with swoopy '50s-style graphics, a pink-and-turquoise color palette, and Caribbean-inspired decor.

In 1995 Conley bought the Orchard Hotel at Union Square in San Francisco and then spent \$800,000 turning it into the 94-room Hotel Rex. "The Orchard was pretty generic," remembers Conley, "but it had an antiquarian bookstore that became the inspiration for the new hotel." So the developer used *The New Yorker* as the brand identifier and gave the Rex a clubby, literary-salon kind of feeling. "We look for anything indigenous to the property to use in creating a new identity," states Conley. "We ask ourselves, 'What is the kernel or soul that we can develop?'"

The Hotel del Sol, a recent project by Joie de Vivre, had been a motor lodge with a sleazy reputation. Repainted in south-of-the-border colors and given kitsch cachet by lights strung in palm trees and a mural of sunflowers, the hotel is now what Conley describes as "*Martha Stewart Living* meets *Islands* magazine."

Moving the boutique concept out of the city, Conley last year opened Costanoa, a rustic lodge and camp on the San Mateo County coast about an hour south of San Francisco. Aimed at cappuccino-sipping folks who drive sport-utility vehicles, Costanoa has a 40-room lodge, small Craftsman-style cabins, and furnished "tent bungalows," along with a "gourmet general store" and spa services. Guests can imagine they're living in the style found in the pages of *Outside* magazine.

Joie de Vivre has four projects in development, reports Conley. Magazines waiting to be turned into hotels include *Wired* and *Fast Company*, which will go on line in Silicon Valley, and *Metropolitan Home*, which will establish residence on San Francisco's waterfront in two years. "We don't have a *Wallpaper* or *Details* hotel," says Conley, "but those would be more in Philippe Starck's territory and I'm not sure we want to go there." Conley's plan is to "branch out beyond hotels" and apply the boutique concept to everything from day spas to campgrounds. "It's boutique if it offers the customer an identity refreshment. What we do is create escapes—whether it's a hotel, a resort, or a restaurant."

Room at the top

While most new players in the boutique market enter at the lower price points or in less developed locations, Morris Moinian, a 38-year-old businessman who got his start in fashion and real estate, is trying to break in at the top. The Dylan, Moinian's first hotel, will open in New York City early this year in a 1903 Beaux-Arts building that had been the Chemists Club and will have rooms for \$300 to \$1,000 a night. The 108-room Dylan will have restored details such as stained-glass windows and a grand staircase to go along with new interiors by architect Jeffrey Beers. Moinian is bullish on boutique hotels and says they can work in all kinds of places, as long as they offer unique lodging experiences and an alternative to the cookie-cutter approach of the large chains.

The new wave of hoteliers may not be introducing major innovations to the boutique model, but it is softening some of the attitude and making hip easier to take. Responsive to local cultures and tighter budgets, this generation is giving the boutique hotel a more popular face. ■

Avalon Hotel

Beverly Hills, California

1 KONING EIZENBERG AND KWID RECASTS THE BOOMERANG CHARM OF A 1950S HOTEL IN A HOME AWAY FROM HOME FOR THE WIRED GENERATION.

By Clifford A. Pearson

Architect: Koning Eizenberg Architecture—Hank Koning, FAIA, Julie Eizenberg, principals; Jim Jackson, Dan Parks, Fernando Bracer, Norah Edelstein, Carole Chun, Tim Andreas, project team
Interior designer: kwid—Kelly Wearstler, principal
Consultants: Mia Lehrer & Associates (landscape); ReVerb (graphics); Vortex (lighting)
Engineers: Nabih Youssef & Associates (structural); M.O. Engineering (mechanical/electrical)
Contractor: Eric Hinds Construction

Construction cost: \$6 million
Size: 88 guest rooms in three buildings; 60,000 square feet
Date opened: May 1999

Sources

Windows: Fleetwood
Skylights: Bristolite
Swan chairs: Designtex
Platner chairs: Clarence House
Eames storage units and George Nelson bubble lamps: Modernica
Bathroom sconce: Artemide

WWW For more information on the people and products involved in this project, go to **Projects** at: www.architecturalrecord.com

Program

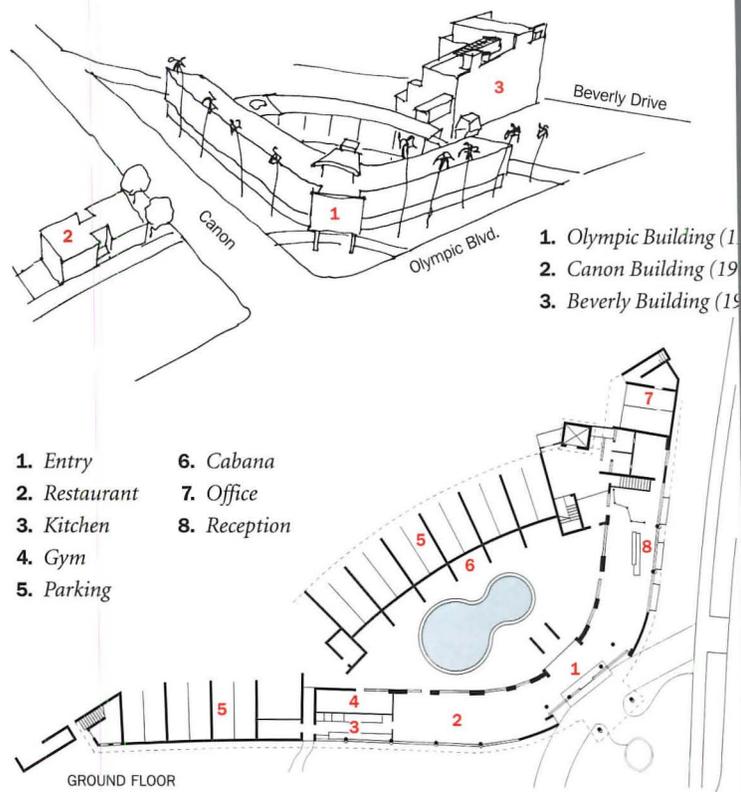
Turn a rundown hotel in a residential section of Beverly Hills into an up-to-the-minute retro-chic hang-out for people in the fashion and entertainment industries. Originally called the Beverly Carlton, the hotel comprises a trio of buildings (the Olympic, the Beverly, and the Canon), each facing a different street and dating from a different part of the postwar era. Although the Canon Building began life as an apartment block and none of the three buildings is physically connected to its mates, the structures have long functioned as one hotel.

The hotel has history. Marilyn Monroe lived in Room 305 for two years, and episodes of *I Love Lucy* showed Ricky and Lucy checking in. But the Beverly Carlton had lost its glamour and most of its charm by the time Brad Korzen and Jeff Elowe, two young developers, bought the property in 1997.

Transforming the place into the Avalon, architects Hank Koning, FAIA, and Julie Eizenberg worked with interior designer Kelly Wearstler to recapture the original postwar spirit while creating a free-flowing character. In the process, they upgraded all mechanical and electrical systems.

Solution

Making three separate buildings feel and work as one hotel was the biggest challenge. Painting all the structures a distinctive seafoam



green was a simple but effective way of linking them visually. The architects didn't stop there. They pared down the architecture—stripping away modifications such as canvas awnings and French doors—and simplified the procession throughout the hotel. "We

needed to establish a coherent identity for all three buildings," explains Eizenberg.

At the same time, each building came with its own set of design issues. The architects created a new face for the hotel by replacing a damaged cement-tile mural on the front of the main building (the Olympic) with a new glass-tile mural. They also expanded the lobby and dining area and opened up views to the pool by adding curving glass walls and moving the elevator from the entry to a location beyond the reception desk. A



The hotel's lobby, which is in the Olympic Building, was gutted and then redesigned with a new terrazzo floor and a mix of vintage and contemporary furniture. A guest room in the Beverly Building (below) has its own outdoor space.



blue terrazzo floor now sweeps through the lobby and out to the pool. Today, vintage sofas and lucite chairs from the '50s blend with a new copper-topped reception desk and a cluster of bamboo poles to create an updated mid-century modern sensibility.

The Beverly Building, which sits across an alley from the Olympic, was improved with new sun-control louvers and landscaping on its street facade and a new metal trellis and patio partitions on its south elevation. White metal arbors and a landscaped roof terrace make the two penthouse suites here the best rooms in the hotel.

To add street presence to the two-story Canon Building, the smallest and oldest of the hotel's three components, the architects designed a new canopy with a bubble skylight and worked with landscape designer Mia Lehrer to create a new ramped entry lined with bamboo and tropical plants.

The strategy for the hotel's guest rooms, interior designer Wearstler says, "was to create rooms that feel like apartments." Although the 88 guest rooms range in size from 400 to 1,000 square feet (for the penthouses) and include 28 different floor plans, Wearstler used a common palette of cool colors and natural fabrics to establish a shared identity. "In a hot place like L.A.," explains Wearstler, "it's nice to come back to a room that feels cool."

The rooms combine furniture from the '50s such as George Nelson lamps, Noguchi tables, and Eames storage units with headboards and cabinetry designed by Wearstler. A coffeemaker, fax machine, television with VCR, stereo, and modem hookup handle all the entertainment and telecommunications needs of today's laptop-toting professionals. As Koren, one of the owners, puts it, "We wanted you to feel like you're in a friend's apartment, one who has a really good interior designer."

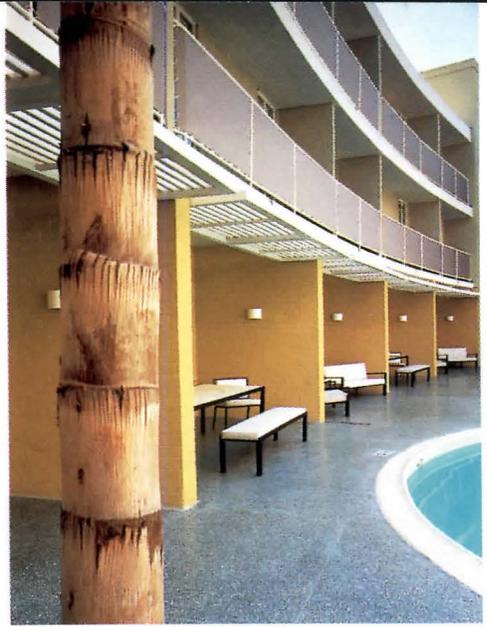
Commentary

The odd arrangement of three separate buildings in one hotel actually contributes to the Avalon's quirky charm. Because each piece is small (46 guest rooms in the Olympic Building, 26 in the Beverly, and 16 in the Canon) and none is more than three stories, the three buildings work as a neighborhood hotel. Indeed, the place fits its surroundings so well that first-time visitors often drive right by it.

While some boutique hotels are designed within an inch of their lives and seem too hip to breathe, the Avalon has a relaxed demeanor that's stylish without being intimidating. New elements such as a copper-clad elevator tower and metal-frame patio dividers on the Beverly Building are clearly contemporary and ensure that no one takes the '50s theme too literally or too seriously. ■



Metal sunshades over pool cabanas replaced old canvas awnings (right and below). The kidney-shaped swimming pool, the focal point of the Olympic Building, was repaired and resurfaced.



Hotel Burnham Chicago

2

MCCLIER AND ANTUNOVICH ASSOCIATES RESTORE THE GLORY OF THE HISTORIC RELIANCE BUILDING AND REINCARNATE IT AS A HOTEL.

By Blair Kamin

Owner: Canal Street Partners LLC

Developers: Baldwin Development Co. with R.M. Chin and Associates (Phase 1); McCaffrey Interests, Mansur & Co., and Granite Development (Phase 2)

Architect/Restoration architect:

McCluer—Thomas Rossiter, AIA, principal-in-charge; Christopher Martersteck, AIA, project manager; T. Gunny Harboe, AIA, restoration architect; John Bowers, AIA, project architect; Dina Barthel, Doug Gilbert, Elizabeth Trail, project team

Architect (Phase 2): Antunovich Associates—Joe Antunovich, AIA, principal-in-charge; Jeff Zelisko, project manager, David Kelley, project architect

Hotel interior designer: Intra-Spec—Susan Caruso, principal; Caroll Enriquez, Chris Porter, project designers

Construction cost: \$30 million

Size: 122 guest rooms, 15 stories

Date opened: Fall 1999

Sources

Terra-cotta: Boston Valley

Double-hung windows: Pella

Storefront: Kawneer

Stone floor in lobby: Walker Zanger

Resilient flooring: Armstrong

WWW For more information on the people and products involved in this project, go to **Projects** at: www.architecturalrecord.com

Program

The Reliance Building, a seminal work of modern architecture from 1895, was derelict by the early 1990s. Fronting State Street, which had hit on hard times, and suffering from a neglectful owner, the Daniel Burnham-designed landmark had only six tenants, including a tea-leaf reader. Its once-glistening white terra-cotta facade was covered with soot and clumsy fire escapes.

In 1994, the city of Chicago took control of the Reliance, initiating a process that would bring this landmark back to life. The first phase of work stabilized and cleaned the structure's dirty, crumbling exterior. Eventually, a team of developers stepped in to convert the former office building into a luxury hotel operated by the Kimpton Group.

The hotel, which opened this past fall and includes a ground-floor restaurant, is geared toward both business travelers and tourists.

Solution

Working with the precision of detectives, restoration architects at McCluer replaced 2,000 of the building's 14,300 pieces of terra cotta and made new molds for more than 130 types of terra-cotta panels. They also replaced a long-missing terra-cotta cornice with a

Contributing editor Blair Kamin is architecture critic for the Chicago Tribune.

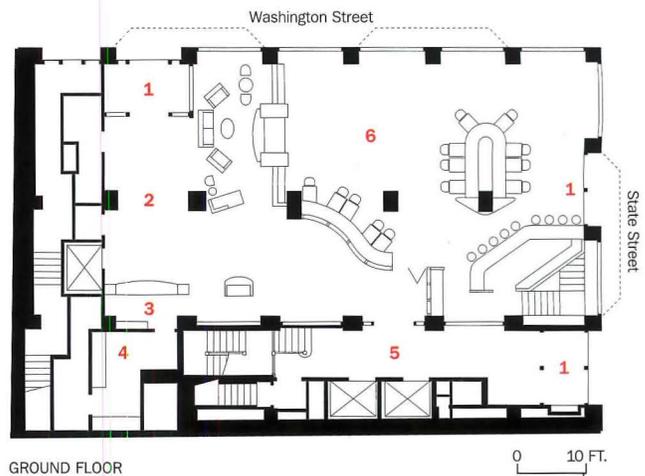


The new hotel is part of a revived State Street (above). Prior to the restoration, the elevator lobby bore little resemblance to its old self (left). Today, it is once again a remarkable space (opposite).



A restaurant (bottom right) and hotel lobby (top right) have been created on the ground floor. Old office areas are now guest rooms (opposite top), but the historic stair and many of the original corridors have been preserved (opposite bottom).

1. Entry
2. Hotel lobby
3. Reception
4. Office
5. Historic lobby
6. Lounge
7. Guest
8. Storage



new, lightweight cast-aluminum version, reconstructed bronze window-bay bottoms, and replaced the original windows with new energy-efficient double-glazed ones.

In the second phase, McClier worked with Antunovich Associates to convert the old office building into a new hotel. They identified missing materials in key areas, such as the original storefront facade, with its brown-granite cladding and neo-Gothic bronze decoration. They also recreated the original look of the office-building lobby, with its exotic combination of Italian, French, and domestic marbles.

The architects strove to balance the functional requirements of a modern hotel with the formal integrity of a landmark office building. They revived the Reliance's old lobby on State Street while creating the hotel's main entrance on a side street. In addition, they turned a former ground-floor retail space into a restaurant.

Upstairs corridors provide a glimpse back to turn-of-the-century office-building interiors. While carpeting and other typical hotel touches are new, the design team restored terrazzo tile floors, white marble wainscoting, and mahogany door and window frames. Best of all, hotel room numbers, painted on translucent glass doors, stylistically recall the office numbers that once graced the Reliance.

By inserting two new fire stairs in the back of the building, the

architects were able to preserve the openness of the Reliance's richly detailed internal staircase, which graces upper-floor lobbies like a piece of sculpture.

The guest rooms, while relatively small, proved surprisingly adaptable to their new role. There was no need to knock down walls between former office cells to create new rooms. The decor now echoes the lightness of the exterior, especially with drapes that are blue on the inside and white on the outside.

Commentary

What is remarkable about this project is the way it has transformed the 104-year-old Reliance without compromising the building's brilliant original design. The architects returned the building's exterior to the ethereal glory that inspired postwar modernists—"a thing of space rather than stuff," the late architectural historian William Jordy described the Reliance.

The new interior is also successful. For all its bold use of color, the lobby never becomes florid and excessive. Like the exterior, the inside spaces exhibit a stunning sense of transparency, with the Gothic metalwork of the new elevator grilles and an enormous interior wall of glass combining to make the lobby, the new cafe, and the street outside appear as a single, continuous space. ■





TYPICAL FLOOR



Ace Hotel Seattle

3

ERIC HENTZ MIXES ORGANIC FORMS AND TOUCHES OF STREET CULTURE WITH A MINIMALIST AESTHETIC TO TURN A FLOPHOUSE INTO A HIP HOTEL.

By Sheri Olson, AIA

Owners: Doug Herrick, Wade Weigel, Alex Calderwood

Designer: Mallet, Inc.—Eric Hentz

General contractor: Ruddesign Concepts

Construction cost: \$270,000

Size: 24 guest rooms; 6,500 square feet

Date opened: April 1999

Sources

Wood windows: Weathervane

Aluminum windows: Windorco

Storefront doors: Contract Hardware

Custom cabinets and wenge counters: Gabe Stern, Issue Design/Build

Eggshell and high-gloss paint: Benjamin Moore

Walnut paneling: Ruddesign and Larsen Woodworks

Plastic laminate: Pionite

Mosaic tiles: Huntington Pacific, Daltile

Coir carpet: Associated

Downlights: Lithonia

WWW For more information on the people and products involved in this project, go to **Projects** at: www.architecturalrecord.com

Program

Cash-conscious urban nomads flock to Seattle's Ace Hotel for a fusion of European pension and minimalist luxury. "We didn't set out to be hip—if you do that you're already out of it—we just wanted an alternative to the standard hotel experience," says part-owner/operator Doug Herrick. The white-on-white interior, stainless-steel fittings, and picture-postcard photomurals provide a low-key backdrop for visiting DJs, filmmakers, and lifestyle journalists.

The hotel is on the second floor of a former early-20th-century maritime flophouse in Belltown, now a stylish neighborhood on the fringe of downtown. To keep rates affordable (rooms start at \$65 a night), the existing hotel layout was left in place with minor alterations to accommodate 15 standard rooms and 9 suites. Guests mingle in bathrobes on the way down the hall to six toilet/shower facilities shared youth-hostel style by the standard rooms. Each suite has a private white-tiled bath concealed behind an oversized pivoting door.

Solution/Intention

A steep flight of crisply detailed walnut stairs leads to a reception desk on the second floor. "WELCOME" is formidably engraved on the limestone face of the reception desk but

Sheri Olson, AIA, is RECORD's Seattle-based contributing editor.



the cheekiness of a 10-foot-square technicolor photomural of Mt. Shuksan takes the edge off any self-consciousness.

The lobby, a dazzling white volume carved out of an old light well, lies directly to the left of the reception desk. The simplicity of the tall narrow space encapsulated by glossy white fiberboard panels provides an otherworldly transition from the

street. "It opens your mind to the whole experience," says designer Eric Hentz. A strip of skylight, the only outside opening, suffuses the space with glowing light under even the most limpid gray sky.

All interior surfaces, including the worn plank floors, wood molding, and rough brick walls, are painted stark white. Phones, clock-radios, and remote controls are also



WELCOME

Carved out of an old light well, the lobby makes the most of inexpensive materials like fiberboard coated with high-gloss enamel paint. The Ace occupies the second floor of an old maritime building (opposite).

The reception desk stands in front of a campy photo-mural at the top of a flight of stairs (right), with the lobby to the left. Guest rooms (opposite) are spartan but have 14-foot ceilings and witty touches, such as old French military blankets.



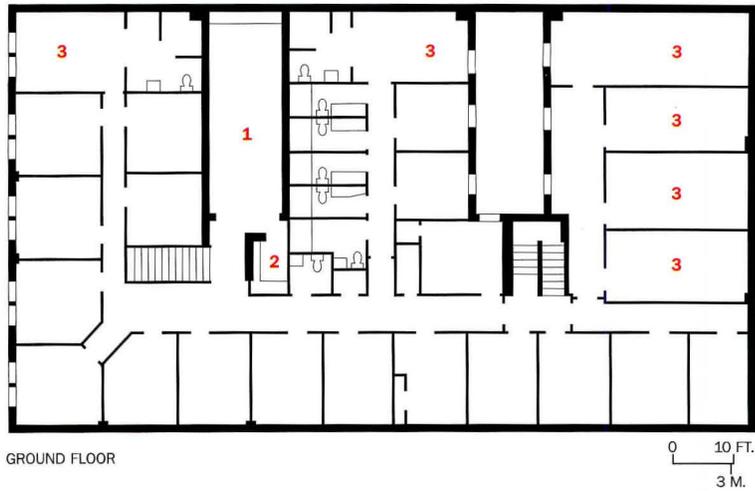
white to reduce visual clutter. Low platform beds, 14-foot ceilings, and large double-hung windows create an illusion of spaciousness in the spartan rooms. Other furnishings—mostly stainless steel and bolted to the wall—are kept to a minimum: a sink, a desk-height shelf, and tiny open-ended cubes for bedside tables and storage. “You are beautiful,” stenciled on the bottom of each mirror, diffuses the institutional look.

To stretch a tight budget, the design relies on common materials used in innovative ways. High-gloss enamel paint on medium-density fiberboard mimics expensive porcelain panels on the stair and lobby walls. The chocolate brown carpet running down the hallways is coir—a coconut husk material usually used for brush-off mats.

Natural materials effectively play against high-tech materials throughout the interior. The dense grain of the black walnut floor adds another layer of detail and interest to an otherwise monotone lobby. In the large interconnected suites at the back of the hotel, walnut paneling inset with a long horizontal mirror covers an entire wall.

For economy, as well as local flavor, many of the furnishings are salvaged from unlikely sources. The vintage modern Thonet bench in the lobby is from Boeing surplus and once graced an old airport lounge. The stainless-steel vanities mounted in the suites are from a demolished nursing home. Replacing the ubiqui-

1. Lobby
2. Reception
3. Guest



tous floral bedspreads found in most hotels are circa 1950 French military blankets with “Service Sante De L’Armee” marching along the bottom edge.

Commentary

Austere modernism, organic forms, and a dab of street culture come together in an ordered yet fresh mix. “The trick is in the proportions of rough and smooth, sweet and sour,” says Hentz. The hotel’s design embraces both the natural and the machined, the high and the low. For example, Hentz places rough coir next to stainless-steel furnishings in the guest rooms and juxtaposes tongue-in-cheek photomurals with original oil paintings.

What could have been too cool, even cold, is inviting instead, thanks to the sense of comfort, and fun, running throughout the project. “We want people to look good in the rooms,” says Herrick. Soft light from frosted-white Plexiglas cubes and a few strategically placed mirrors flatter everyone’s image. Works by emerging artists such as graffitist Kaws and pop-culture satirists Ken Sakurai and Dave O’Regan enliven the guestrooms.

With glass transoms over every door and the predominance of hard surfaces, the Ace may not be the quietest place to sleep at night. Perhaps in this hotel—where a copy of the *Kama Sutra* replaces the standard issue Bible—that might just be part of the ambiance. ■



Hotel Le Germain Montreal

4

LEMAY MICHAUD ARCHITECTURE CREATES A MIDTOWN HOTEL WHERE THE 9-TO-5 WORLD DOESN'T INTRUDE BUT IS PART OF THE HISTORY.

By Susan Doubilet

Owner: *Développement Germain-des-Prés*

Architect: *Lemay Michaud Architecture Design—Viateur Michaud, partner-in-charge; Marielle Landry, project architect*

Engineers: *Expert-Conseil Genecor (mechanical and electrical); BPR Ingénieurs-Conseils (structural)*

General contractor: *Les Constructions Pierre Blouin*

Construction costs (including furnishings): *\$4 million*

Size: *101 guest rooms, 16 stories, 71,000 square feet*

Date opened: *May 1999*

Sources

Curtain wall: *Les Industries Cantex*

Acoustica ceiling: *Armstrong*

Cabinet work: *Designed by Lemay Michaud Architecture, built by Renova*

Wooden venetian blinds: *Stores de Bois Montréal*

Wood flooring: *Lefebvre McCaffrey*

Ambient lighting in rooms: *Lampada*

WWW For more information on the people and products involved in this project, go to **Projects** at: www.architecturalrecord.com

Program

Is it hip or corporate, loftlike or traditional, raw or refined? The new 101-room Hotel Le Germain tries to be all of the above. Housed in a former office building in midtown Montreal, this urban inn targets business travelers yet features arty elements such as exposed concrete and seductive views of glazed showers from guest-room beds. Not unlike Montreal itself—which is at once French, North American, and worldly—Hotel Le Germain offers a series of contradictions.

Muscular building meets mahogany and white linen is one way to describe the hotel. Designed by Montreal architect Viateur Michaud of Lemay Michaud Architecture, the project offers a unique perspective on 20th-century commercial design, working with the bones of a 34-year-old office building and providing excellent views of a neighborhood filled with mirrored-glass, granite-faced, and precast-concrete-clad office towers.

When erected in 1966, the 16-story building now occupied by the hotel was one of the most thoughtfully conceived of these modern towers. Designed by Andre Vescei as the headquarters of the Order of Engineers of Quebec, the building shows off the art of engineering—

Susan Doubilet is author of American House Now (Universe/Rizzoli) and grew up in Montreal.



expressing its concrete Vierendeel trusses on its front and rear facades and exposing interior poured-concrete ceilings.

Solution

Architect Michaud took advantage of some of the original features and softened others in deference to the more conservative members of the hotel's clientele. Most foreign to the aesthetic of the original building are the attempts to make the entrance

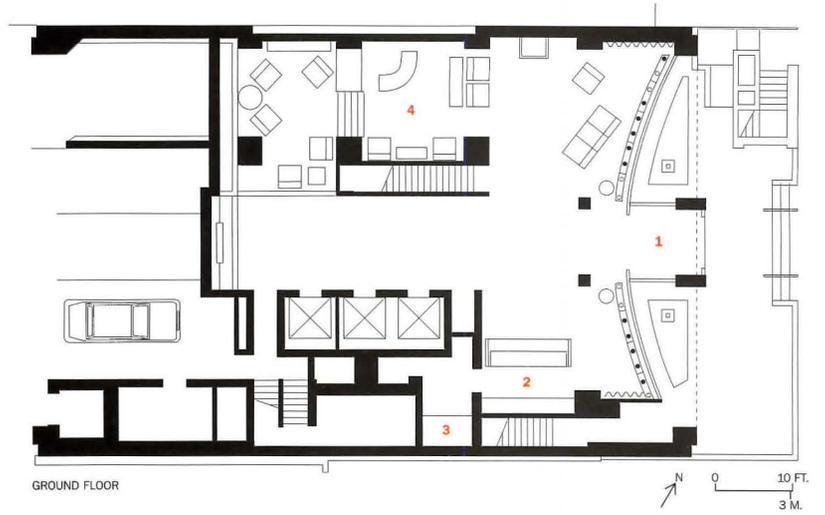


and lobby more inviting.

The new entrance is a glitzy polished-steel assembly inserted into a new, two-story curved wall of mullionless glass, while the lobby is divided into several cozy but fussy seating areas. Mahogany-stained pressed-wood paneling in the lobby adds warmth to the atmosphere, says Michaud. Even the original concrete coffers above the elevator lobby are wrapped in wood, a case of gilding the cabbage rose.

Before its \$4 million makeover, the 101-room hotel (opposite right), was a 1966 office tower (opposite left). Like much of the hotel, the reception area (below) blends the corporate with the hip.

1. Entry
2. Reception
3. Office
4. Concierge





TYPICAL FLOOR

0 10 FT.
3 M.

- 5. Guest
- 6. Utility

Glass walls allow bathrooms (below) to act as extensions of guest rooms (bottom) and afford views out to office buildings that are mostly empty at night. Each floor has only eight guest rooms.

A wall of exposed concrete, whose silver tints seem to glow in a sea of wood surfaces, makes a more successful contribution to the reception area. Up one level, the mezzanine bar with its spare, custom-designed furniture allows a panoramic view of the urban canyon to inspire awe.

Earthy refuges, guest rooms juxtapose rough and soft materials, rawness and hedonism. Dubbed "lofts" by the architect because of their openness and simple finishes, the rooms are 14 feet wide and 9 feet high, with poured concrete ceilings covered only by a coat of gray paint.

Beds and cabinets, custom-designed by the architect, are made of silky, walnut-stained wood. Luxuriant white-linen duvets and pillow cases also make welcome touches. Also contributing to the upscale setting are CD players in every room, 27-inch TVs with VCRs, good lighting, and black-and-white prints by Quebec photographer Louis Ducharme. "Hotel design is detail design," Michaud points out.

Bathrooms are unexpectedly open features in the guest rooms. Because nearby office buildings are rarely occupied at night, the architect separated the showers from the sleeping areas with only glass walls, giving the bathrooms great city views. For the faint-hearted, however, wooden venetian blinds between each shower and bedroom can mod-

ulate the view, and vinyl shower-curtain liners can exclude it altogether.

Bedroom windows are framed by concrete on the floors occurring within the Vierendeel trusses, or they run as ribbons of glass on the alternate stories. The former window type is furnished with venetian blinds, while the latter is veiled by sheer crinkled polyester curtains, providing subtly muted, ethereal views of the city by day and an undulant silken scrim when the black-out drapes behind them are drawn.

There are only eight guest rooms per floor in the 16-story tower, whose 4,000-square-foot floor plate is more appropriate, as it happens, for a hotel than an office building. Two two-story suites occupy the top of the building. The hotel also has a small conference facility and a fitness room.

Commentary

Spare, finely detailed guest rooms give Hotel Le Germain much of its appeal. And, perversely, its location contributes as well, offering a special haven for those cool enough to relish the relative remoteness from both the city's lively night scene and the enchanting but tourist-clogged Old Montreal area.

The hotel's developers are gambling that there are enough corporate souls hip enough to appreciate not only the convenience but also the architectural charms of a modern-day business district. ■





LIFE IS GOOD...
BECAUSE WAUSAU'S GOOD.

Photo: The Summit Building of Mt. Washington; Sargent's Purchase, NH. Installing Contractor: Granite State Glass, Belmont, NH.

THE ELEMENTS OF SUCCESS.

Wausau Window and Wall Systems has built an unequalled reputation by providing the best products backed by the best customer service in the industry. Whether you're building in the harshest environment on earth,



or maybe you just have an idea that's a bit out of the ordinary, you're in our element. Contact us today and everything will be cool.

Life is good... because Wausau's good.

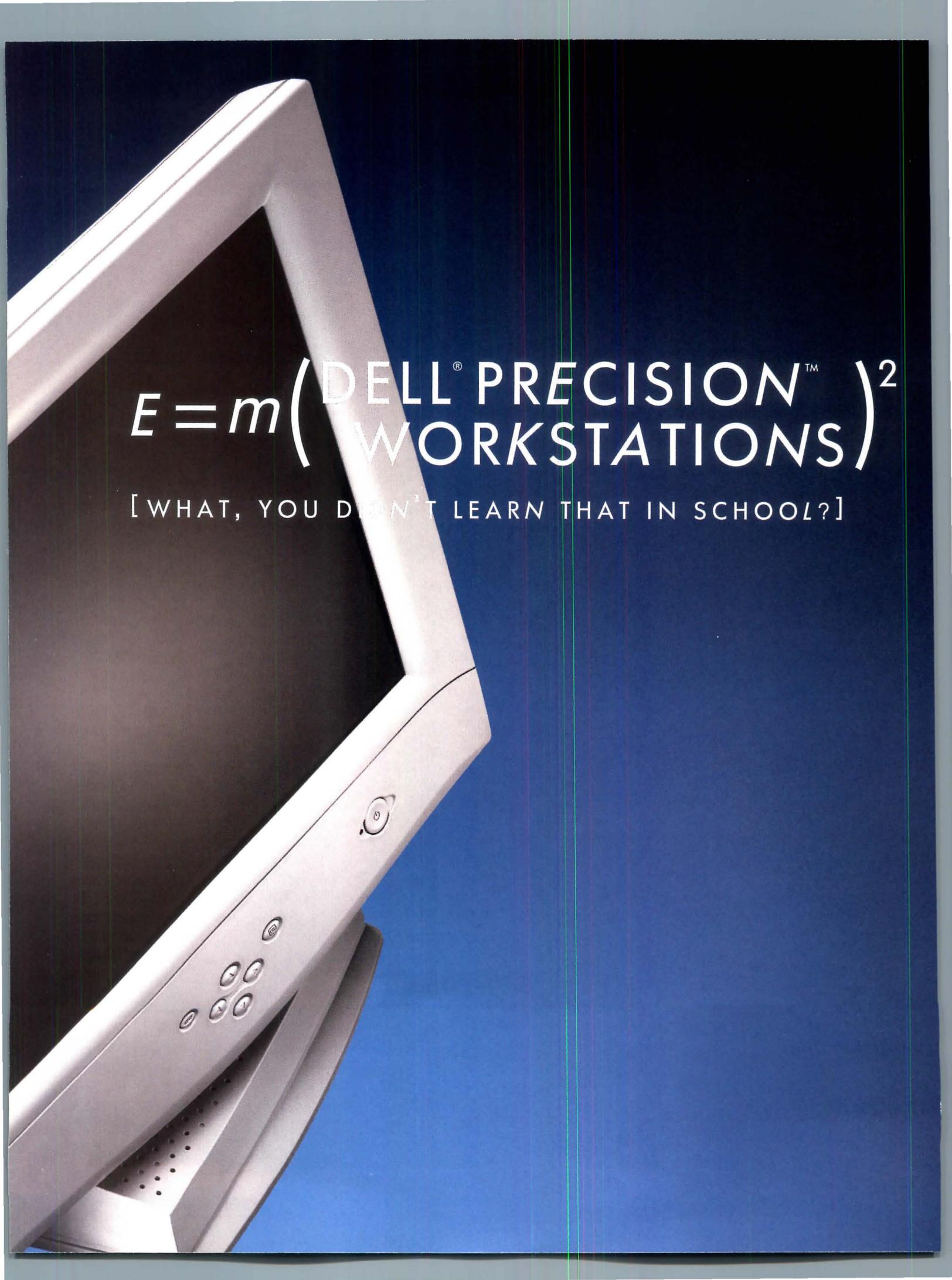


WAUSAU

WINDOW AND WALL
SYSTEMS

CIRCLE 46 ON INQUIRY CARD

1.877.678.2983
www.wausauwindow.com



$E = m \left(\text{DELL}^{\circledR} \text{PRECISION}^{\text{TM}} \text{WORKSTATIONS} \right)^2$

[WHAT, YOU DIDN'T LEARN THAT IN SCHOOL?]



Flat Panel Monitor Sold as an Upgrade.

NEW DELL® PRECISION™ Workstation 420

- Dual Intel® Pentium® III Processors at 600MHz (up to 800MHz)
- Dual Processor Configuration/RAID Capable
- 128MB PC800 RDRAM at 400MHz (up to 1GB)
- 27.2GB* 7200 RPM EIDE HD (up to 36GB* 10K Ultra3 SCSI)
- 19" (17.9" vis) P991 Trinitron® Monitor (up to Flat Panel)
- 32MB 4X AGP Matrox G400 Max Graphics Card
- Integrated NIC & Sound; 48X Max Variable CD-ROM
- Microsoft® Windows NT® Workstation 4.0; 1-Year NT Support
- 3-Year Next-Business-Day On-site* Service
- 7X24 Dedicated Hardware Phone and Online Tech Support

\$4389  Business Lease[™]: \$147/Mo., 36 Mos.
E-VALUE CODE: 89603-490243

- Add a Laptec Spaceball® 4000 FLX, add \$695
- Upgrade to 21" (19.8" vis) P1110 Trinitron®, add \$470

TAKE A DEEP, DEEP BREATH. FEEL WHAT IT'S LIKE TO TRAVEL AT SPEEDS PREVIOUSLY UNKNOWN TO HUMANS. WITH THE OPTION OF DUAL INTEL® PENTIUM® III PROCESSORS UP TO 800MHZ, RENDERING TIME CAN MELT INTO A PHANTASMIC BLUR. AND WHEN YOU RUN CAD/CAM APPS WITH ADVANCED GRAPHICS CARDS AND MULTI-MONITOR OPTIONS, YOUR MODELS CAN BE DISPLAYED WITH FRIGHTENING PRECISION. THE FINAL RESULT? YOUR CLIENTS WILL FINALLY RECOGNIZE YOU AS THE SUPER-GENIUS THAT YOU REALLY ARE.

DELL® PRECISION™ Workstation 410

- Up to Dual Intel® Pentium® III Processors from 500MHz-800MHz (RAID Capable)
- 64MB ECC SDRAM (up to 1GB)
- 9GB* up to 36GB* (10,000 RPM) Ultra-2/LVD SCSI HDs
- 32MB Diamond Viper V770D Graphics Card (Upgradeable to: 32MB Matrox G400 Max, Appian® Jeronimo Pro, Diamond Fire GL1 or Intense3D Wildcat® 4000)

STARTING AT \$2199  Business Lease[™]: \$74/Mo., 36 Mos.
E-VALUE CODE: 89603-490221a

NEW DELL® PRECISION™ Workstation 220

- Up to Dual Intel® Pentium® III Processors from 533MHz-800MHz
- 64MB PC800 RDRAM at 400MHz (up to 512MB)
- 10GB* EIDE HD up to 27.2GB* EIDE or 9GB* up to 36GB* (10,000 RPM) Ultra-2/LVD SCSI HDs
- 32MB 4X AGP Matrox G400 Max Graphics Card (Upgradeable to 32MB 4X AGP Synergy Force or Appian® Jeronimo Pro)

STARTING AT \$2169  Business Lease[™]: \$73/Mo., 36 Mos.
E-VALUE CODE: 89603-490221

DELL® PRECISION™ Workstation 210

- Up to Dual Intel® Pentium® III Processors from 500MHz-800MHz
- 64MB ECC SDRAM (up to 512MB)
- 6.4GB* EIDE HD up to 27.2GB* EIDE or 9GB* up to 18GB* (10,000 RPM) Ultra-2/LVD SCSI HDs
- 32MB Diamond Viper V770D Graphics Card (Upgradeable to 32MB Matrox G400 Max or Appian® Jeronimo Pro)

STARTING AT \$1859  Business Lease[™]: \$62/Mo., 36 Mos.
E-VALUE CODE: 89603-490218

Common Features:

- 17" (16.0" vis) M780 Monitor [Upgrades available from 17" (16.0" vis) P780 Trinitron® Monitor to 24" (22.5" vis) and Flat Panel]
- Multi-Monitor Capability ■ 48X Max Variable EIDE CD-ROM Drive ■ Integrated SoundBlaster Pro Compatible Sound
- Integrated 3Com® 10/100 PCI TX NIC with Remote Wakeup ■ Remote Client Manageability Support via Wakeup on LAN (WuOL) Capable
- Microsoft® Windows NT® Workstation 4.0 ■ 3-Year Next-Business-Day On-site* Service ■ 7X24 Dedicated Telephone and Online Tech Support

WWW.DELL.COM/SMALLBIZ/CAD ■ 1.877.696.3355



USE THE POWER OF THE E-VALUE™ CODE.
Match our latest technology with our latest prices. Enter the E-VALUE code online or give it to your sales rep over the phone. WWW.DELL.COM/EVALUE



BE DIRECT™
DELL®
www.dell.com

Phone Hours: M-F 7a-9p ■ Sat 10a-6p ■ Sun 12p-5p CT ■ In Canada¹, call 800-839-0148 ■ In Mexico¹, call 01-800-021-4531 ■ GSA Contract #GS-35F-4076D

*Prices, specifications and availability may change without notice. U.S. only. ¹For a copy of Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One Dell Way, Round Rock, TX 78682. ²On-site service provided via contract between customer and third-party, availability varies. Technician will be dispatched if necessary following phone-based troubleshooting. Other conditions apply. ³For hard drives, GB means 1 billion bytes; accessible capacity varies with operating environment. ⁴Business leasing arranged by Dell Financial Services L.P., an independent entity, to qualified customers. Above lease payments based on a 36-month lease, and do not include taxes, fees, shipping charges; subject to credit approval and availability. Above lease terms subject to change without notice. Intel, the Intel Inside logo, and Pentium are registered trademarks; Celeron, SpeedStep, and Pentium III Xeon are trademarks of Intel Corporation. MS, Microsoft, BackOffice, IntelliMouse, Windows NT and Windows are registered trademarks of Microsoft Corporation. 3Com is a registered trademark and Fast EtherLink is a trademark of 3Com Corporation. HP and DeskJet are registered trademarks and OpenView is a trademark of Hewlett Packard Corporation. Trinitron is a registered trademark of Sony Corporation. ©2000 Dell Computer Corporation. All rights reserved.



We're not in the insurance business, but we sell peace of mind.

There's no substitute for getting the job done right the first time. NECA/IBEW contractors have the best trained workforce to head off potential problems before they happen and to insure healthy performance on any job.

NECA/IBEW contractors deliver peace of mind on all types of electrical construction jobs, especially those involving the latest technologies. NECA contractors can also monitor the efficiency and reliability of a power distribution system, providing preventive maintenance that saves money and helps to avert system breakdowns.

When you need the job done right the first time, on time and on budget, call a NECA/IBEW contractor.

To hire an electrical contractor who employs IBEW workers, contact your local NECA chapter or IBEW local union. To find a NECA contractor, call The NECA Connection at 800-888-6322 or visit our website.

<http://www.necanet.org>

National Electrical Contractors Association
International Brotherhood of Electrical Workers



CIRCLE 47 ON INQUIRY CARD

Seismic Systems that Stand Up to Nature

THREE INNOVATIVE PROJECTS IN THE BOOMING BAY AREA DEMONSTRATE THE LATEST THINKING ABOUT STRUCTURAL SEISMIC SYSTEMS IN BUILDING PERFORMANCE.

By Wendy Talarico

In San Francisco, architects, engineers, and builders don't say the word "earthquake." They refer to those sudden and violent vibrations of the earth's crust as "events." The one that's discussed most in the Bay Area is the 1,000-year event—an earthquake the equivalent of the famous 1906 quake, with a magnitude of 7.8. According to the U.S. Geological Survey (USGS), another 1,000-year quake, would kill "thousands of people...and economic losses might be in the hundreds of billions of dollars." The USGS also predicts there's a 67 percent chance of a quake with a magnitude of 7 or larger before 2020.

No wonder people there and in other seismic zones, such as Seattle, Mexico City, and even St. Louis, are becoming increasingly savvy about the seismic components of the structures in which they live and work. "We're not designing to meet code anymore, we're paying attention to what the tenants want based on their own risk assessments," says Mark Miller of Kaplan McLaughlin Diaz (KMD) in San Francisco. "Office building owners want to limit the threat to their employees and, just as important, to their businesses. Shutting down operations for just one day costs thousands."

For example, in Emeryville, just across the Bay Bridge from San Francisco, Pixar is building an animation studio, designed by Bohlin Cywinski Jackson. The expensive seismic system they're using is perhaps a case of overkill; the base isolators, paired with a concentric-brace frame, far exceed code. For a company that stands to lose money if its sensitive computer equipment fails, however, the expenditure is worth it.

The information and case studies presented here focus on the Bay Area, America's prime earthquake territory. There's a building boom underway there, thanks in part to dot-com companies, but also as a reaction to the lean years of the early 1990s when virtually nothing was built. The boom is an opportunity to advance the seismic design process and even experiment with American and international innovations.

CONTINUING EDUCATION



Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 134 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe different types of structural seismic systems.
2. Explain how seismic systems—including base isolators, dampers, shear walls, and braced framing—function and what types of buildings each serves best.
3. Explain seismic terminology.



In 1906, a 7.8-magnitude earthquake rattled San Francisco, destroying much of the housing stock. The USGS predicts another strong quake before 2020.

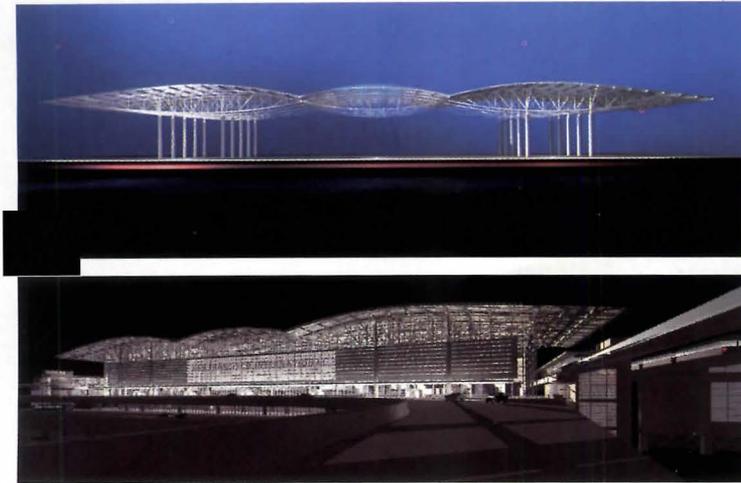
BUILDING SCIENCE

Like many aspects of building science, designing structures to withstand seismic forces is trial and error. "We have a long way to go in terms of understanding how materials and structures behave and react," says David Friedman, president of Forell/Elsesser Structural Engineers. "With every quake we learn a little more about what stands and what falls."

Picking a system

An earthquake is a series of forces, or energy, and the goal of any seismic system is to somehow dissipate or absorb that energy, decreasing the demand on the building structure. There are several ways to design a building to endure an earthquake with minimal structural damage. The seismic system that works best depends on the particular project—its location, the design parameters, the owner's requirements, building codes, and costs.

In California, seismic design is governed by the Uniform Building Code, which sets standards based on the amount of load the building is likely to take and its proximity to fault lines. "Code mandates that the building be stable enough immediately after an event to allow safe egress, but it says nothing about getting back into the building, unless the building is classified as essential—hospitals, airports, and so on,"



CASE STUDY

New International Terminal at San Francisco International Airport

Completion: Spring 2000

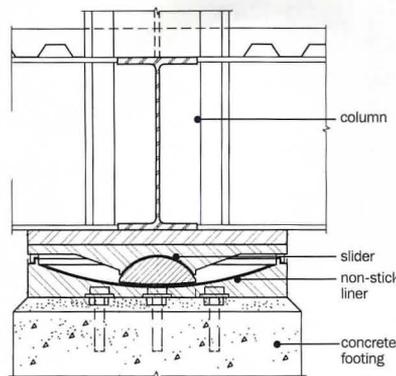
Construction cost: \$500 million

Architects: Joint Venture Architects (JVA), including Skidmore, Owings & Merrill (SOM), DelCampo & Maru, Michael Willis and Associates

Engineer: SOM

Seismic concerns, while important, weren't top priority when design work began on the New International Terminal in 1993. Then, in 1994, the Northridge quake proved yet again that nature wins out over architecture, despite engineering know-how. "We suddenly realized we had to increase the building's seismic criteria," says Craig W. Hartman, FAIA, an SOM partner at the firm's San Francisco office.

In California, building codes rate structures such as airports and hospitals as essential: they



FRICION PENDULUM

may sustain minimal damage but must continue to operate after a severe quake. In addition, because the terminal spans the entrance road to the domestic terminals, its

ability to withstand seismic vibration was even more important. "Nobody wanted anything to come down and block that road," says Peter L. Lee, one of the project engineers.

The terminal's cantilevered roof rests on 2 sets of 10 columns. The innovative, winglike trusses span 860 feet and encompass 1.2 million square feet. To keep the trusses stable and allow the use of delicate steel framing and a window wall at the front facade, SOM's seismic engineers selected friction pendulum base isolators—267 of them tucked beneath the building's columns.

structural engineer with Ove Arup & Partners in San Francisco.

Seismic devices

The case studies presented here rely on four types of systems: shear walls, braced framing, shock-absorbing devices or dampers, and base isolation. These may be used alone or, for tall buildings, in combination. Each additional system increases construction costs, though the amount of increase varies. Shear walls and braced framing are least expensive, dampers are higher in cost, but base isolation is most expensive, depending on the number of isolators required and type. "They also perform best," Friedman says.

The nonstick, concave surface of the plate and the steel "slider" that moves over it lets the building swing around during seismic vibrations, while the weight of the structure evens the terminal once the earth's crust calms down. The isolators allow 20 inches of movement around the perimeter. "It's a system that works best for a low building, one that lacks strong overturn forces [a building's propensity to flip over when it is rocked]," Lee says. "It's essentially a squat, stiff building, despite the trusses."

Eccentric and concentric braces reinforce the building's frame so that it moves as a unit. The structure is also tightly knit at roof and floor junctions.

While the base-isolation system is unique, it is only part of the story. The real engineering came in creating a seismic moat—the 20-inch-plus seam around the building that allows it to sway without crashing into the adjacent structures or pulling the surrounding roadways along with it. "All kinds of systems come through that seam," Hartman says. "It required connections that could flex and stretch—not exactly off-the-shelf items."

The buildings that lead from the terminal to the boarding gates and connect to incoming mass transit are fixed and will not move in a quake. To keep these wings connected, the floor plates, walls, and ceilings telescope. Metal plates that slide over each other prevent the road in front of the terminal, where passengers are loaded and unloaded, from tearing away when the building moves.

Friedman says. How a building actually fares is determined, in part, by the level of structural engineering that the building owners, working with the architect and engineers, decide to achieve. Factors that determine this level include permissible outage time, extent and cost of repairs, and how the electrical, plumbing, and other systems must hold up. It's likely that the new International Code will integrate some of these performance-based standards when it is next updated in 2003, he adds.

The architecture also determines what type of seismic system is employed. "Sometimes the architect says, 'The building must look like this. Find a way to make it stand.' But the best results come when we work together, finding the right solution for the right problem," says Eric Ko, a

CASE STUDY

Hearst Memorial Mining Center

Completion: Fall 2001

Construction cost: \$49 million

Architect: NBBJ San Francisco

Engineer: Rutherford & Chekene

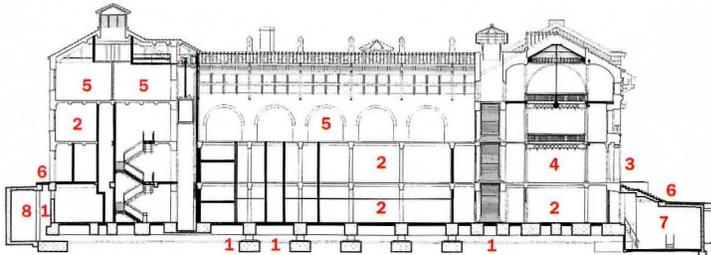
Designed by architect John Galen Howard for Phoebe Apperson Hearst in memorial to her husband, George Hearst, one of the great 49ers (and father of William Randolph Hearst), some aspects of this 1907 Beaux Arts building's interior are intended to recall a mine shaft. But pace 800 feet to the east, and you're standing on the Hayward Fault, determined by the USGS to be the likely source of a major quake in the next 30 years.

"This is the most historically significant building in a near-fault environment," says Brendan Kelly of NBBJ. "It's worth preserving."

The four-story laboratory and classroom building houses the University of California at Berkeley's department of materials science and mineral engineering. Due for renovation 20 years ago, the building had become a warren of offices and labs. "You could barely see the original features, like the two light courts and central atrium," Kelly says.

While sections of the building were closed after a structural analysis in the 1970s, it wasn't until after the Loma Prieta quake in 1989 that school officials took action. "The building survived, but everyone realized its precariousness," he adds.

The university decided not only to preserve the structure, but to update the labs and return the build-



1. High-damping rubber isolator space
2. Laboratories
3. Entrance
4. Memorial hall
5. Graduate student research
6. Moat cover
7. Mechanical room
8. Utility tunnel

ing to its original state. They're also adding two 4,800-square-foot towers. Construction began last summer.

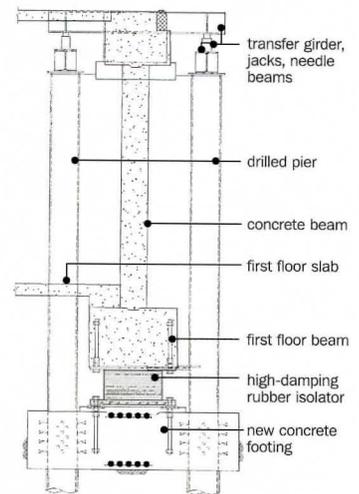
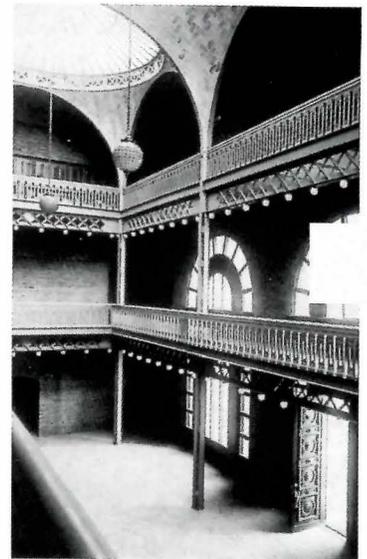
The new seismic system combines 24 fluid dampers and 134 high-damping rubber base isolators, which allow 28 inches of displacement around the building. New concrete beams and existing 2 1/2-foot-thick masonry walls add rigidity and tie the structure together.

The dampers and isolators work in concert; in a large event, the isolators let the building sway, but the dampers prevent it from swaying too actively. The 16-foot-long, 10-inch-diameter dampers connect to the footings and the first-floor beams.

To maintain the first-floor height, the contractors must remove the existing footings and install new ones 11 to 27 feet below, depending on the location. "This added a tremendous

amount of labor," says Douglas Robertson, a structural engineer with Rutherford & Chekene. The isolators are placed atop the new footings, while a grid of concrete beams rests on the isolators. The building columns bear on these beams. The tower additions are tied to the existing building at the first and second floors with concrete beams.

Other seismic precautions include strengthening the 7-foot-tall parapets that ring the building by inserting rebar into 3-inch-diameter vertical cores drilled into the parapet walls (called center-core reinforcing). The 20 chimneys towering above the roofline, will be secured by prestressing high-tension steel strands dropped from the concrete chimney caps to anchor plates at the bottom. The historic Guastavino tiles in the great hall will be painstakingly



secured by attaching them to fiberglass-composite stiffening ribs added above the vaulted ceiling. Between the ribs, steel mesh embedded in urethane foam will "grab" the tile.

It seems the expense of the restoration is worthwhile. "I understand the university president is getting phone calls from the other campus departments," Kelly says. "Everyone wants to move into Hearst when the building is done."

Shear walls: These may be added to an existing building or designed into a new one to add strength and stiffness to the building. In commercial buildings, they are most frequently made of reinforced concrete. Their placement and composition requires careful thought about how seismic activity will affect a particular building. On multistory buildings, for example, shear walls are heaviest at the bottom floors where there is the most shear.

Architecturally, shear walls have a strong impact. They require careful placement of windows, doors, and wall openings. Their thickness, often 12 to 18 inches or more of concrete, eats up square footage and adds weight. Says Navin Amin, with Middlebrook + Louie Structural

Engineers, "It's not so easy to have a slender, elegant structure when shear walls are used alone for seismic resistance."

Braced framing: Sometimes referred to as trussed framing, bracing stretches diagonally within a bay to create a triangulated vertical frame. As in roof trusses, the triangles are able to handle stresses better than a conventional rectangular frame. They also add stiffness. Braces are usually welded or bolted in place for a stiff and sturdy joint that will not give in an earthquake. Bracing may be configured as diagonals, chevrons, knees, or in X, V, or K shapes. Concentric braces connect at the intersection of beams and columns. Eccentric braces connect to the beam some distance from the beam-column intersection. This configuration provides

CASE STUDY

Chong-Moon Lee Center for Art and Culture

Completion: Fall 2002

Cost: \$125 million

Architects: Hellmuth, Obata + Kassabaum Inc. (HOK), LDA Architects Inc., Robert B. Wong Architects and Planners

Design architect: Gae Aulenti

Engineer: Forell/Elsesser

Built in 1917, this four-story, 163,000-square-foot Beaux Arts building, part of the city's Civic Center complex, was formerly the public library. Now known as the Asian Art Museum, the building will hold the city's collection of antique Asian pieces, now housed at the de Young Museum.

"We're told it is the city's most valuable asset, aside from its real estate," says Mark Piaia, AIA, of HOK. The city mandated that in a 1,000-year quake, only 2 percent of the total collection may be damaged. "The seismic criteria exceeds design for hospitals and other 'essential' structures," he adds.

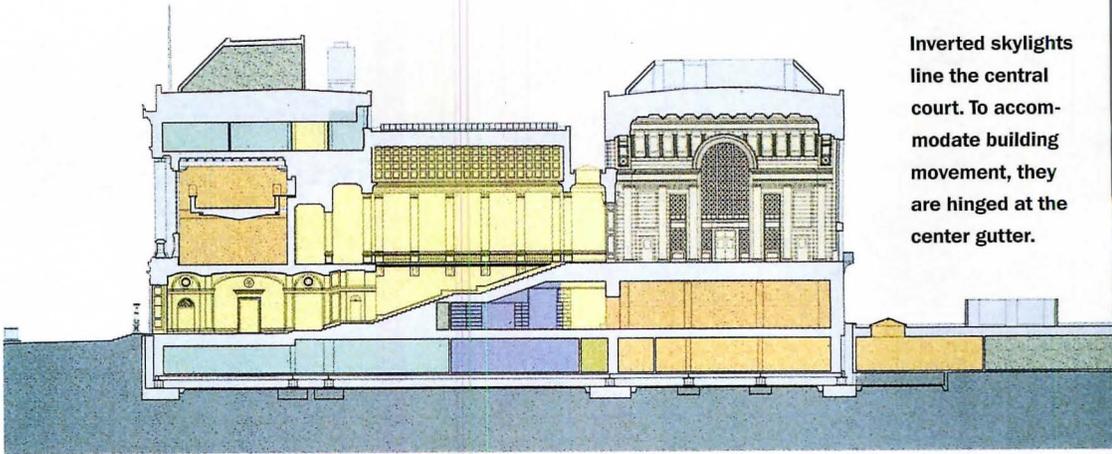
The seismic structure will consist of 120 lead-core rubber base isolators, working in tandem with shear walls, added strategically throughout the structure. The latter, 36-inches-thick at their base, will be cast in place. "We had to work around the existing openings to find locations for these," Piaia says. "They eat up a lot of square footage." Metal struts that stretch across the wings tie these to the main structure.

The 20-inch-high, 40-inch-

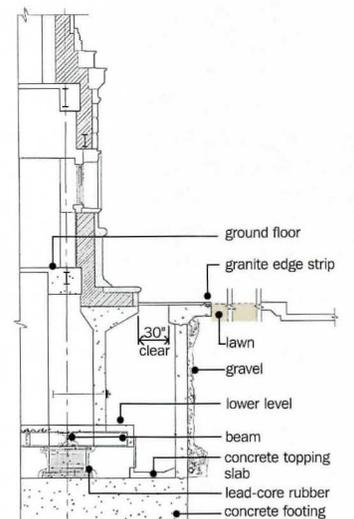
stiffness but prevents a buckled brace from destroying the beam-to-column or brace-to-beam joints.

Bracing limits building design by requiring consistent floor design so that the braces don't interrupt the usage of space. "Positioning the bracing is an architectural challenge if what happens on each floor is different," says Craig Hartman, FAIA, of SOM's San Francisco office.

Dampers: Damping is ordinarily performed by the failure of various building elements. Every shattered window, buckled framing member, and cracked piece of masonry is evidence of dissipated energy. Dampers "literally soak up the energy of earthquake-induced motion," in the words of one manufacturer. Instead of swinging back and forth



Inverted skylights line the central court. To accommodate building movement, they are hinged at the center gutter.



MOAT SECTION

0 3 FT.
1 M.

diameter isolators allow movement of 30 inches in all directions. "You can specify or 'tune' the isolators to give you whatever displacement factor you want," says Paul Rodler, a structural engineer with Forell/Elsesser. "Softer isolators are used here for a greater range of motion."

The isolators are now being installed beneath the building one column at a time. To do this, each column is first shored up, the connection between the footing and the column base is cut out, and the isolator is slipped in place. Then the shoring is removed and the column is resettled. "The trick in all this is that the building itself

can't move more than $\frac{1}{8}$ inch during the process. Greater movement will result in structural damage," Piaia says.

Also, installing the base isolators this way meant sacrificing some of the first-floor height. But digging down deeper to repour the footings (as is being done in the Hearst Memorial Mining Center) would have been prohibitively expensive.

The seismic moat is straightforward—an air space capped by a 5 ½-foot cover that wraps around the base of the granite. There are no structures immediately adjacent to the center and nothing for it to bump into, in case of a quake. The

repeatedly as earthquake vibrations are transmitted, the building is stilled as the motion of the dampers absorbs the energy.

There are four basic types of dampers: visco-elastic, friction, metallic, and viscous. Each employs some type of pumping component or piston that operates against a friction device—pads or fluid-filled chambers—to release energy in the form of friction or heat. Metallic dampers absorb energy via the inelastic deformation of metal. Dampers are normally incorporated into the bracing or paired with base isolators.

Base isolators: First used in the U.S. in the mid 1980s, base isolators come in three varieties: high-damping rubber, lead-core rubber (both elastomeric), and friction pendulum. All three have the same effect: inserted



We're one company for one world.

Montgomery KONE is now KONE.

One company dedicated to innovative and reliable vertical transportation worldwide. Keeping people circulating efficiently, safely and dependably in buildings like yours. Creating elevators and escalators that set new standards. Making sure that the pulse of your building never skips a beat. That's who we've been for more than 100 years. It's the way we'll continue to serve.

To learn more about KONE and our innovative vertical transportation solutions, give us a call at 1-800-956-KONE (5663). Or visit us on-line at www.us.kone.com.

The heart of your building™



CIRCLE 48 ON INQUIRY CARD



The Gap Embarcadero (above), by Robert A. M. Stern Architects and Gensler, includes slotted-web connections and a seismic core (below).

under the building, they allow the structure to move independently of the shifting ground below. Each type of isolator performs differently.

Elastomeric isolators, made of natural and synthetic rubbers, stretch with the building as it responds to seismic forces. The rubber, as it seeks its natural form, pulls the building back into place. The all-rubber version is softer, allowing greater movement, but the lead core absorbs some of the seismic energy and forces the isolator back into place quicker. Friction pendulums offer a lower profile than rubber isolators (8 to 12 inches versus 24 to 36 inches in height) for corresponding load and displacement values—a valuable asset when floor height or excavation depth is limited. They function like a ball on a plate: a curved slider, attached either to the footing or the building above, slips around on a concave steel plate. The weight of the building recenters the slider on the plate after an event, righting the structure.

Among the problems with friction pendulums is what one engineer calls “sticktion,” the propensity of the slider to stick at the edges of the plate. Also, in quakes of sufficient magnitude building edges can lift, pulling the slider off the edge of the plate. There are disadvantages to elastomerics, as well. The rubber can harden or stretch, making it unresponsive. For this reason, isolators must be inspected regularly.

Base isolators are not appropriate for all buildings. The structure must be made rigid so that it operates as a unit, involving the addition of bracing, ties, or shear walls. Even so, it is a seismic strategy that offers architects greater design flexibility than brace framing or shear walls. Enough of the seismic force is absorbed by the base isolators that the framing can be lighter, and base isolators are suitable for renovation since most of the work is done at the foundation level.

Improving steel-moment frames

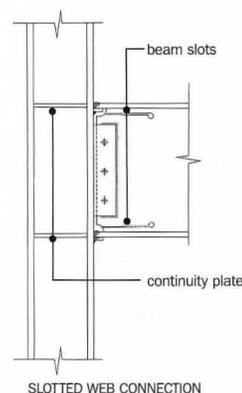
The 1994 Northridge Earthquake, which originated northwest of Los Angeles, proved that steel-moment-resistive frames don't hold up. While the flanges of the beams and columns are fully welded in this framing system, allowing greater continuity and distribution of moment forces, the 1994 event resulted in cracking along the webbing of the columns and buckling throughout the assembly.

Since the Northridge quake, these connections have been tested

extensively by private research firms and at the four principal federal seismic research centers. On shake tables, which simulate seismic vibrations and in sophisticated computer-modeling programs, new twists on the moment connections are tested. “There are so many ways of putting a building together, seismically speaking, it seems ridiculous that so much attention is given to steel-moment frames,” Eric Ko says. “But architects aren't willing to give up the flexibility that this system allows.”

Among the variations are dogbones, in which the flanges of the beam adjacent to the column are shaved, focusing the deformation onto that area of the beam instead of the joint. Damage to joints and columns is more serious and more difficult to fix than isolated beam damage. Another method for improving the performance of steel-moment frames is the slotted-web moment connection in which slots are cut at the top and bottom of the beam webbing. Like the dogbone, this localizes damage to the beams. A circular cut at the end of each slot arrests cracking that might continue through the web.

Slotted-web connections were used by Robert A. M. Stern Architects and Gensler at the 18-story Gap Embarcadero in San Francisco. The specifications for the slots, based on the size and position of the beam, are given to the fabricator, who makes the necessary cuts. A building as tall as this Gap requires a combination of seismic systems to keep it standing after an event. The architects created a four-sided concrete core which acts as a centrally located shear wall. It resists overturning forces and provides stiffness for the rest of the structure.



The central spine doesn't interfere with openings—important when the view is as good as it is from this building, located near the waterfront. The core measures 157 by 30 feet at the base, but shrinks to 90 by 30 feet at the top. Its walls taper upward from a thickness of 18 inches to 12 inches on top. The core holds the elevators, restrooms, and storage areas. Steel wraps around the core and is tied to it by collector beams that “gather” seismic forces and direct them into the concrete. In case of a quake, 90 percent of the force will go into the core.

A dance

An architect's job in a quake zone is to make choices that will mitigate the effects of earthquake energy on a building and its contents. “A shear wall cracks, a dogbone buckles, base isolators sway, dampers move in and out, and bracing bends and stretches,” Friedman says. “The key is something has got to give somewhere.”

As seismic studies progress, however, that something that has to “give” doesn't have to result in a less functional, flexible building. Just as important, it doesn't have to make a building that's clunky and unattractive. “A building should be able to dance with the forces that affect it,” KMD's Miller says. “There's no reason why architecture in the Bay Area can't be as graceful as in a place where there is no seismic threat.” ■



NOW GET ABUSE RESISTANCE WITHOUT THE HEAVY INSTALLATION COST.

The time, labor and expense of masonry construction can add up to a weighty load. That's why more builders are switching to USG® FIBEROCK™ Brand Abuse-Resistant Panels.

You get all the abuse resistance required for institutional applications, with panels that install over conventional framing. Which also pays off in speedier occupancy and far greater design flexibility.

Take some of the pressure off your next project.

Call 1-800-USG-4YOU today or visit our website:

www.usg.com

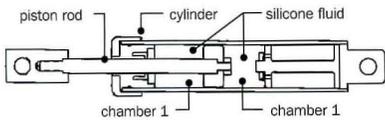


FIBEROCK™
BRAND

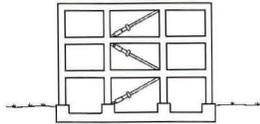
VH1 ABUSE-RESISTANT
GYPSUM FIBER PANELS

CIRCLE 49 ON INQUIRY CARD

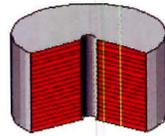
GLOSSARY



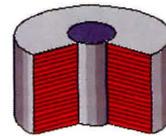
Fluid damper



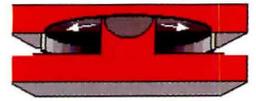
Dampers in chevron bracing



High-damping rubber base isolator



Lead-core rubber base isolator



Friction pendulum

Base isolators: These decouple the building from the ground, allowing each to act independently in case of a seismic event. There are three types: high-damping rubber, lead-core rubber, and friction pendulum.

Base shear: The lateral force that is designed for at the building base.

Braced frame: A frame that uses triangulated elements (trussed) to brace it against lateral forces.

Concentric brace: A brace that stretches vertically from corner to corner within a framing bay.

Dampers: Like automotive shock absorbers, dampers consist of metal tubes filled with silicon fluid and a piston rod that releases energy by forcing the fluid into a series of chambers.

Dogbone: Used on steel-moment frames, dogbones are the flanges of the beam adjacent to the column joint that are weakened by shaving off some of the steel on either side, creating a slender section about two feet long (depending on the depth of the beam). If seismic forces are strong, the

beam deforms in this spot, thereby localizing the damage to the frame.

Ductility: Ability of a material to carry load after it is bent.

Eccentric brace: A brace that stretches from some point along the beam or the column, reducing stress on the corner joints.

Moat: The seismic seam or buffer between a base-isolated building and the surrounding structures or land. The moat must be large enough to accommodate building movement in case of seismic activity. Without a moat, the building is anchored to the surrounding structures, limiting its movement and defeating the purpose of the isolators.

Shear wall: A vertical wall that adds stiffness and rigidity to a structure, usually made of concrete in commercial structures.

Steel moment-resistive frame: A frame with joints between beams and columns that are created with welds or, occasionally, high-strength bolts to transfer the load among the members.



AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- ◆ Read the article “Standing Up to Nature” using the learning objectives provided.
- ◆ Complete the questions below, then check your answers (page 202).
- ◆ Fill out and submit the AIA/CES education reporting form (202) or file the form on ARCHITECTURAL RECORD’s Web site at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. What is the goal of seismic devices?

2. What do shear walls add to a building?

3. How does braced framing affect building design?

4. How do dampers work to support a building?

5. How do base isolators work?

What can you do with certified wood?

Norm
Thompson
Headquarters
Hillsboro, OR

Sienna Architecture
Corporation
Portland, OR
Architects

Czopek &
Erdenberger
Portland, OR
Interior Design

FSC-Certified Maple:

Doors, Railings,
Workstations,
Conference Table
Paneling, Benches

Recycled Flooring:
Philippine Apitong
Reclaimed from Railroad Boxcars



Certified Forest Products Council
CERTIFIED WELL-MANAGED FORESTS

info@certifiedwood.org ❖ www.certifiedwood.org

CIRCLE 50 ON INQUIRY CARD

message made possible through a grant
The Pew Charitable Trusts.

**THERE ARE WINDOWS AND THERE ARE MIRRORS.
WE DON'T GET THEM CONFUSED.**



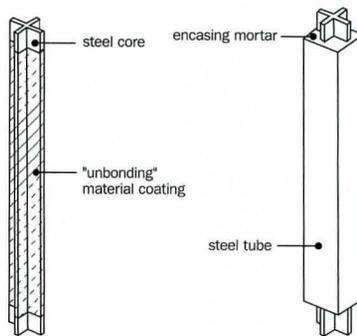
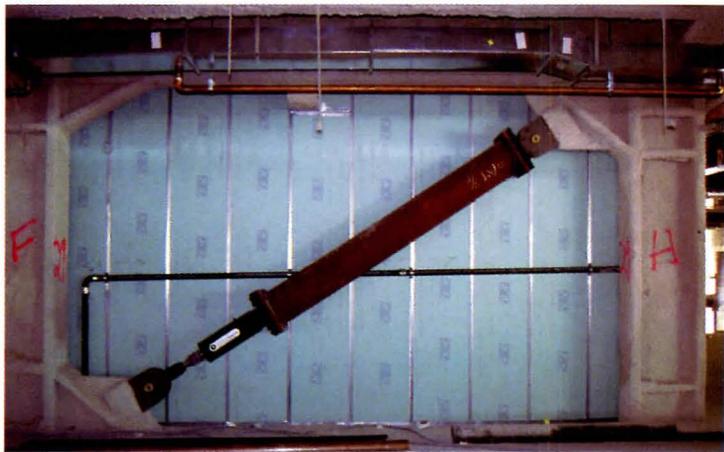
Ordinary glass



AMIRAN anti-reflective glass

AMIRAN® anti-reflective glass is so clear, it's like it's not even there. Mirrors are great for seeing yourself. They're not so great for seeing what's on sale. Or what's inside a zoo, museum, restaurant – anyplace where visibility counts. That's when you need Amiran anti-reflective glass. For years it's been virtually eliminating glare to as little as 1%. There are other advantages, too. Amiran saves money. It lets more light pass through than regular glass, so lighting fixture and energy costs are lower. And only Amiran has a 15-year track record for reliability. Amiran anti-reflective glass is available in tempered, laminated and insulated glass panels for delivery anywhere in the U.S. Because if you want a window, we think you should get a window. Let us put some Amiran in your hands so you can see the dramatic difference for yourself. Call 914-378-3839 or write Schott Corporation at 3 Odell Plaza, Yonkers, NY 10701 for samples. For more details, visit www.schottglass.com/amiran.htm.

Tech Briefs



BUCKLE-RESISTANT UNBONDED BRACE

The size and shape of the center core depends on the strength that is required. The stronger cruciform core is used on the two lower floors of the Davis facility, while a flat-bar core is used on the top floor.

Cost may prove the brace's biggest advantage. Reimer's bids put the cost, including construction fees, at about one-half percent of the total construction cost. "This was still competitive, and the cost is likely to come down as the braces are more widely adopted," he says.

Unbonded braces are too new for inclusion in U.S. building codes. The Davis facility is being treated as a "special case," Reimer says. If it meets approval, there is a good chance the bracing system will be adopted into code in 2003. *Wendy Talarico*

THE UNBONDED BRACE, LONG POPULAR IN JAPAN, MAKES ITS AMERICAN DEBUT

To preserve a building and its contents in the event of an earthquake, American structural engineers specify base isolators with braces—the most expensive system available. But the unbonded brace, according to Eric Ko, a structural engineer with Ove Arup & Partners in San Francisco, is poised to replace base isolators as the Cadillac of seismic systems, and it's reasonably priced.

Developed and manufactured by Nippon Steel Corp., the unbonded brace consists of a concrete-filled steel casing with a steel core shaped as a cruciform or flat bar that's coated with debonding chemicals to let it slip freely inside the casing. The concrete keeps the core from buckling, enabling the braces to perform well in tension and compression.

"Technically, the unbonded brace is a damper," Ko says. "It's the world's largest seismic shock absorber." Like dampers, the unbonded brace absorbs the energy of the seismic forces with a slipping action that protects the main frame. "It's intended to last through multiple quakes. That differentiates it from other bracing systems," he adds, "which, when they deform, drag along the floor plates they're connected to."

Used extensively in Japan during the past 10 years, the unbonded

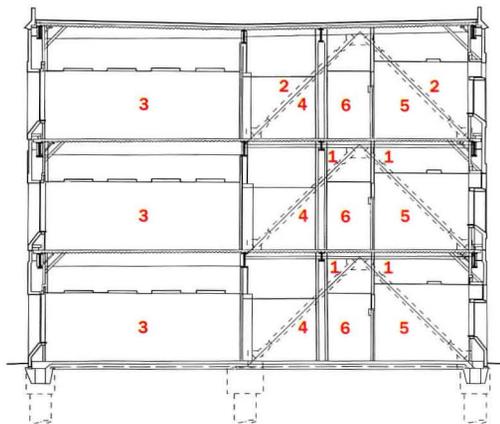
brace is being introduced in the States at the Plant and Environmental Sciences Replacement Facility, now under construction at the University of California at Davis (bottom right), designed by Zimmer Gunsul Frasca. The three-story, 125,000-square-foot building, which contains teaching labs, offices for researchers, and conference rooms, will be completed in late 2001.

"After deciding to make this a steel-frame building, we explored our seismic options," says Doug Reimer, AIA, project architect. "The unbonded brace is well tested. There's no question of how it will function." In fact, the Japanese are using unbonded braces exclusively in structures as tall as 750 feet.

The braces are located throughout the building. "They are really no different from ordinary braces in terms of location and configuration," Reimer adds. Architecturally, any type of bracing is problematic if the programming is not consistent from floor to floor. "We put tremendous effort into putting the braces where they wouldn't hinder the flexibility of the labs," he says.

There is, however, another distinct advantage: unbonded braces are so effective at absorbing earth-

quake energy that they can be very slender. In this case, they are 12 inches square on the first two floors and 10 inches square on the top floor. Standard bracing of a similar performance level would be "enormous," Ko says.



1. Cruciform-core unbonded brace
2. Flat-bar core unbonded brace
3. Laboratory
4. Laboratory support
5. Office
6. Corridor



Tech Briefs

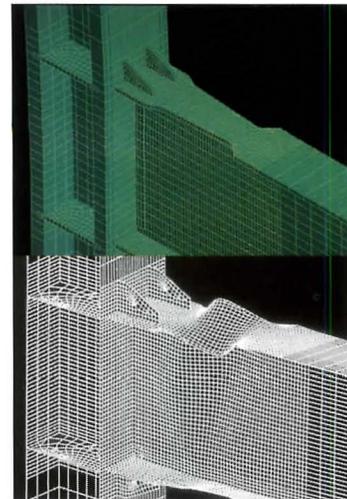
ENGINEERS, ARCHITECTS WORK TOGETHER

Successful building design in seismic zones relies on a close relationship between structural engineers and architects. "Seismic elements are an integral part of the building palette," says Tom Leslie, AIA, with Foster & Partners who, together with Fong & Chan Architects, worked with structural engineers Ove Arup & Partners to design the Stanford University Center for Clinical Sciences Research in California (below). "The seismic design cannot be separated from the building design. We worked

with Arup from day one," he adds.

The center, to be completed this spring, consists of two four-story wings separated by a 55-foot-wide atrium. The concrete-frame wings have conventional reinforced-concrete shear walls but, stretching between them, are six steel-frame bridges and roof-level steel framing with louvers that shade the atrium.

In case of an earthquake, these steel members would shake with the comparatively rigid wings. "It's like holding the candy end of a lollipop and shaking the stick," says Eric Ko, a structural engineer with Arup. The bridges and steel canopy were placed on friction-pendulum base isolators, which allows them to operate independently of the buildings. "It's as if they are floating," Leslie says. Isolating the bridges



The 24-story 199 Fremont Street (left), uses dogbone connections. Computer tests (right) show the dogbone beams deform where they are shaven.

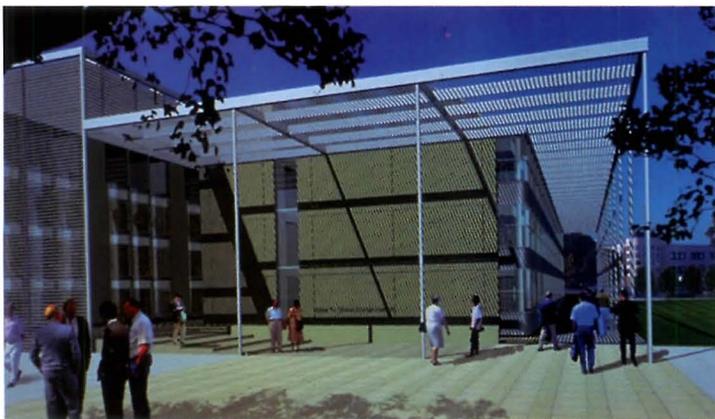
and framing permitted the use of finer, more elegant members. It was also less costly than putting the entire structure on isolators.

This approach is significant in that it takes the base isolators out of the basement, Ko says. "It's a trend we'll see more: building elements will be allowed to react to seismic forces independently."

Structural engineers also played a big part in the design of a 24-story office building, by Kaplan McLaughlin Diaz (KMD) and EQE Structural Engineers, at 199 Fremont Street in San Francisco. The steel-moment, core-braced frame, which incorporates the new dogbone

connection, is one of the first such systems in the Bay Area. "Extensive testing using computer modeling and scale models proves that dogbones, in essence, tell the beams where to deform," says Mark Miller of KMD. "You know where to go first for repairs. That was important to our clients." The owners wanted a building that could be quickly reoccupied after a quake, adds Stephen Harris, a structural engineer at EQE.

Architecturally, the core and dogbones allowed a delicate exterior with mostly glass corner offices. "It's a system we're using on almost everything we're doing now," Miller says. *W.T.*



CONCRETE BUILDING SYSTEM WITHSTANDS AFTERSHOCKS IN TURKEY

After Turkey's devastating earthquake last August, Tony Ruiz of Simple Building Systems (SBS) in San Diego got a call from Douglas Layton of Servant Group International, a Nashville-based organization that coordinates the construction of buildings for disaster relief. Layton wanted SBS, which manufactures low-cost concrete and steel building systems, to donate materials to help the disaster victims. So last October, Ruiz not only sent an estimated \$80,000 of supplies, but also joined a team of American volunteers who worked 12- to 14-hour days to build two

2,000-square-foot school buildings in Yalova, Turkey. "Layton asked if it was possible to finish the job in 13 days," explains Ruiz, "I said yes."

Ruiz used his company's ThinCon system of precast or poured-in-place concrete studs and plates. Walls and roof panels were poured face-up (so the top surface faced the outside) over expanded polystyrene molds, resulting in monolithic 9-foot-high walls. Since lumber is expensive in Turkey, the team used the building slabs as casting surfaces for most of the panels, which allowed them to be simply tilted up near their places.



To help the school buildings withstand the next quake, ribbed steel reinforcing bar and high-grade concrete was used—though local builders were skeptical. Ruiz says the poor-quality concrete and smooth rebar normally used are

partly to blame for the many structures that tumbled in the August quake. The real test of materials and construction methods came in November: the new schools survived a 5.2-magnitude aftershock without a scratch. *Rita F. Catinella*

Where Do You Specify a **LEVEL 5** Gypsum Board Finish?

- *Where Critical Lighting Conditions Occur*
- *Where Gloss, Semi-gloss, Enamel, or Non-textured Paints are Specified*

Find out more . . .



GA-214 *Recommended Levels of Gypsum Board Finish* educates architects and specifiers on the various levels of finish of gypsum board surfaces prior to the application of specific types of final decoration. This industry-wide consensus document ensures project plans can be written in specific terms so architects, contractors, and owners can best anticipate the final appearance of the decorated wall and ceiling system.

To learn more about GA-214 *Recommended Levels of Gypsum Board Finish*, contact the Gypsum Association or any of its member companies.

For a limited time, GA-214 is available for downloading FREE from the Gypsum Association at www.gypsum.org.

Earn Learning Units by studying the ***Levels of Finish***



For details visit the Gypsum Association online.

GYPSUM ASSOCIATION MEMBERS

American Gypsum
Celotex Corporation
Continental Gypsum Company
G-P Gypsum Corporation
James Hardie Gypsum
Lafarge Gypsum
National Gypsum Company
PABCO Gypsum
A Division of Pacific Coast Building Products, Inc.
Republic Gypsum Company
Temple-Inland Forest Products Corporation
United States Gypsum Company
Westroc Inc.



GYPSUM ASSOCIATION

810 First Street NE, #510
Washington, DC 20002
Phone: 202-289-5440
Fax: 202-289-3707
www.gypsum.org

CIRCLE 52 ON INQUIRY CARD

North Oakland Medical Centers
Emergency Room Renovation
Pontiac, Michigan

Gunn Levine Associates
Detroit, Michigan

Documenting how you made this baby
would take all the fun out of it.



Same with architecture.

MATURE SOLUTIONS: 17 YEARS
IN THE DEVELOPMENT FOR

- Building Simulation
- Intelligent Objects
- Full 2D/3D Integration
- **Automatic Documentation**
- Instant Visualization
- True TeamWork Functionality
- Cross Platform Compatibility

GRAPHISOFT™



Graphisoft and ArchiCAD are registered trademarks of Graphisoft R&D Rt.

ArchiCAD®

www.graphisoft.com/ArchiCAD 800.344.3468

Visit or call for a FREE Presentation CD and the
location of an ArchiCAD dealer near you.

CIRCLE 53 ON INQUIRY CARD

Digital Architect

Giving small firms the tools to be big

By **B.J. Novitski**

When John Marx, AIA, was a senior designer at a large architecture firm, he and his coworkers joked that "two guys and a fast computer" could accomplish more work faster than the management-heavy design department. With his well-honed skills in both design and computer modeling, Marx often completed competition entries for large buildings with a team of only two or three.

He is further testing the joke in the new 13-person San Francisco firm, Form4, with partners Robert Giannini, AIA, Gary Adkisson, and Paul Ferro. Scarcely a year old, Form4 enjoys challenging, complex projects often considered beyond the scope of small firms, thanks to the efficiency gained from doing most of their work on computers.

Project diversity is not the only benefit of technology. The firm also uses technology to blend design and business skills to meet a range of client needs. Where other firms use the subtitle, "architecture, engineering, and planning," Form4 business cards list "architecture, management, and collaboration."

This emphasis on nontraditional services reflects the partners' work with clients beyond the construction of a physical facility. It also recognizes that a small firm benefits from partnering with other firms and individuals. Form4's architectural design, business management, and team collaborations are all integrated through computer technology, giving them a competitive advantage. Giannini sums it up: "To make it as a small firm, we must be able to do more, and do it better and faster."

Underlying technology

The architects use Power Macintosh

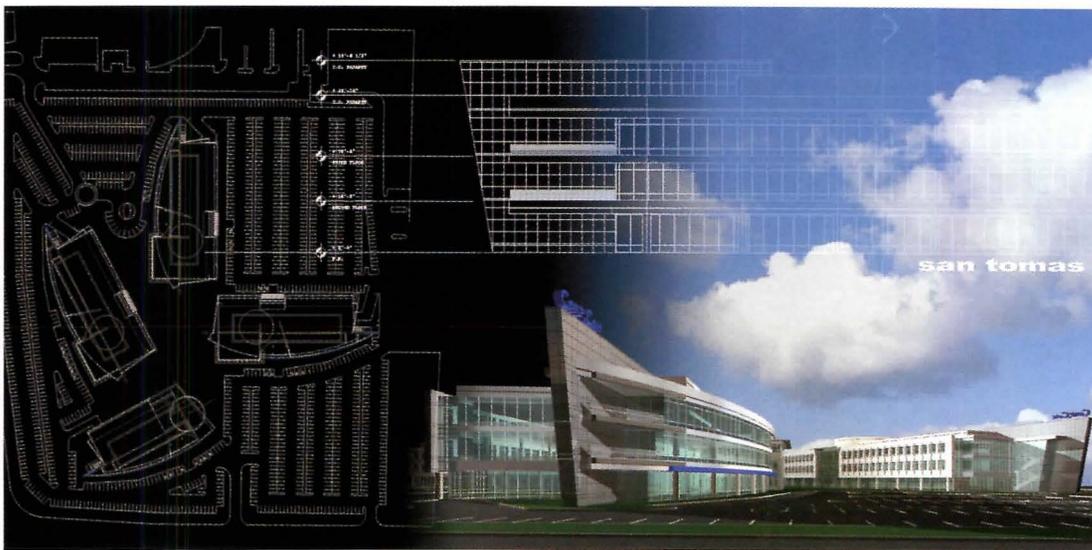
G3 computers with FormZ for their 3-D modeling. The software affords a "comfortable" graphic environment for the architects. They do 2-D design of elevations and building cores with Dell Dimension XPS Windows PCs and AutoCAD R14, which they have in common with their engineering consultants. They believe the advantages of these systems merit the high per-capita investment in hardware and software for a dual-platform office.

principals' home offices. A digital camera will allow them to document problems found in the field and instantly transmit images to team members.

Fast-tracking

From the beginning, Giannini's passion for "giving form to ideas," coupled with the technology focus, has led Form4 to concentrate on relatively large projects. The firm specializes in corporate and hospi-

Marx has been working with FormZ for so long that he skips the manual drawing stage and goes directly to the computer. The software's ability to display the building-in-progress from any view is essential to his creative process, and its ability to model curvilinear forms gives his designs their drama. FormZ incorporates rendering capabilities, which the firm uses for in-house and informal evaluations as well as for final presentations.



A four-person team completed design and working drawings for a four-building, 500,000-square-foot corporate campus in only four months. The buildings are for a high-tech software company in Santa Clara, Calif.

Translating files between platforms with the DXF and DWG file formats keeps all work-in-progress digital, so they never have to redraw what's already designed.

Although few experienced architects today are familiar with both FormZ and AutoCAD, the firm's goal is to make all staff members proficient in both. Form4's wish list for hardware that will further extend the firm's capabilities includes a large-format plotter and a high-speed Internet connection for the

tality facilities and has entered international competitions for large office buildings. In one recent fast-track project, Ferro, Marx, and two staff members completed design and working drawings for a 500,000-square-foot corporate campus in four months. This was possible, Marx says, because computer technology let the designers make the decisions. Such direct involvement by the principals in the design of every project is a key selling point to potential clients.

Keeping everyone up to date

Form4 follows what Marx refers to as the "Silicon Valley model" of office management. "Unlike firms where decision making is top-down," he explains, "we foster an atmosphere of collaboration," achieved, in part, by communicating openly about all projects in the office. Meeting notes and construction administration documents expose the junior staff to a broader spectrum of professional experience than they might see in a more conventional setting. Office

Digital Architect

management tasks, such as correspondence, scheduling, and contact management, are integrated through Microsoft Office and FileMaker Pro applications and internally circulated by E-mail. Keeping staff members informed enhances their cohesiveness and makes them more effective and independent decision makers.

This philosophy of openness is reflected in the firm's floor plan. Instead of fixed walls, half-height partitions enable everyone to see, hear, and interact with the rest of the office. (The partners telecommute from home when they need quiet.) The office is scattered with fully wired tables for impromptu conferences. Employee workstations on wheels shift positions frequently to adjust to varying sunlight angles and to make accessing nearby reference drawings convenient.

It's not just in-house that Form4 excels in management innovation. Computer technology is also used to expand client services. Management partner Adkisson recently demonstrated the power of integrating financial planning with architectural planning. He designed and commissioned software that links an architectural program to a system, helping building owners track the financial performance of the various areas.

For a 64,000-square-foot wellness center in Livermore, Calif., for

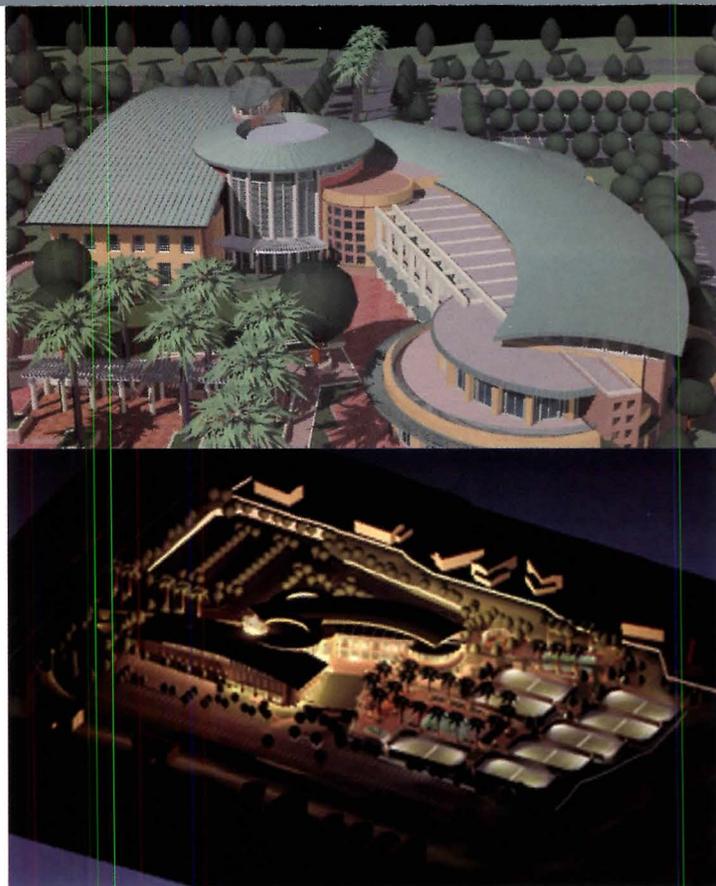
example, Form4 worked with the client, owners of an adjacent hospital, to design spaces that carefully balance luxury and privacy to serve two disparate populations: those who come to relax and exercise and those who come for cardiac therapy.

At work at this dual-purpose facility are financial and operational models which Adkisson developed. With the custom software, the owners can evaluate the profitability of particular areas daily and react immediately by renovating space for alternate purposes. Adkisson says the clients' confidence that this unusual experiment would work was bolstered by the fact that the financial management model and the architectural planning originated within the same firm.

Anytime, anywhere

The ability to collaborate with anyone anywhere, supported by digital communications, is key to the success of a small firm with big ideas. It enables Form4 to extend their capabilities without expanding their staff. For example, when a project calls for a highly polished rendering, computer models are E-mailed to a digital renderer. Firm members communicate with him about the renderings by digitally redlining the drafts in Photoshop. If the image files become too large to send easily by E-mail, they are transmitted through the Internet's file transfer protocol (FTP).

Similarly, the Form4 architects send digital files to engineering and landscape consultants and receive



Form4 architects created a simple bird's-eye view rendering of the Carmel Valley Athletic Club in San Diego to help the clients understand the dramatic roof form.

digital files in return. They avoid firms using manual methods that disrupt the flow of electronic drawings from team to team. This digital collaboration is particularly useful for geographically remote professionals. Form4 is working on projects with architects in China and Brazil. These collaborations work well because, though the foreign architects may not have easy, affordable access to the most current design software, they know local codes and practices. Form4 also collaborates with other firms on large competitions.

Key to the success of Form4 has been the technical and business abilities of its four partners. They did not have to overcome an established culture or educate managers who predate the computer age. As more young firms emerge fully in control of technology's levers, the profession will see more new business models and new ways to succeed. ■

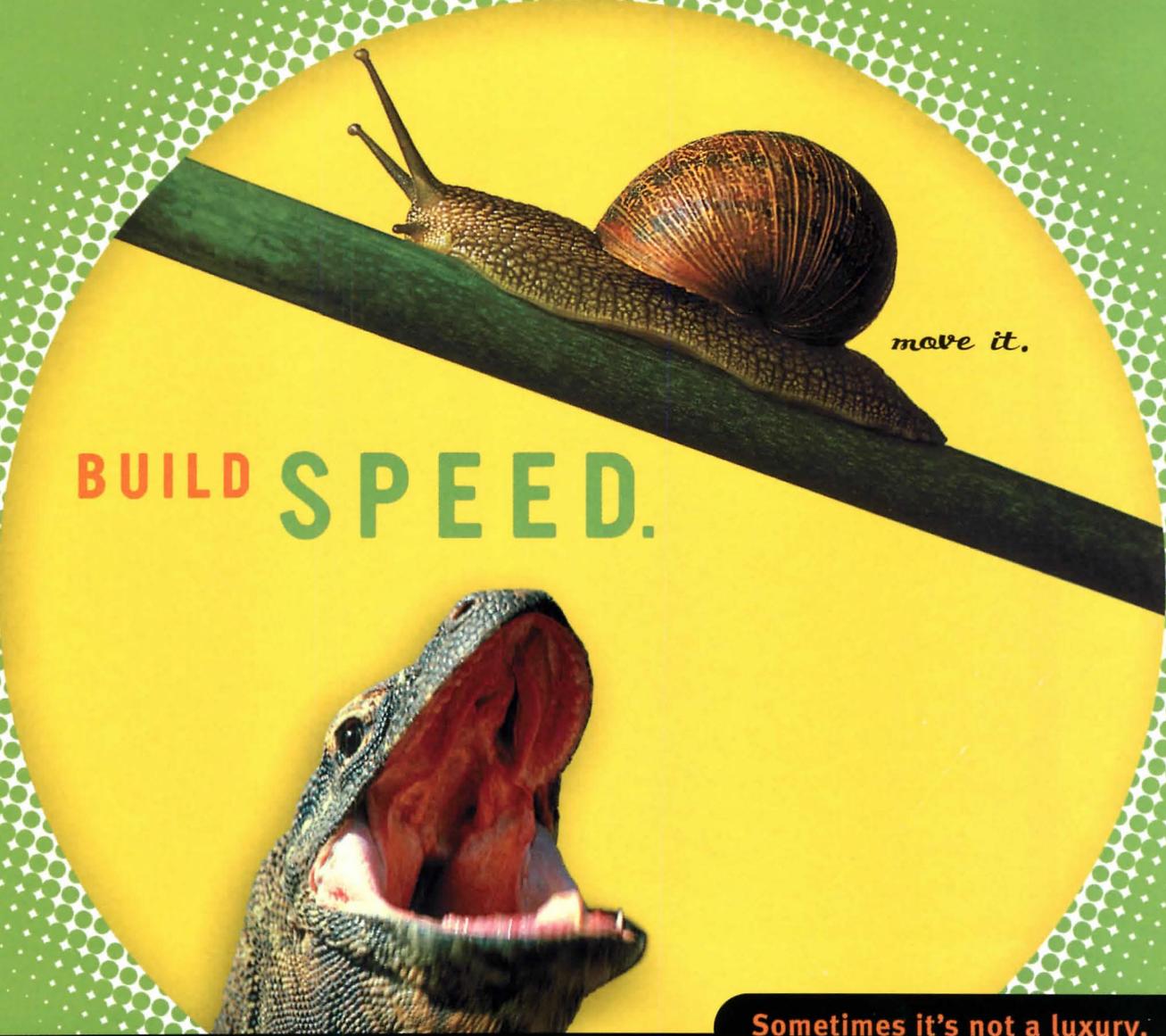
WWW For a list of software vendors with digital resources for small firms, go to **Digital Architect** at: www.architecturalrecord.com

HOORAY FOR TECHNOLOGY Many small firms are exploiting technology to expand their capabilities without hiring more staff. Patrick Szustak, AIA, who runs a one-man firm in Chester Springs, Pa., is working on a 50,000-square-foot school using a Web-based project-extranet service to communicate with consultants and contractors. In the bidding phase, he issues addenda to hundreds of subcontractors by posting a note and a drawing to the extranet. During construction administration, he photographs problem areas with a digital camera and posts the photos to the extranet for quick responses from his consultants.

Architect Robert Benson, of the three-person Chicago firm Von Weise Associates, leverages technology not only to tackle large projects but also to expose the team to an interesting diversity of project sizes. Using Pentium PCs, they create building models in AutoCAD 2000 and 3-D Studio Viz and

composite them in Photoshop with a photograph of the existing site. They further develop the images with Illustrator and PageMaker and send them to a color printer to produce polished presentations that compete successfully against very large firms. The company also uses Maya software to place video footage of a client into a proposed building animation. This gives the client a clearer idea of the scale and impact of the design-in-progress.

Don W. Thursby, AIA, principal of a five-person firm in Rolling Hills Estates, Calif., particularly likes the office management systems customized for his firm by Redondo Beach, Calif., consulting firm Architectronica. These productivity tools, such as T&E, for tracking time and expenses, built on the database program FileMaker Pro, let him easily manage invoicing, contacts, and project databases, which in larger firms would typically be handled by a managerial staff. B. J. N.



BUILD SPEED.

move it.

Sometimes it's not a luxury.

ProjectCenter® is the most widely-used project management Website in the building industry, and has made the definitive difference in the success of projects of every size and scope, in nearly every corner of the world. The reason it works is simple—ProjectCenter gives team members immediate access to mission-critical information, streamlining work flow, reducing project schedules, improving time to market, and minimizing the risk of miscommunication along the way. And because it's so easy to use, team members are up and running in no time at all.

ProjectCenter is a service of Bricsnet.com, the e-marketplace for the building industry. It's available for only \$259 per project per month, which allows you an unlimited number of team members. To see a demo or receive more information, visit www.bricsnet.com today.

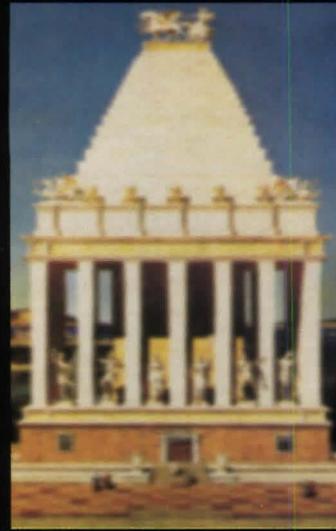
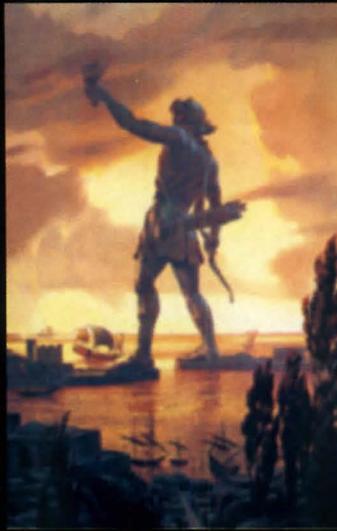
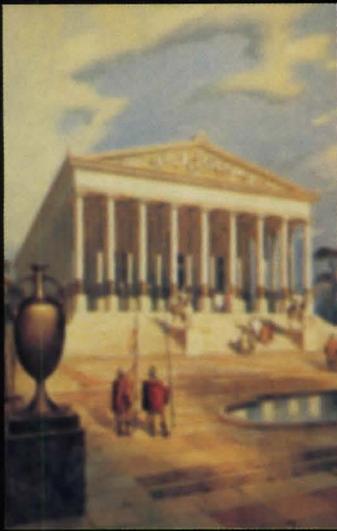
bricsnet.com

Bricsnet.com is the most comprehensive e-marketplace for the building industry. A place where every part of the building process gets equal attention, so that someday the world's second largest economy will also be the world's most efficient.

BUILD on

CIRCLE 54 ON INQUIRY CARD

ProjectCenter is a registered trademark and Bricsnet is a trademark of Bricsnet N.V.



Next.

Some of mankind's grandest ideas are as old as time. Others have yet to be created. For those, there is United States Aluminum, an industry leader in quality entrances, storefronts, curtain walls and Raco Interior OfficeFronts.[™] We give the world's top designers beauty, durability and design flexibility with sustainable aluminum. Then we stand behind our products with the kind of dependable service that is as classic as the designs themselves. For more than four decades, United States Aluminum's commitment and resources have been as unlimited as your imagination. So when you're ready to create civilization's next architectural wonder, make United States Aluminum part of your team. Call us today at 1-800-627-6440, or visit our website at www.usalum.com.



**United States
ALUMINUM**
COMMERCIAL PRODUCTS GROUP

A world of possibilities

the BEST in ROOFING METALS

**TCS[®]
AND
TERNE**
just
got
better!

Newly developed TCS II[®] and TERNE II[®] offer better corrosion resistance than Follansbee's original TCS and Terne. Coated with a new, revolutionary alloy of zinc and tin, these new environmentally-friendly roofing metals are oxygen-reactive, enhancing their performance in all atmospheres including those in marine areas.

The new alloy, while retaining solderability, is substantially more abrasion and smudge resistant. TCS II does not require painting and transforms its color to an earth-gray oxide as it weathers. TERNE II requires painting and its surface has an excellent affinity to paint.

Follansbee offers you these two outstanding roofing metals—combining many of the time-tested characteristics of the original metals with metallurgical and production improvements which answer the demanding needs of the next century.

We'll be happy to send you substantiating evidence of the excellence of TCS II and TERNE II. Call us toll-free at 1-800-624-6906.

*Creating outstanding roofing metals
for more than a century*

FOLLANSBEE[®]

FOLLANSBEE STEEL • FOLLANSBEE, WV 26037
FAX 1-304-527-1269

Visit us on the Website:
www.follansbeeroofing.com

Our E-Mail address:
folrfg@lbcorp.com

TCS II[®] and TERNE II[®]

for enhanced corrosion resistance
in marine and chemical atmospheres

See Your Designs in a Better Light



- Lutron's new Tu-Wire™ Ballast has it all:
- Small size for more design flexibility
 - 2-wire power and control for easier installation
 - 5% dimming for architectural performance
 - Superior energy efficiency vs. incandescent

Announcing new models!

- For 18, 26 and 32W compact lamps
- For T8 32W linear lamps

Fluorescent dimming just got better— and easier—with new Tu-Wire™ Electronic Dimming Ballasts from Lutron.

Lutron's new Tu-Wire™ dimming ballasts make it easy to design efficient architectural compact fluorescent lighting systems for demanding commercial *and residential* applications. The first of a new ballast family, Tu-Wire delivers the superior performance you expect from Lutron—the inventor of the electronic dimming ballast.

Combine new Tu-Wire's features with Lutron's many lighting control options, and you'll see why specifier's count on Lutron, the leader in quality fluorescent dimming for over 25 years.

For more information, call toll free 1-877-2LUTRON, Ext. 402



LUTRON
www.lutron.com

LIGHTING...

The most delightful part of being the editor of ARCHITECTURAL RECORD's Lighting section is the joy I get seeing the imaginative things that designers do with light. Yes, from time to time, I complain to my colleagues—and anyone else who will listen—that I've seen it all. Then, someone will come along and show me something brand new.

For example, I don't think anyone has ever submitted an elevator cab for publication before. Not until last December, when lighting designer Carlos Inclan E-mailed me photos of the elevator cab that he and architect Susan Matheson did for The Color Wheel in New York City (1). Their solution is not only fun to look at, but very clever, considering the constraints involved in lighting a tiny room that moves up and down the height of a building several hundred times a day.

Of course, some people ask why really dramatic lighting can't be designed on a budget. That must be what Seattle architect Don Carlson, FAIA, was asking himself when he designed lighting for his own residence (2), using little more than porcelain sockets, PAR lampholders, exposed recessed lights, and off-the-shelf wallbox dimmers. I enjoyed this project because the lighting is simple and inexpensive, yet adds so many layers of complexity and richness to the space.

It isn't surprising that the real story of Ingo Maurer's new showroom (4) lies in Maurer's inspiring design work of his own products, not the lighting of the showroom itself. That seems logical, considering that the last thing one wants is for the lighting in a showroom to compete with the products on display, particularly if they are luminaires. Maurer's products on display there are colorful, made of a wide range of media, and thought provoking.

All this is not to say that I'm now jaded to all but novelty in lighting. I equally respect the ingenuity of lighting designer Angela McDonald, of Horton•Lees Lighting Design, who lit San Francisco City Hall (3). The skill here lies not in the provocative nature of what is visible, but rather in what one does not see: the creation of fixture reproductions that are indistinguishable from the originals, concealed modern wiring and fixtures, and her decision to light the building with subtlety. The City Hall is grand—there is nothing to be gained by gilding this lily. *Charles Linn, AIA*

149 Creative Uses

156 San Francisco City Hall

Horton•Lees Lighting Design

162 Ingo Maurer Showroom

Ingo Maurer

165 Carlson Residence

Don Carlson Architects

170 Technology: New Light-emitting Diodes

175 Lighting Products:

Peerless Lighting's new T5 high output indirect/direct luminaires

179 Lighting Resources



1



2



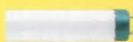
3



4



THE MOST INNOVATIVE
LIGHTING IS FOUND
BEHIND THE MOST
INNOVATIVE DESIGNS.



At Philips Lighting Company, we design to maximize the visual experience. Our innovative **MasterLine™** halogen and **MasterColor®** lamps provide superior control and color consistency. Of course, we also consider the environment a partner in our vision. Our acclaimed **ALTO™** lamps revolutionized fluorescent technology with low mercury content. The **Earth Light®** collection is uniquely designed to conserve electricity. For information, call 1-800-631-1259 or e-mail us at plc.lit@salesupport.com or visit our Web site at www.lighting.philips.com/nam

Dress Courtesy of AmericasMart-Atlanta ©1998 Philips Electronics North America Corporation



PHILIPS

Let's make things better.

CIRCLE 57 ON INQUIRY CARD

Creative Uses



YARNELL AND ASSOCIATES LAVISH A GLOWING FUTURE ON A CENTURY-OLD MURAL

One of the most impressive of the many original artworks in the two-story lobby of the Marquette Building in Chicago is Tiffany & Co.'s 1895 mosaic mural. It depicts the explorations of the Chicago area by the French missionary Jacques Marquette, from whom the landmark building draws its name. The mosaic is made of colored glass, semiprecious jewels, and mother-of-pearl, installed on the vertical face of a hexagonal rotunda separating the first and second floors.

Originally, the artwork was illuminated by daylight, which filtered through glass elevator shafts and interior rotunda windows. During numerous renovations, however, these openings were blocked, and the mosaic eventually was lit by the harsh, flat glare of fluorescent uplights.

Yarnell Associates of Shawnee, Kans., was commissioned to relight the mosaic. Bruce Yarnell decided to use a proven art gallery technique: to light the 100-foot-long, 4-foot-high installation between 20 to 40 degrees from

nadir, and to light it from above. The challenge was to develop a housing for the 60 lamps Yarnell deemed necessary to cover the six-sided mural and, somehow, to integrate a new fixture with a classical column that stands in the center of the rotunda.

The design brief required that the fixture not penetrate the build-

ing's floor or walls or invade the space in any way. "Overall, our goal was to develop a fixture that would be compatible with the architecture, be recognized as a new addition, and give the impression that it could easily be taken out if architectural purity was desired in the future," says principal Yarnell.

He decided not to touch the column, but to use it as an inspiration: the design of the fixture evolved into a 14-foot-diameter ring around the

column, suspended from the ceiling with cables. The ring's appearance takes its cues from the column's capital, with a cross section that has rounded corners, a recessed bottom, and a slightly curved top—removable so fixtures can be aimed and relamped.

To keep the ring lightweight and inexpensive, Kramer Lighting used fiberglass-and-resin composite and painted it matte white to be compatible with the marble of the rotunda.



A new 14-foot-diameter ring made from fiberglass-and-resin composite houses 60 SOLUX lamps to light the Marquette Building's Tiffany mosaic.



A detail of the mural shows the cool colors brought out by the new lights.

Since the mural is made up of many colors and incorporates glittering gems, the task required a light source with precise optics that simulated daylight. Although MR16 lamps have good optical control, most are rated at 3,000-degrees Kelvin, a warm-colored light that would not enhance the cooler colors found in the mosaic. Yarnell tested the recently developed SOLUX lamps, which are available in cooler color temperatures, including 3,500-, 4,100-, and 4,700-degrees Kelvin, and decided to use them instead of MR16s. The SOLUX lamps are also available in three beam spreads, so that artwork can be precisely lit. Based on mockups, Yarnell decided to use 3,500-degree Kelvin SOLUX lamps with a 17-degree beam spread.

The bright light from the new fixture and lamps articulates all of the colors of the mural, including the blues and lavenders. And people who have worked in the building for many years say they never knew the mural could be made to shine so well. *Nayana Currimbhoy*

Creative Uses

DICHROICS FOR AN ELEVATING EXPERIENCE

In Manhattan, even an elevator ride can turn into an adventure of the mind. At the midtown office building of The Color Wheel, a printing and computer-graphics firm, riders are treated to a subtle reminder of the importance of color to the firm's business. Unusual elevators, conceived by architect Susan Matheson of Matheson Architecture and Design and lighting designer Carlos Inclan of Luminotecnia set the tone.

Three elevators in the lobby are fitted with nine 15-inch-diameter steel portholes covered with dichroic



Dichroic filters backlit by fiber optics decorate the elevators in Color Wheel's office building in midtown Manhattan. The colors represent the basic red, green, and blue used in the firm's printing and computer-graphics work.



The 15-inch-diameter filters are mounted in sturdy stainless-steel rims and protected by a layer of clear glass.

filters and backlit with fiber-optic lighting. One cab is fitted with red filters, the second with blue, and the third with green. The filters work by reflecting the unwanted portion of the spectrum, allowing only light of a desired color to pass through, and have another property: when the filters are viewed from different angles, their color appears to change.

Within the confines of the small elevator cabs, the "dichro-

ports" can be viewed only from very different angles. Since the color changes with the angle of view, none of the ports ever seems to be the same color at the same time, producing interesting, ever-changing color shifts. The brushed, stainless-steel walls that compose the rest of the cab, reflect different hues of light, heightening the experience.

Matheson had an easy time

convincing her client to approve the use of the concept; however, the logistics of the actual installation took some creativity. One challenge for the designers was to find a light source that would be compact enough to evenly backlight the filters, since the depth of the dichroports was limited to one and a half inches. Ease of maintenance and resistance to vandalism were also concerns.

Matheson and Inclan elected to use fiber-optic cables, custom-made by the Legacy Lighting Group, run in narrow tracks on the inside perimeter of each porthole. An illuminator mounted atop each elevator cab channels light to the nine dichroports for that cab. This allows the illuminator lamps to be easily accessed and changed.

To make the Abrisa Industrial Glass filters resistant to breakage, they are laminated between a clear layer of glass, which faces the inside of the elevator cabs, and a layer of frosted glass, which also helps diffuse the light from the fiber optic cables. The glass sandwiches are mounted in sturdy stainless-steel rims. The installation was completed by CEC Elevator Cab.

Finally, to ensure that the brightness of the overhead fluorescent lights in the elevators did not overwhelm the light emitted by the dichroports—while keeping light levels in the elevator high enough to make them safe—the fluorescent tubes were dimmed by simply being wrapped with layers of neutral-density gray theatrical gel material. N.C.

Matrix™



KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

CIRCLE 58 ON INQUIRY CARD

www.kimlighting.com



Creative Uses

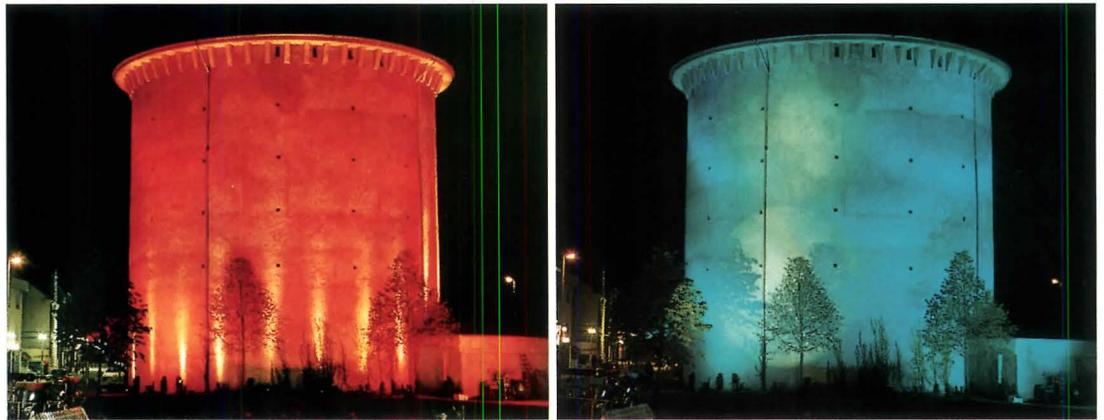
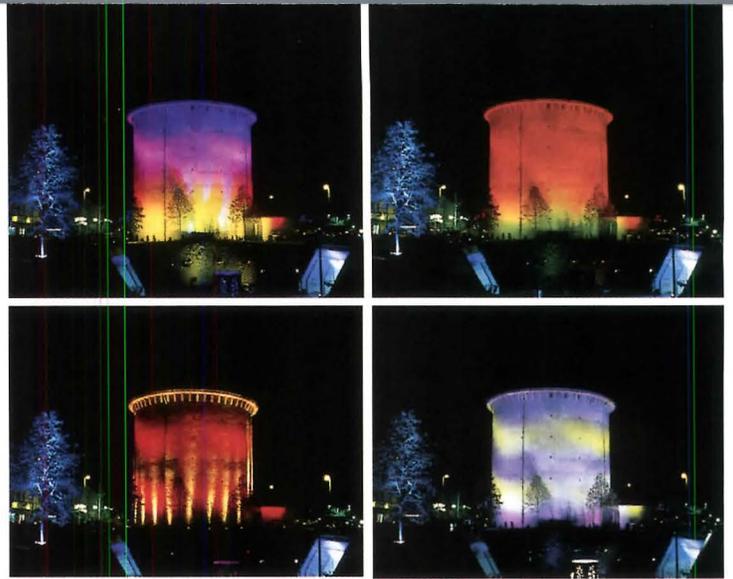
CONCRETE BUNKER IS STAR OF WORKSHOP

An abandoned bunker in Bochum, Germany, became a canvas for a flamboyant display of lights during an exterior lighting design workshop last summer. The five-day workshop, part of a 12-week theatrical lighting seminar sponsored by the International Theater Academy Ruhr, was conducted by two leading architectural lighting designers, Paul Gregory of Focus Lighting, New York, and Jonathan Spiers of Jonathan Spiers Associates, Edinburgh, and attracted an international contingent of theatrical lighting students.

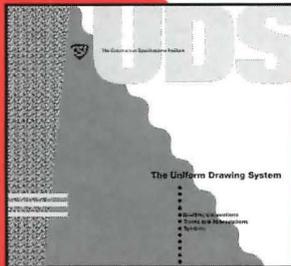
The workshop culminated in the lighting of a 100-foot-tall, 60-foot-diameter bunker. Theatrical light fixtures, PAR64s, and gel-wrapped fluorescent lamps were

used to bring vibrant colors, interesting patterns, and streaks of light to the textured, neutral surface of the bunker.

"Thanks to the diligence of the organizers, we had an extremely large package of equipment available from multiple companies," says Gregory. "The students had more than 200 fixtures at their disposal. The many different types of luminaires gave the students the freedom to experiment with almost any idea they could imagine." N.C.



Use the *Emerging Industry Standard*...



NOW with 6 Powerful, Interrelated Modules

- 1 Drawing Set Organization
- 2 Sheet Organization
- 3 Schedules
- 4 Drafting Conventions
- 5 Terms and Abbreviations
- 6 Symbols

Use UDS for 30
Days RISK-FREE!

CSI's *Uniform Drawing System*™

Spend **LESS** Time Organizing and **MORE** Time Drawing

UDS provides a "*universal language*" to clearly communicate your unique designs. Now you can *minimize time-consuming sheet preparation* and get right to the heart of your work—designing the project!

Just as CSI/CSC's *MasterFormat*™ gives construction specifiers a common language, UDS gives designers a *standardized system to organize and communicate visual information*.

Now you can present drawings everyone can easily understand. Save hours of preparation time, minimize errors due to miscommunication, and *avoid "reinventing the wheel"* every time you start a new project!

A Key
Component
of the NIBS
National CAD
Standard!

The modules are sold as a complete set of six, or in packages of 1-2-3 or 4-5-6.
Call toll-free (800) 689-2900 or visit CSI on the Internet at www.csinet.org

 The Construction
Specifications
Institute

UDAR

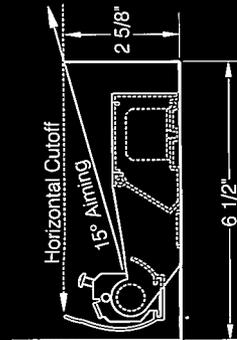
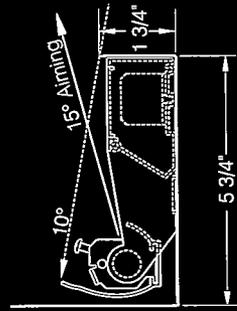
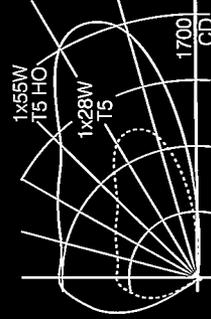
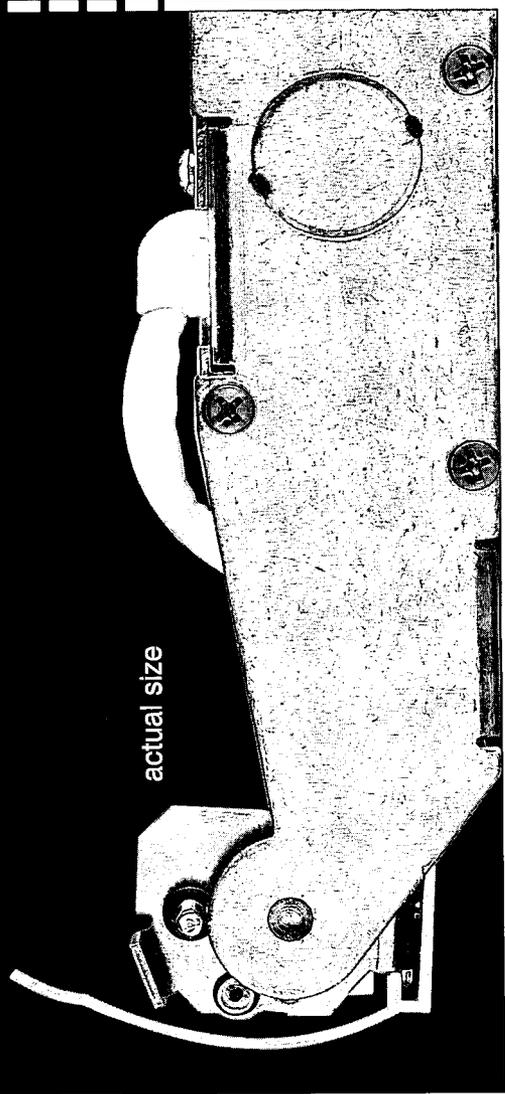
size
matters...

performance, too

your cove just
got smaller

Style F305

- T5 fluorescent
- linked, adjustable and lockable aiming*
- all aluminum and stainless steel construction

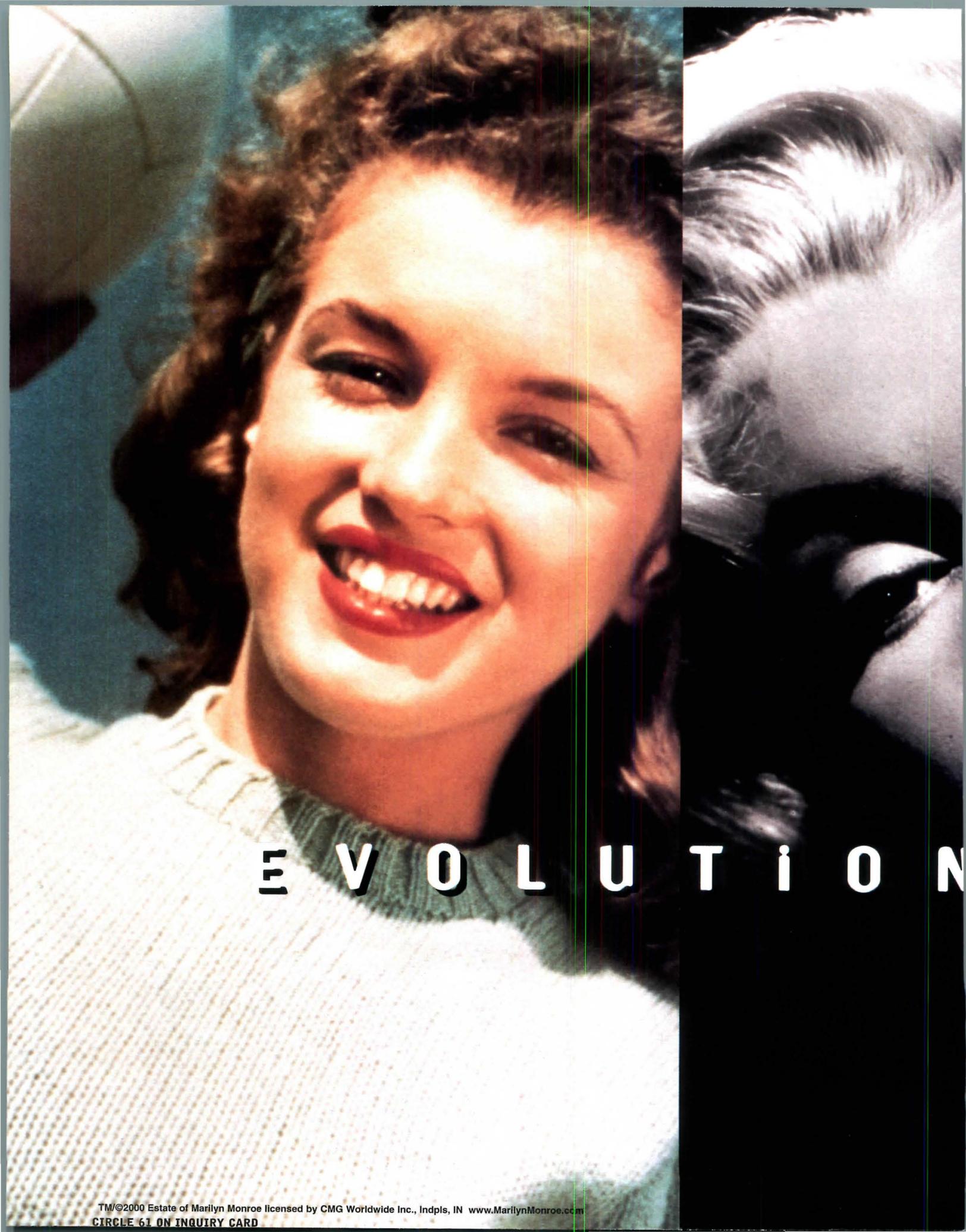


 **elliptipar**
... there is no equal™

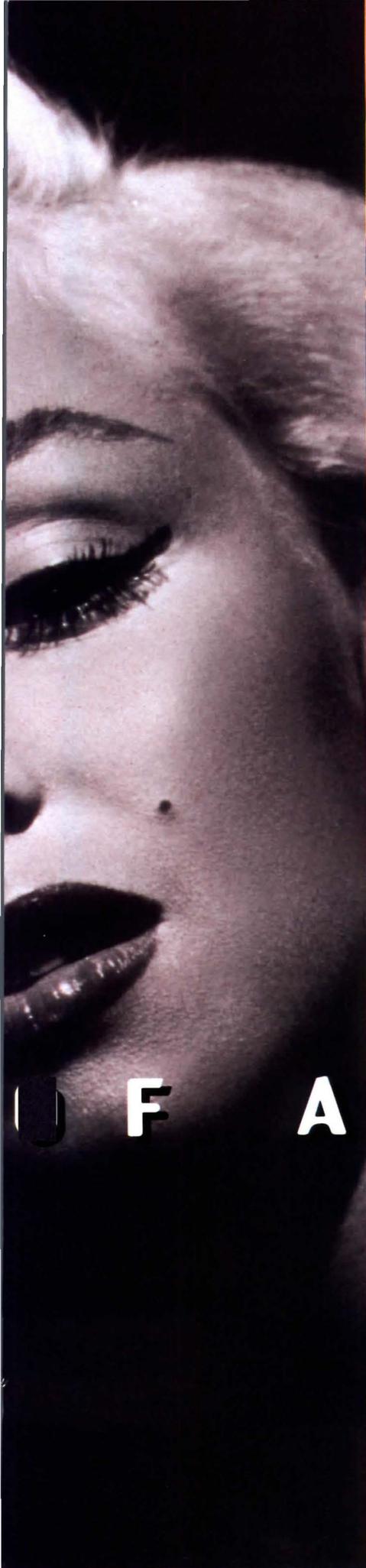
114 Orange Avenue
West Haven, CT 06516
203.931.4455 Fax: 203.931.4464
www.elliptipar.com

CIRCLE 60 ON INQUIRY CARD

*U.S. Patent No. 5,550,725 and foreign.



EVOLUTION



U F A N i C O N

Lighting is the finishing touch for San Francisco City Hall's renovation

By **Nayana Currimbhoy**

The San Francisco City Hall is the centerpiece of this city's civic center. Designed by San Francisco architects John Bakewell and Arthur Brown Jr., and constructed in the tradition of the Beaux-Arts style, the two-city-block-long building with its high dome is a bold symbol of the city's unshakable pride. Constructed in the wake of the 1906 earthquake and the inferno that followed, its opening in 1915 signalled the rebirth of the city.

In 1989, the Loma Prieta earthquake damaged the building so severely that officials were forced to close the structure. City officials and preservationists recognized that the damage provided a golden opportunity to renovate and upgrade the aging building. In 1995, after several contentious elections, voters approved the purchase of \$300 million in general obligation bonds to fund improvements that would bring many areas of the building back to their original grandeur and convert other portions into modern workspaces. Soon after the bonds were approved, a comprehensive renovation and restoration of the building began.

The rebuilding of city hall was a Herculean task, which took more than three years, and involved 24 teams of architectural, design, and engineering consultants. To reinforce the building against future seismic events, each of its 600 columns was retrofit with a base isolator, and walls were stabilized, enabling the rest of the work to proceed

*Nayana Currimbhoy is the author of *Designing Entrances* and is a regular contributor to *Record Lighting*.*



The largest rotunda in the United States glows in the night sky, with the help of long-beam metal-halide spots installed on the roof and dome base. Other metal-halide fixtures are hidden on ledges and cornices.

safely. The work was comprehensive, including the installation of new lighting, electrical, and communication networks; new HVAC systems; and disability access; the renovation and remodeling of spaces for administrative offices; and the replacement of damaged materials. Exterior cladding and metalwork were cleaned, repaired, and refurbished, and the copper dome, which had patinaed with age, was gilded with gold leaf as Bakewell and Brown had originally intended.

A continuous visual experience

Where areas were to be renovated, the philosophy was to create "a continuous visual experience," says Anthony Irons, AIA, who was in charge of

Project: San Francisco City Hall
Renovation

Client: City and County of San
Francisco

Architects: Department of Public
Works—Bureau of Architecture; MBT
Architecture; Heller•Manus
Architects; Komorous-Towey

Architects; Finger & Moy Architects;
Levy Design Partners; Cervantes
Design Associates

Lighting designer: Horton•Lees
Lighting Design

Historic preservation architects:
Carey & Company

Engineers: Forell/Elsesser Engineers

(structural); Tennebaum-Manheim
(consulting); SJ Engineers; Gayner
Engineers (mechanical); FW
Associates (electrical)

Audio/visual consultant: Smith, Fause
& McDonald

Electrical contractor: Rosendin
Electric

Project management: Turner
Construction

General contractor: Huber Hunt
Nichols

WWW For information on this
project, go to **Projects** at:
www.architecturalrecord.com



EVOLUTION ON AN ICON

Introducing The Ultimate Architectural Downlight

From teenage beauty to Hollywood icon, Marilyn Monroe's incandescence never lost its glow. Now, Lightolier spotlights her image with Calculite EVOLUTION, the ultimate architectural incandescent downlight. Designed to enrich the visual environment in any residential or commercial application, EVOLUTION's precise, interchangeable optical system delivers the finest glare-free performance available. Visit EVOLUTION at www.lightolier.com, or contact your local Lightolier representative, to learn more about a downlight destined to become an icon itself.

Calculite®
Evolution™

CIRCLE 62 ON INQUIRY CARD

LIGHTOLIER®

the project for the city architect's office. "We wanted it to look like no modern architect had ever been there." San Francisco firm Heller•Manus was the principal and supervising architect. Other key architects on the job were Finger & Moy and Komorous-Towey Architects. Historic preservation was the responsibility of Carey & Company, who created a special database to document each of the building's 1,000 rooms.

Relighting City Hall

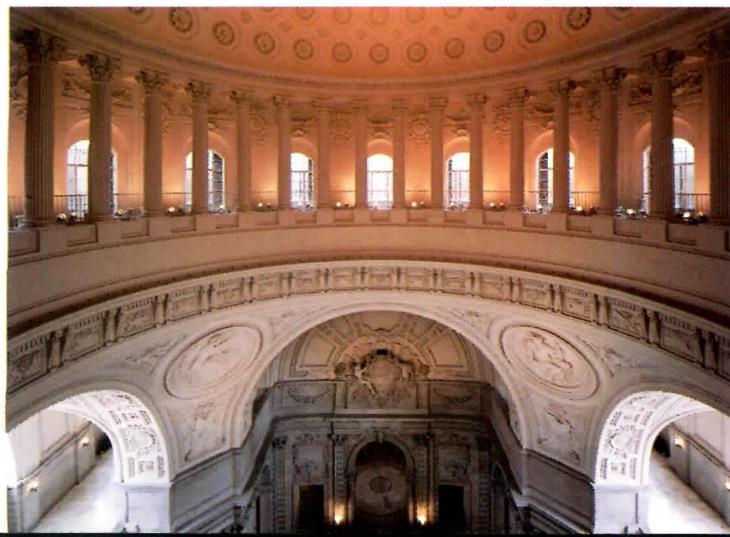
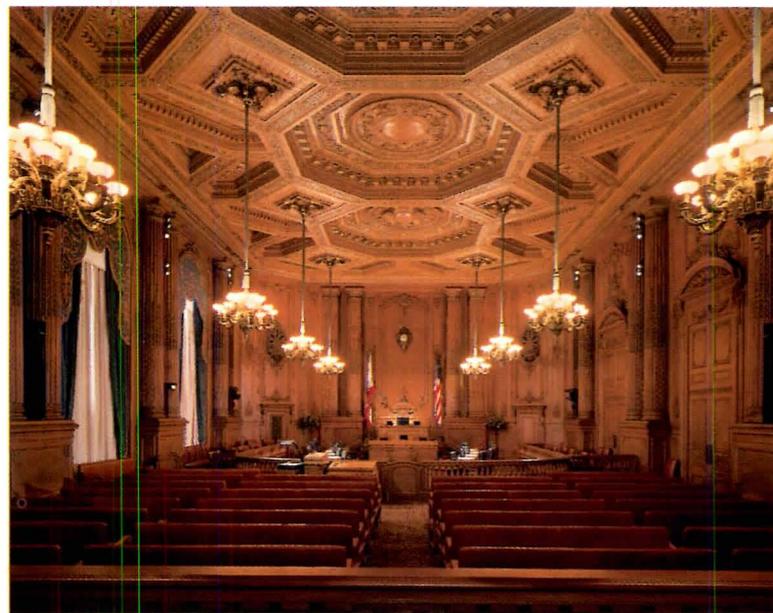
Because electric lighting was still a new technology when the building opened, modern lighting had to be applied carefully, or Iron's ideal of the continuous visual experience would have been compromised immediately. Angela McDonald, principal of Horton•Lees Lighting Design, whose firm was initially commissioned to help create lighting for special events in the main hall, says, "the starting point of the design was an intensive study of the building's history, and its Beaux-Arts traditions." The firm soon became the lighting consultants for the entire project, for the restoration and enhancement of the lighting in public spaces and remodeled spaces, as well as for the new exterior lighting. The project included the renovation of 900 antique fixtures, and the manufacture of more than 1,600 historically based modern fixtures for use in office and public areas.

Original drawings and photographs were used as the basis for the design of the new fixtures. Robert B. Stokes of Taylor/Stokes Lighting of Sausalito, Calif., in conjunction with Paul R. Scott of Scott Architectural Lighting of Fairfield, Calif., manufactured the custom fixtures and refurbished the existing ones. Diffusers for the original

THE LIGHTING DESIGN'S STARTING POINT WAS A CAREFUL STUDY OF CITY HALL'S HISTORY AND ITS BEAUX-ARTS TRADITION.

pendant fixtures were shaped like shallow cones with rounded bottoms and were 14 inches in diameter. To provide comfortable, energy-efficient lighting, these dimensions were enlarged to 24 or 28 inches in diameter to accommodate two, four, or six 42-watt, triple-tube compact fluorescent lamps, as well as the occasional tungsten-halogen PAR downlight. These fixtures, used in most renovated rooms, were recreated using imported Italian glass diffusers.

Throughout the building, the existing fixtures were stripped, refinished, rebuilt, and upgraded to meet current UL requirements. More than 200 surface-mounted ceiling fixtures, used mainly in corridors, were converted from the original incandescent designs to use 32-watt, triple-tube fluorescent lamps. The striking clear-glass diffusers seen on the cast-bronze fixtures throughout the public spaces are hand-cut lead crystal made in



The lower portion of the dome is illuminated by 36 300-watt PAR56 uplights mounted between the columns of the top-most gallery. Twenty-four additional PAR56s in the same location uplight the dome's apex. In the council

chamber (above), the decorative chandeliers are supplemented by track lights mounted on custom, freestanding vertical poles concealed between columns on either side of the room. PAR38s accentuate the flag and front desk.





In the restored northern light court (left), which serves as a museum, daylight and restored hanging pendants are supplemented by dimmable PAR38s mounted on tracks con-

cealed in the skylight mullions. In the mayor's public office (below), recessed PAR38s supplement the chandeliers and serve to highlight the period wood paneling.



France for this project. Frosted A-lamps previously used in these fixtures were replaced with clear tungsten-halogen lamps to accentuate the glass with intensity and sparkle. The dozen or so pendants remaining in the building were refurbished and relocated to the second floor. New indirect and lay-in fluorescent lighting was added in remodeled offices.

The rebuilding of the skylights over the light courts and the restoration and relighting of the grand rotunda are two of the most spectacular improvements. In 1977, the department of public works removed the large glass-and-steel skylights on both sides of the rotunda to protect

THE CITY HALL WHERE MONROE AND DIMAGGIO WED IS ONCE AGAIN THE PLACE FOR MARRIAGES AND PARTIES.

the building's occupants from falling masonry. Shortly thereafter, the formerly open space was crammed with a warren of offices. Now, skylights cover the reopened light courts, which can be rented by the public for special occasions.

The lighting plan for the light courts also includes extensive support for rigging, and more than 24,000 watts of additional power for special-event lighting equipment is readily accessible via receptacles located throughout each space. For temporary event use, these receptacles, as well as permanent architectural lighting, can be controlled from the architectural preset stations; a small, portable lighting console; or full-function theatrical consoles.

The lighting in the two-part, restored Baroque-style dome is soft and subtle. Thirty-six, 300-watt tungsten-halogen PAR56 lamps mounted between the columns that support the dome over the uppermost gallery upright the surface of the lower portion of the dome, and 24 additional PAR56s are focused on the top portion of the dome. The decorative medallions mounted on the arches that support the rotunda are highlighted by spots mounted at the fourth-floor balcony level.

A grand gesture for Civic Center Plaza

The exterior lighting of City Hall was developed by Horton•Lees as part

of the master plan to light the six building facades that face Civic Center Plaza. Designed to emphasize the strength, mass, and rhythm of the monumental building and to accentuate its classical detailing, the lighting plan for City Hall relies on more than 200 metal-halide floods. These lights graze the limestone facade and are mounted on ledges and cornices to hide them from view and reduce glare. The lighting designers used 3,000K, 100-watt metal-halide PAR38 lamps with electronic ballasts to correspond with the incandescent light from the refurbished historic lampposts at ground level and with the incandescent light washing the facades of adjacent buildings.

Custom filters installed on 20 of the accent lights reduce light between several narrowly spaced columns at the end of each facade, keeping the overall lighting effect uniform and allowing the maintenance department to keep a single type of standard lamp in its inventory. For the newly gilded dome, McDonald wanted to achieve sparkle without blazing light on neighboring buildings. Twelve long-beam metal-halide spots with remote ballasts installed along the roof and the base of the dome carve the edges of the golden dome away from the night sky.

The monumental project, though arduous, has won a number of preservation, construction, and architectural design awards. "It was a once-in-a-lifetime project for an architect," says Clark Manus, FAIA, principal-in-charge of the project at Heller•Manus. Best of all, the renovation of the building where Marilyn Monroe married Joe DiMaggio in 1954 has won the hearts of city residents who can once again admire the gracious interior and gather there for weddings and parties. ■

Sources

Custom fixtures: Taylor, Stokes & Scott Architectural Lighting

Historic fixture refurbishment: Taylor, Stokes & Scott Architectural Lighting

Track lighting: LiteLab

Downlighting: Kurt Versen

Indirect fluorescent: Peerless

Reproductions: Rejuvenation

Lay-in fluorescent lighting: H.E. Williams; Zumtobel/Staff

Indirect lighting: Linear Lighting

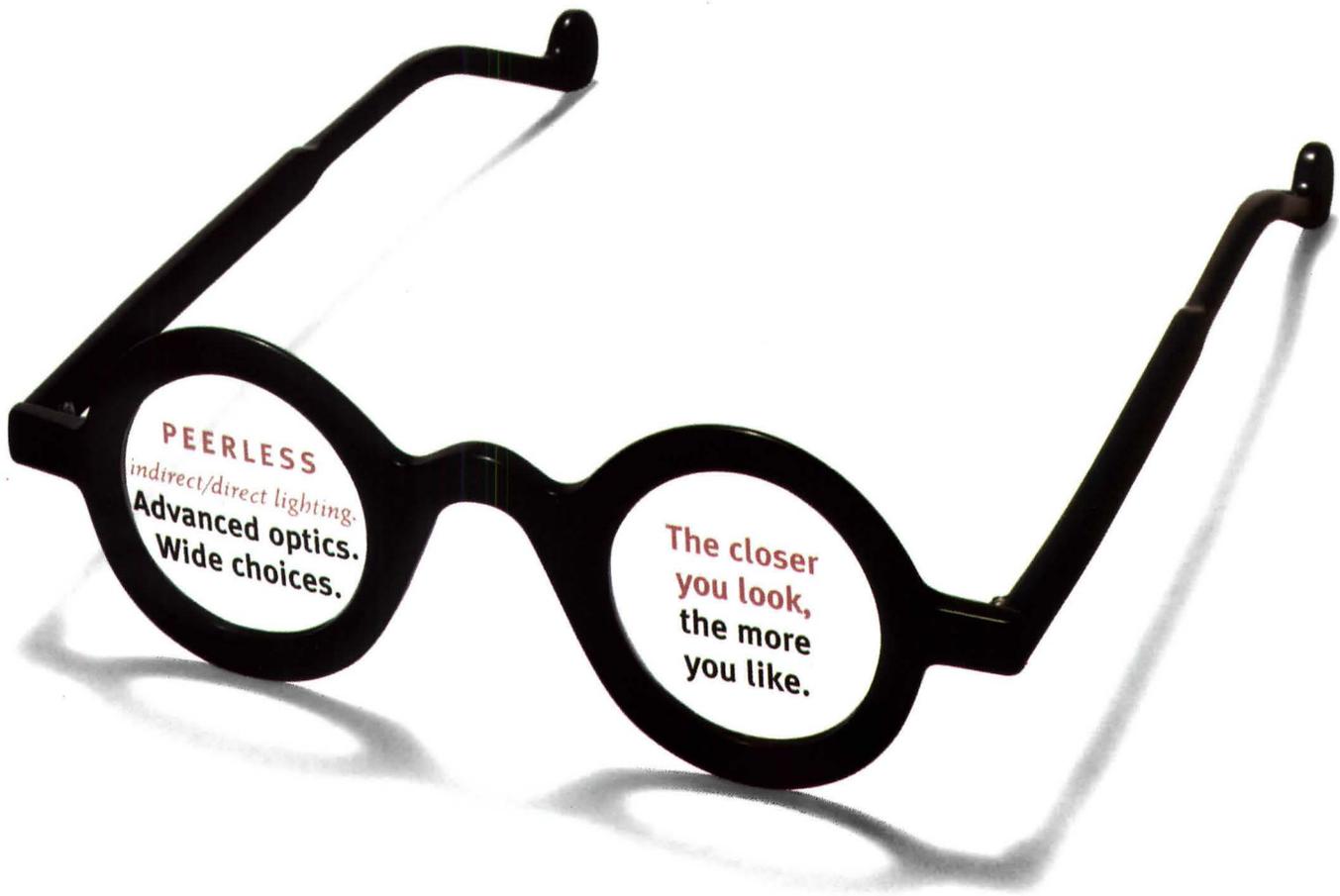
Undercounter lighting: Alkco

Exterior floodlights: Phoenix

Exterior uplights: Hydrel

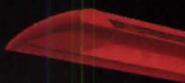
Dimming system: Strand

Is that a T8 lamp or a VisorOptic™ diffuser?



www.peerless-lighting.com

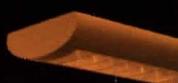
LET A LITTLE LIGHT SHINE DOWN



MIRAGE™ I/D



ENVISION® I/D



PRIMA™ I/D



PEERLESS LIGHTING 2246 5TH STREET BERKELEY CA 94710 510-845-2760 FAX 510-845-2776

CIRCLE 63 ON INQUIRY CARD



Gold- and silver-leafed-paper chandeliers float above halogen lamps positioned above red Japanese paper table lamps with heart-shaped mirrors that reflect light pools onto

the table (left). Movable canvas panels and a wealth of line-voltage receptacles mounted 8 feet above the floor allow for reconfiguration of lighting displays (right).



"XXL," a 6-foot-diameter red dome lit with a single halogen lamp (left) frames a chandelier made with 34 printed and 50 blank sheets of paper pierced

by rods illuminated by a PAR30. In the basement (opposite), folded-paper lanterns lit by 50-watt halogens hang over a 9-meter-long wooden table.



Expressive lighting fixtures cast a poetic glow in innovator Ingo Maurer's new SoHo showroom

By William Weathersby Jr.

Since the late 1960s, designer Ingo Maurer has produced luminaires at his studio and factory in Munich that merge sculptural form, cutting-edge materials, and metaphorical flights of fancy. An 8-foot-high gilded heart surrounded by bulbs sprouting wings was designed for a village in Italy, while a pendant combining a hologram of an A-lamp and a socket shaped like the profile of inventor Thomas Edison encapsulates a veritable history of illumination. "Calling Ingo's light installations 'systems' is just like calling Shakespeare's sonnets 'typesetting,'" muses designer Ron Arad, with whom Maurer collaborated on the Tel Aviv Opera

based lighting design team. "With 35 to 50 luminaires to be mounted all around at any given time, we wanted to make sure we had access to plenty of power sources."

On the main level, line-voltage receptacles are mounted 8 feet high along the perimeter walls and are covered with magnetic caps when not needed for luminaire display. A series of movable canvas panels attached to the walls serve as backdrops—and often as mounting surfaces for the lighting fixtures—and can be easily reconfigured for changing displays. Because the original ceiling could not be altered in the rented space, rods supporting a lighting track were suspended from the original chandelier rosettes. The track fixtures were fitted with 12-volt halogen lamps to provide ambient and spot lighting.

The main light show is Maurer's creation and includes the "XXL" luminaire commissioned by fashion designer Issey Miyake. Floating near the front of the showroom above a brushed-steel table, it incorporates a 6-foot-diameter egg-shaped fiberglass dome, whose red interior surface pulsates with a glow from a 300-watt halogen lamp. Nearby, a chandelier inspired by the work of mobilist Alexander Calder is a balancing act of miniature mirrors, spheres, weights, and a 50-watt halogen lamp.

Downstairs, the concrete floor and cast-iron columns were refinished, and red-painted sliding wood doors were added to close off utility space. To support versatile lighting displays, five ceiling slots were fitted with hidden transformers that accommodate low- or line-voltage luminaires. A recent series of folded-paper lanterns illuminated by 50-watt halogens hangs over a 9-meter-long wooden table.

Throughout the showroom, offbeat furniture found at flea markets adds to the downtown gallery ambience. And as a complement to the lighting fixtures for sale, Ingo Maurer sponsors special art exhibitions twice a year. The inaugural show featured the light-inspired work of Manhattan schoolchildren. ■

Project: *Ingo Maurer Showroom, New York City*

In-house design: *Ingo Maurer, principal; Bernhard Dessecker, Hagen Sczech, Mark McKenna, design team*

Electrical design: *Mauceri Electric*

Sources

Luminaires: *Ingo Maurer*

Halogen track lighting: *Dedolight*

For information on this project, go to **Projects** at:

www.architecturalrecord.com



House and other projects. In 1998, Maurer's work was honored with an exhibition at the Museum of Modern Art in New York City.

Last September, Maurer opened his first showroom outside his home base in Germany, a 2,300-square-foot space in New York City's SoHo district. Housed at street level and in the basement of an 1885 cast-iron-facade building constructed as a corset factory, the retail-space-cum-gallery presents Maurer's poetic creations as a kind of performance art that seems right at home in the neighborhood. The venue retained its good bones, including slender Romanesque cast-iron columns and an original ceiling of pressed tin and leather. Working with his in-house design team, Maurer created a neutral backdrop to showcase his fixtures in their best light. Crumbling walls were replaced with drywall, the bamboo floor was refinished, and a storage area was enclosed at the rear. "Most of the project focused on overhauling the wiring," says showroom general manager Mark McKenna, who previously spent two years as a member of the Munich-

William Weathersby Jr. is a writer based in Westport, Conn.

• P2150 SERIES



SOLID VALUE.

Our designers and craftsmen know that nothing renders form so crisply, takes a finish so richly, and endures so permanently as solid brass. That's why we use it (and lots of it) on virtually every fixture we make. We have dozens of architecturally relevant styles to choose from..... each built in an extensive range of sizes, lamping options, and finishes. Available cast glass and natural alabaster diffusers add yet another level of sophistication.

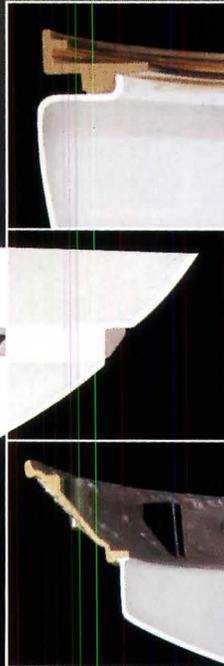
Contact us to get your copy of our new catalog. You'll see why Davis/Muller is your most "solid" choice in decorative specification - grade lighting.

• S5110 SERIES



davis/muller
LIGHTING

• C3160 SERIES



tel. (888) dav-mull
fax. (888) dav-mul6
www.davismuller.com

CIRCLE 64 ON INQUIRY CARD

Inventive use of off-the-shelf lights help a loft-style Seattle house glow on a budget

By Sheri Olson, AIA

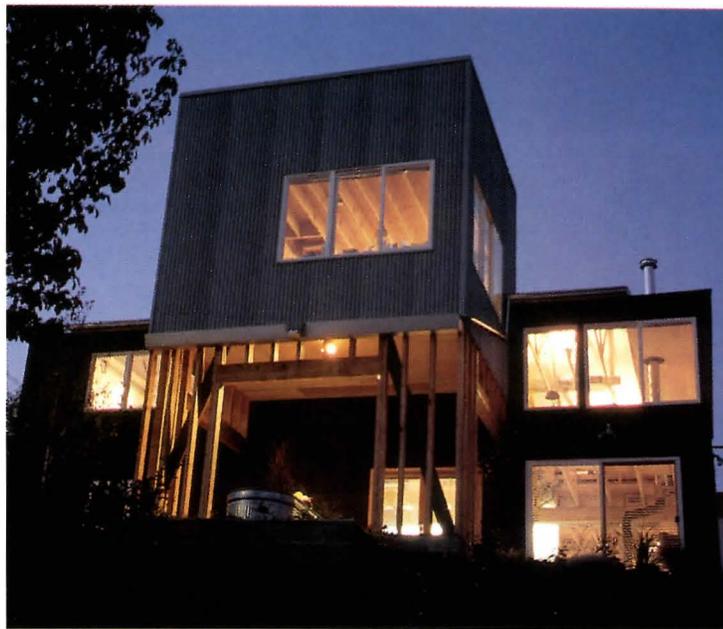
With sophisticated wit and a tight budget, architect Don Carlson, FAIA, transformed a remodeled tract house with strategically placed off-the-shelf lights. "It's an exercise in getting the most drama from the cheapest fixtures," says Carlson of Carlson Architects, Seattle. The 20-year-old hillside house was decrepit from years of misuse, but had knockout views of Mt. Rainier and Lake Washington. Carlson stripped the existing 1,600-square-foot structure down to its wood frame and created a large open space in the middle by cutting away half of the second floor. The only interior walls are around the bathrooms. "It's a loft lifestyle in the suburbs," he says.

At the front door, a covered entry space defined by exposed wood framing glows yellow-orange from two incandescent 100-watt floodlights. At night, with the rain coming down on all sides, the house becomes a lantern in a landscape dominated by gray skies.

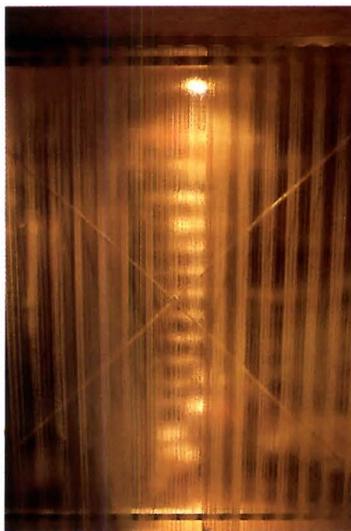
A new 400-square-foot pavilion defines a covered entry and contains a third-level office open to the rest of the house. The house employs a complex and mutable mix of direct light from incandescent fixtures, reflected light from fluorescent lamps tucked behind ductwork, and clip-on lights for flexible task lighting. The industrial-style lamps complement the rawness of the house's exposed sheet-metal ductwork, floor joists, and prefabricated roof trusses. Both exterior and interior fixtures independently use dimmers, making it easy to adjust light levels. "We use different combinations of lights for different events and times of day or year," says Carlson. "I'm continually experimenting."

At the front door, light filters down from above into the main living space and through the steel grating of the stairs that link the second and third levels. Four 75-watt floodlights are mounted out of sight at the upper level and cast a grid of shadows on the plywood and gypsum board walls. The deep sides of an adjacent 8-by-4-foot skylight are lined with sheet metal. "On our rare sunny days, the sheet metal glows blue like the sky," says Carlson.

A curtain of perforated, corrugated metal suffuses the alcove kitchen with a soft glow from dimmable 60-watt bulbs in inexpensive porcelain sockets tucked behind the valance. To heighten the trickle-down effect, the top shelves (holding glassware and other delicate items) are wire, while solid shelving further down blocks the light. Over the sink, three can lights—intended by the manufacturer to be recessed but



Light reflecting off wood surfaces inside the house picks up a warm glow, contrasting with Seattle's often gray, rainy skies.



left exposed as part of the industrial-design vocabulary—are mounted between joists and meticulously rewired to snake between water pipes in the ceiling. Above the butcher-block center island is a clamp-on spotlight with a 50-watt halogen bulb. "Since the light is reflecting off wood surfaces, it's warm, like in a cabin," says Carlson.

A high-tech chandelier, made from an exposed heating duct and six exposed can lights, runs the length of the house through the open web of the roof trusses. Triangular metal brackets cantilever the fixtures, fitted with 50-watt halogen bulbs, off the side of the duct to uplight the underside of the plywood roof deck—

Project: Carlson residence
Architect: Carlson Architects—
Carlson, FAIA, principal
Contractor: Rewald Construction
Sources
Downlights: Halo

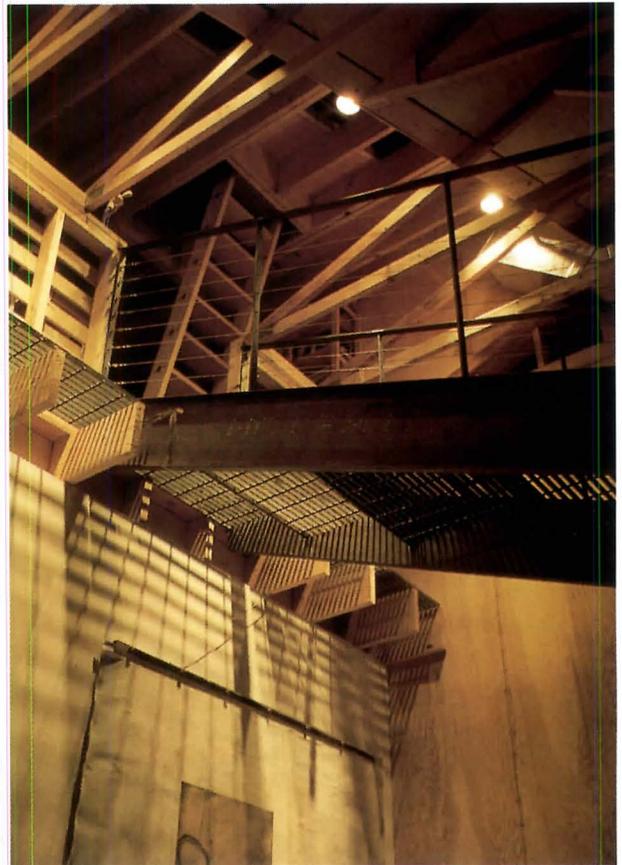
Porcelain sockets, PAR lampholders, dimmers and outlets: Leviton

WWW For information on this project, go to **Projects** at: www.architecturalrecord.com



Lamps in simple lamp holders hidden in the ceiling trusses (photo below) casts the shadows of the stair gratings on

the two-story dining room walls (left). On sunny days, the living area is generously skylit from above (bottom).



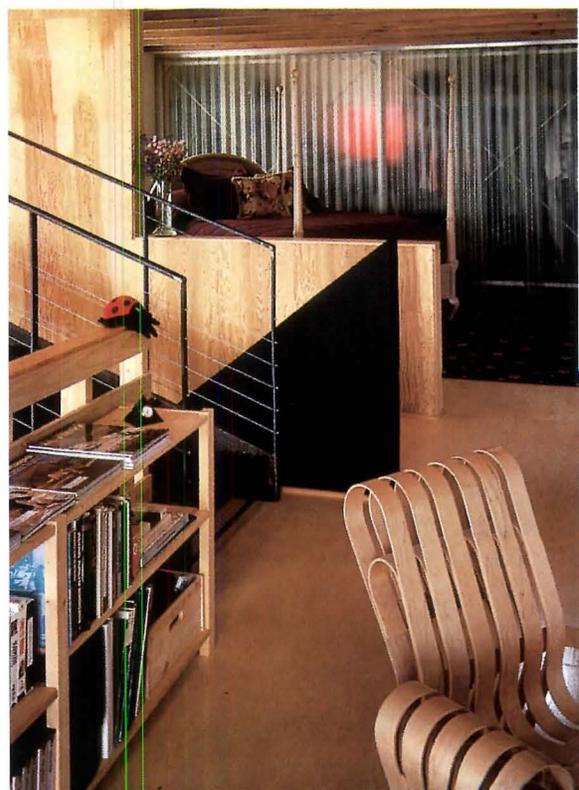
ing, which was whitewashed to better reflect the light. Switched outlets mounted on wood runners at the peak of rafters accommodate clamp-on lamps.

Along the back wall of the master bedroom, the closet doors are made of sheets of industrial-weight corrugated fiberglass hung on overhead tracks and backlit by five 75-watt halogen lamps. The varying

IT'S AN EXERCISE IN GETTING THE MOST DRAMA FROM THE CHEAPEST FIXTURES.

colors of the clothes float mysteriously behind the screen and are overlaid by the geometric pattern of the aluminum-rod cross-bracing that stiffens the doors. "The clothes are part of the composition," says Carlson, who adhered to fire codes that require the use of shielded lamps by using outdoor fixtures in the closet.

Carlson and his electrician (who is also a sculptor) exercised great care in neatly laying out all the circuit runs to prevent a haphazard presentation. Such attention—which doesn't necessarily add to the cost of the installation—is rare when contractors are hired to wire a space with an unfinished ceiling and walls. In a city that has become known for its abundance of young millionaires, it is refreshing to see what a little imagination can accomplish for just a few bucks. ■



eSconce™

exterior sconce

Its merits include four reflector systems for precise illumination, high efficiency lamp sources, and rugged die cast aluminum construction. The eSconce™ is available as an uplight, downlight or both (as shown).

Its charms include a softly luminous window that can be endowed with color or backlit acrylic ribs. Or one of nine optional overlay panels in aluminum, brushed stainless steel or natural copper.

Why demerit your next project with an ugly wall pack when instead you can add some charm with the new eSconce™ from AAL.

charm strikes the eye, but merit wins the soul™



add color to the
light window with
internal gel filter



overlay panel
in brushed
stainless steel with
a perforated center



add backlit acrylic
ribs and a gel filter



overlay panel
with four squares
in natural copper

ARCHITECTURAL
AREA
LIGHTING

14249 Artesia Blvd.
La Mirada, CA 90638
Tel 714.994.2700
Fax 714.994.0522
www.aal.net

CIRCLE 65 ON INQUIRY CARD

Prescolite

A NEW QUALITY OF LIGHT

OK. We heard you. We didn't laugh. You had a vision. We thought it was innovative. You wanted a recessed downlight that wasn't recessed. We built it. It won. **A lot.** Lightfair's Technical Innovation Award. Lightfair's Best New Product of the Year Award. The ADEX Grand Prize Trophy. Europe's Industry Forum Design Award. Thanks. For us, it's just another example of our listening skills paying off. For you, it's that rare example of being heard...and maybe that's the most important innovation of all. So, what do you want to **invent** now?



T R U S T I N G

From Prescolite's home page, click on the "What's New" button. Click on the "Phos" icon and view a complete press release. For product and technical information, click on the adjoining link or enter from the "Products" icon on the home page. Within the "Product Information" link, you can view a list of features and download complete specification sheets, or link to find your local Prescolite representative.



www.prescolite.com



Y O U R V I S I O N

CIRCLE 66 ON INQUIRY CARD

LEDs make their architectural lighting debut

THE LIGHT-EMITTING DIODE'S GREATEST ATTRIBUTE HAS ALWAYS BEEN ITS 100,000-HOUR LIFE; HIGH LIGHT OUTPUT HAS BECOME ITS LATEST BENEFIT, BUT THE COST IS HIGH.

By Lindsay Audin

Until recently, light-emitting diodes (LEDs) appeared mostly in control panels, electronic devices, and exit signs. Now a variety of new products employing them have appeared, and many are direct replacements for incandescent lamps. While their cost makes them inappropriate for general lighting, they work well in decorative, outdoor, advertising, and signage applications. Where lamp replacement is difficult or poor maintenance is a problem, their very long life—on the order of 100,000 hours—makes them ideal.

Several innovations spurred the creation of these novel devices, including the development of the bluish-white, 8000-degree Kelvin LED. Furthermore, LEDs have become much brighter in recent years. At 5 to 30 lumens per watt, they still rate low compared to compact fluorescents, but they are rapidly improving. The efficacy of many of the new LED sources is presently comparable to or greater than most incandescent lamps of equal size, thus cutting electric costs and connected loads. Blue LEDs have now been combined with red and green LEDs in one device, fostering combinations that produce nonprimary colors. The use of standard base types makes them interchangeable with incandescent and some halogen lamps.

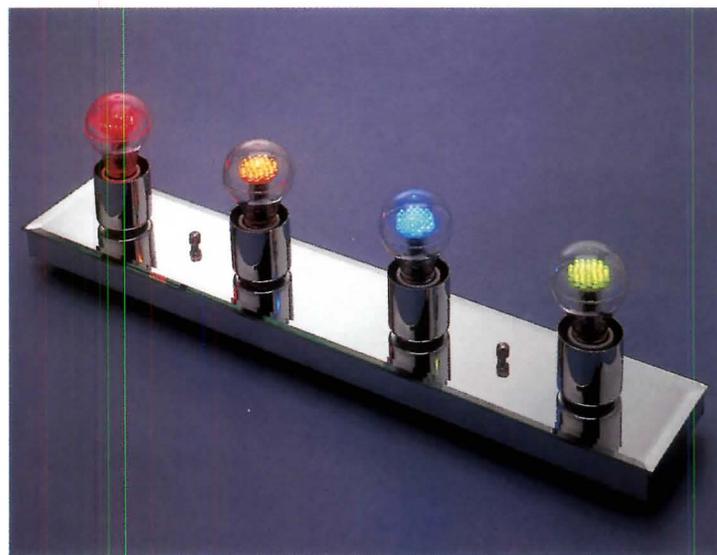
One version of these new devices, by Color Kinetics, has merged this technology with sophisticated power line carrier (PLC) control systems that change the lamp's color and brightness by mixing the output of different-colored LEDs within a single unit, producing up to 16.7 million colors. Of special interest is the iColor MR, which works in most standard MR16 fixtures. This lamp's color and output can be rapidly changed, adding stunning effects without complicated wiring and relays. A linear unit with similar capabilities is available for use in coves.

Others by LEDtronics, CCI Lighting, and Mule Lighting are designed as direct replacements for the standard A-lamp, providing a variety of colors and distributions. Miniature lamps by Lighting Technology Inc., designed mainly for indicator and direct-current decorative applications, use both large LEDs and multiple LEDs, depending on the application.

Before purchasing LEDs, users are cautioned to check their specifications, because they vary from product to product. LEDs may outlast other lamps, but their output drops over time. Some manufacturers of the LEDs rate the unit lifetime by predicting when the average light output will drop by 50 percent, while others consider it the point at which 50 percent of the units have burned out (and by then the survivors will be rather dim). Overdriving LEDs initially will cause them to be very bright, but both lamp life and output quickly suffer.

Light distribution, a function of the built-in lens that surrounds the diode chip, may vary greatly from an incandescent lamp of the same size and shape so a few tests with samples are in order. Also, cost is drop-

Lindsay Audin is president of Energywiz Inc., an energy and technology consulting firm.



An MR16 lamp can be replaced by the iColor (top) whose color and output are controlled by a chip. LEDtronics makes replacements for A-lamps (bottom).

ping, but still quite high. The list price for one iColor MR16 lamp is \$159, but over its lifetime, the iColor unit will likely outlast 40 or more of the standard MR16s. Single-color LED units by other manufacturers are also pricey, falling in the range of \$40 to \$130 per lamp. At those prices, it pays to consider where they will be operated.

Like all solid-state devices, LED units may deteriorate if placed in poorly ventilated fixtures and allowed to overheat. Some units are specially designed to handle this kind of torture, others are not, so carefully consider the choices. Likewise, take into account the design life of the fixtures: if the fixture dies before the LED lamp, it is likely that both will be discarded during replacement. ■

Rethinking indirect fluorescent fixture design

THE STORY OF HOW THE NEW T5 HIGH-OUTPUT LAMP, COUPLED WITH ADVANCED OPTICAL DESIGN, INSPIRED ONE MANUFACTURER TO REEXAMINE ITS FIXTURE-DESIGN PHILOSOPHY.

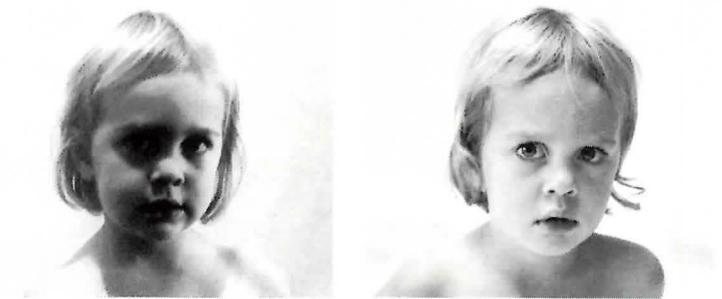
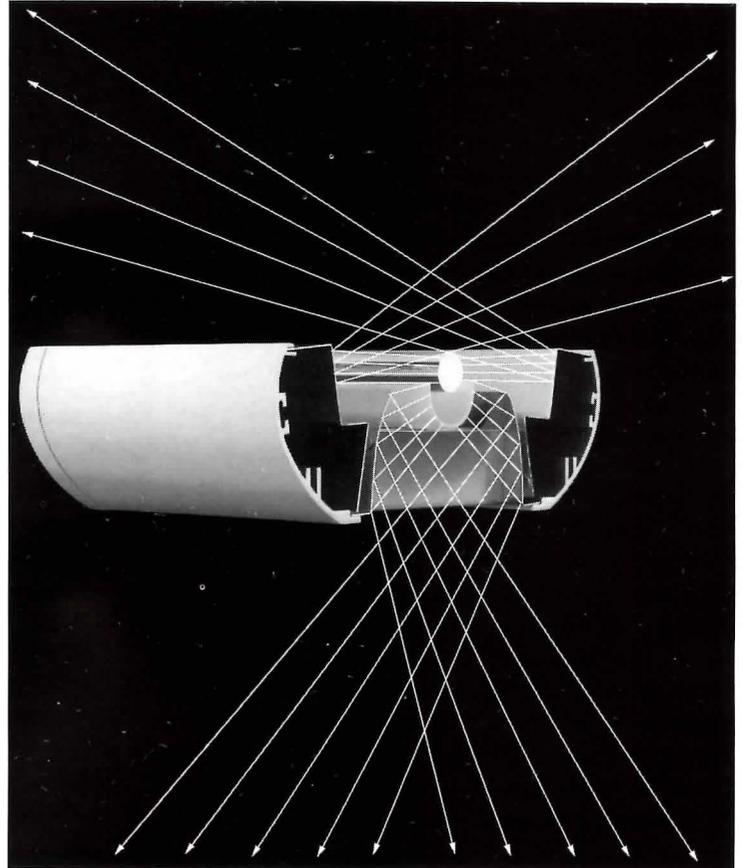
By Charles Linn, AIA

Over the last 40 years, Peerless Lighting of Berkeley has established a reputation as the lighting industry's premier designer and manufacturer of indirect fluorescent lighting products. Part of the company's renown derives from its long-term campaign to persuade skeptical, bottom-line-oriented architects, lighting designers, and building owners that their premium-priced, extruded-aluminum tubes, which bounce light off the ceiling and hang from aircraft cable, do a better job of lighting spaces like schools and offices than do the ubiquitous, commodity-grade fluorescent troffers. It wasn't an easy sell. Anyone with a light meter could stand directly under a troffer and show that it was putting out more light than what was being bounced off a ceiling lit by a system of indirect fixtures. For some specifiers, the case was closed.

But Peerless' argument was persuasive. Bouncing light out over a room's ceiling and other surfaces is better than using troffers to dump mass quantities of light toward the floor because it produces a more comfortable visual environment. To achieve even illumination, the firm developed sophisticated optical systems that spread light uniformly over the ceiling plane. By comparison, parabolic troffers, with shiny, ice-cube-tray-like louvers, produce high brightness-to-contrast ratios, dark ceilings, and scallops of light with sharp shadows along walls. They are plagued by glare and hard to look at. With indirect lighting, the uniform light bouncing off the ceiling softens shadows and virtually eliminates reflections on VDT screens. The only problem is that indirect light also diminishes the visual definition and modeling produced by shadows, so much so that some surfaces appear dull and lifeless. Some people describe this as "the cloudy day effect."

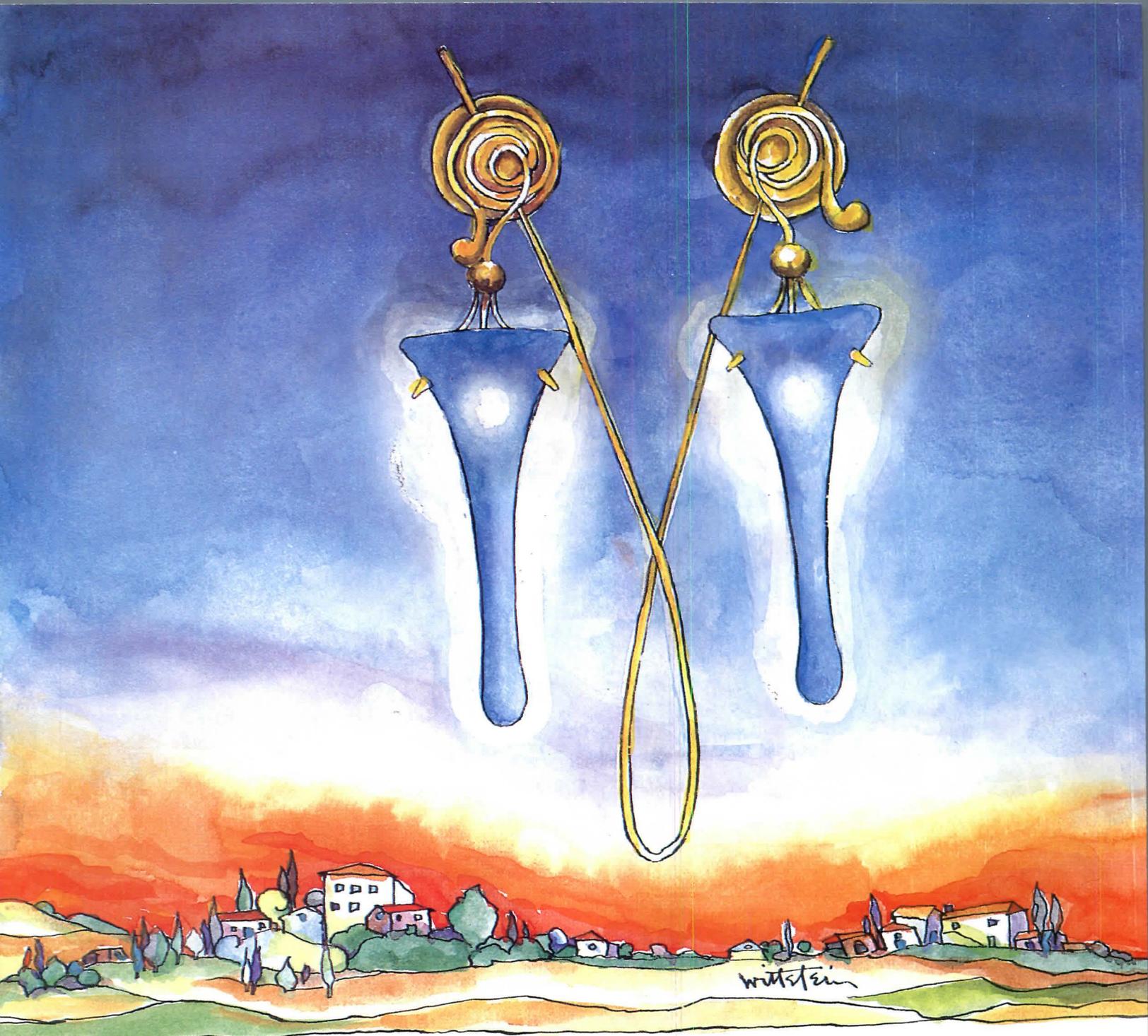
One way to solve this problem is to design an indirect fixture to add direct lighting that is projected beneath the fixture. A number of other manufacturers have been producing such designs already, although they have several disadvantages. It was difficult to create an optical system that can control the light from a T8 fluorescent lamp—which, at 1-inch in diameter, was until recently the smallest, most efficient fluorescent tube available—while keeping the fixture housing compact. And most of the light from the fixtures still goes up to the ceiling over them, so they can only be spaced 8 to 10 feet apart. A lack of research that showed exactly how much light should go downward without creating glare beneath the fixtures resulted in some manufacturers erring on the safe side, trapping much of the light behind perforated metal screens wrapped beneath the fixtures, actually lowering their efficiency.

Peerless stayed away from direct/indirect until late last year when the company's vice presidents Doug Herst and Peter Ngai (Peerless is now owned by Lithonia) announced that the firm would manufacture a new line of fixtures with uplights that would be balanced with the addition of a carefully controlled amount of downlight. What made this



Ray tracing (top) shows the direct/indirect distribution of Peerless Lighting's new Envision I/D fixture. Direct downlight (below left) creates harsh shadows on the child's face. The new fixture combines indirect and direct lighting to create a uniform luminous distribution without eliminating the shadows that give the face depth and definition (below right).

product possible was Osram's new high-output T5 lamp. The lamp has approximately twice the light output of a T8 but is only $\frac{5}{8}$ of an inch in diameter. "The T5 high-output lamp was a radical new product," says Herst. "The lamp was so small, compared to a typical reflector cavity, you could get a very broad distribution with extremely high uniformity on the ceiling, so the fixtures could be small." However, the T5 high-output lamp



L'Arte che illumina

The **Lamp International** Collection ■ Designer **Enzo Ciampalini**

The Goccia series includes floor, table, chandelier, suspension, wall, and ceiling design with white, green and blue glass

illuminating experiences

233 Cleveland Avenue ■ Highland Park, NJ 08904 ■ Phone (732) 745-5858 ■ Fax (732) 745-9710

CIRCLE 69 ON INQUIRY CARD



Peerless Lighting's new indirect/direct fixtures (left, from top to bottom): the Mirage I/D, the Envision I/D, and Prima I/D. Here, the Envision I/D is used in a classroom and in the offices of Chipotle Mexican Grill, Denver, Gensler Associates, architect; McFall, Konkel and Kimball, lighting consultant.

has approximately twice the light output of a T8, so creating an indirect fixture that also produced a direct component that was not too bright wasn't as easy as punching holes in the bottom of the fixture housing—the light would be much too bright if not carefully controlled. Aided by new research from a study conducted at the Lighting Research Institute at Rensselaer Polytechnic Institute in Troy, N.Y., that tested subjects to see how much direct light they could comfortably accommodate, Ngai developed a special diffuser that distributes about 40 percent of the lamp's light below the fixture. The balance is reflected off the ceiling. "At 60 percent downlight and 40 percent up, you get a pretty harsh environment," says Ngai. "With 60 percent of the light going up and 40 percent down, now you have pretty nice fill light, yet objects still maintain plenty of shadow and highlight."

One of the major advantages of the new Peerless fixtures is that they can be spaced 12 to 15 feet apart in a room that has a 9-foot ceiling. This translates into a savings of up to one-third on the costs of hardware, labor, and electrical distribution. In addition, suspension cables and electrical feeds are spaced on a grid of 4-foot multiples, so that even spacing of these items throughout the length of a run is assured.

Peerless Lighting is not alone in its adoption of the new T5 lamp. Look for direct/indirect fluorescent fixtures from Ledalite, Litecontrol, Neoray, and Focalpoint. ■



WAUSAU TILE

THE SINGLE SOURCE FOR
PRECAST CONCRETE PAVERS,
TERRAZZO TILE &
CUSTOM PRODUCTS



WAUSAU TILE

P.O. Box 1520
WAUSAU, WI 54402-1520
800-388-8728
FAX 715-359-7456
www.wausautile.com

CIRCLE 70 ON INQUIRY CARD

Lighting Briefs

The lighting options on this page and the products on page 191 highlight some new ideas for a hotel lobby, guest room, bar, or restaurant, whether the mood is classical, modern, or whimsical. *Rita F. Catinella*



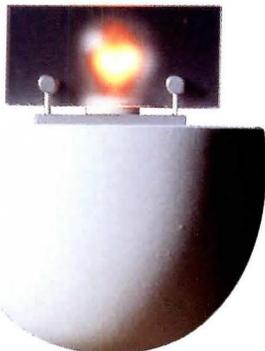
▲ Intergalactic lighting

The two oval and round glass shade styles in Neidhardt's Galaxy series are offered as either a ceiling-mounted fixture or as a pendant fixture (shown). These hand-blown shades can be specified with a choice of blue, amber, or clear glass. The fixtures are lamped with a medium-based mirror reflector lamp, maximum 75 watt. 800/978-8828. Neidhardt Inc., Redwood City, Calif.

CIRCLE 201

► A bit of the classics

The La Violette wall sconce is part of Baldinger's Classic Collection. Shown here in antique brass finish with ivory shirred fabric shades, the light functions with incandescent, halogen, or high-lumen compact fluorescent lamps with electronic ballasts. Like most of the new wall sconces from Baldinger, the lights are ADA compliant and can be used in commercial, hospitality, or residential applications. 718/204-5700. Baldinger Architectural Lighting Inc., Astoria, N.Y. CIRCLE 200



◀ Dine by moonlight

Lunalite cast-ceramic wall sconces feature a subtly irregular hand-painted surface suggestive of the moon. There are three sconces in the collection, all exaggerated bulbous shapes offered in ice blue, charcoal, or bronze. A wafer-thin Plexiglas lens, supported by anodized aluminum hardware, shades the bulb. 612/339-7746. Emily McLennan, Minneapolis. CIRCLE 202



▲ Custom cast lighting

Artist Joan Sherman's chandeliers, tables, fountains, and decorative art objects are cast directly from the actual organic materials that inspire them, using a method called "live burn-out casting." Sherman creates high-end, UL-listed custom lighting fixtures, such as the Ribbon sconce (shown) in materials such as bronze, crystal, and hand-blown glass. 212/387-0866. Joan Sherman Decorative Arts, New York City. CIRCLE 203



▲ Outer space

The Meteor wall sconce, designed by architect Rae Douglass, projects rainbow light patterns onto its immediate wall surface. The reflector disk of the fixture can be either tilted, warped, or cut into standard and custom shapes to create a variety of lighting effects. The fixture can

be used alone or grouped together to transform a wall into a tapestry of light and color. The fixtures above are shown in annealed copper, but are available in a variety of other finishes. Douglass has also designed a selection of mobile lighting systems. 520/327-1581. Light Ray Solutions Inc., Tucson. CIRCLE 204

► Bronze table lamps

A limited edition of cast-bronze table lamps, which reflect sculptural themes long explored by artist Bruce Stanton, apply original forms and museum-quality production techniques to foundry cast bronze. The collection features four designs with silky patina surfaces in a range of reds, browns, golds, and greens. All lamps come with a lifetime guarantee, including any defects to the base, patina, hardware, and electrical work. 888/804-0679. Stanton Design, Santa Barbara, Calif. CIRCLE 205



Lighting Briefs

▼ Brushed-nickel finish added

W.A.C. Lighting's miniature low-voltage recessed trims are available in a new brushed-nickel finish. These trims are offered in a broad range of styles and can be used under-cabinet, in-cabinet,

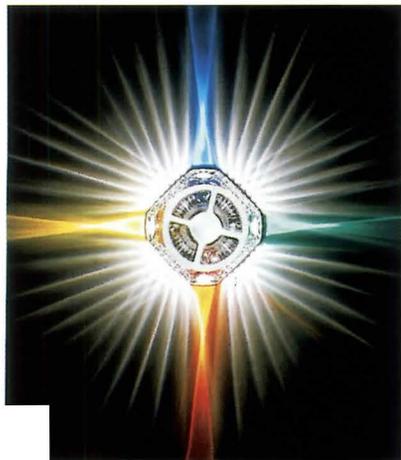
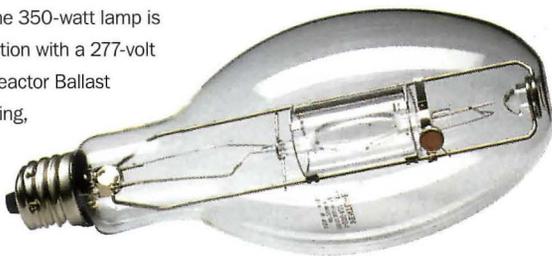
and in a variety of other task-lighting functions. The miniature fixtures can be installed to wash a wall with an even light and graze textured walls to highlight specific areas, adding drama to a residential or commercial space. Miniature recessed trims can be easily installed on a finished ceiling employing a variety of housings, or often without housings in other applications. 800/526-2588. W.A.C. Lighting, New York City. **CIRCLE 206**



▼ Venture into energy savings

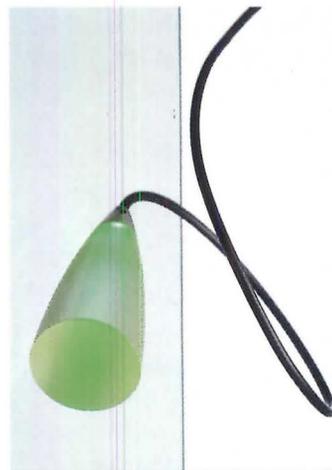
Venture Lighting's 350-watt, high-performance Uni-Form pulse-start lamp-ballast system provides higher maintained-lumen output than the 400-watt position-oriented lamp it was designed to replace. When the 350-watt lamp is used in combination with a 277-volt energy-saving Reactor Ballast with ignitor starting, the system

saves approximately 80 watts per fixture or \$128 over the 20,000-hour life of the lamp, compared to standard 400-watt technology. 800/437-0111. Venture Lighting, Solon, Ohio. **CIRCLE 208**



◀ A star is born

When mounted flush to walls, Radial Tapestry luminaires emit light in a starburst pattern, reaching 6 feet out from the housing. Sconces can also be mounted recessed, on three-dimensional background shapes, and on ceilings to create special effects. ADA-compliant, the light is ideal for hotels, theaters, or other contract lighting applications. 914/698-5959. D'ac Lighting, Mamaroneck, N.Y. **CIRCLE 210**



◀ Beam me up, Scotty

Designed by Adam Tihany, the Scape-beam decorative acrylic pendant features a frosted exterior and a clear end that diffuses light evenly over the fixture surface and projects light down when suspended by a fiber-optic cable. When teamed up with the remote illuminator, color wheel, and controls, the fixture can be programmed to glow over six colors. It can be used as an interior or exterior pendant mount. 210/227-7329. Lucifer Lighting Co., San Antonio.

CIRCLE 207

▶ Become more defensive

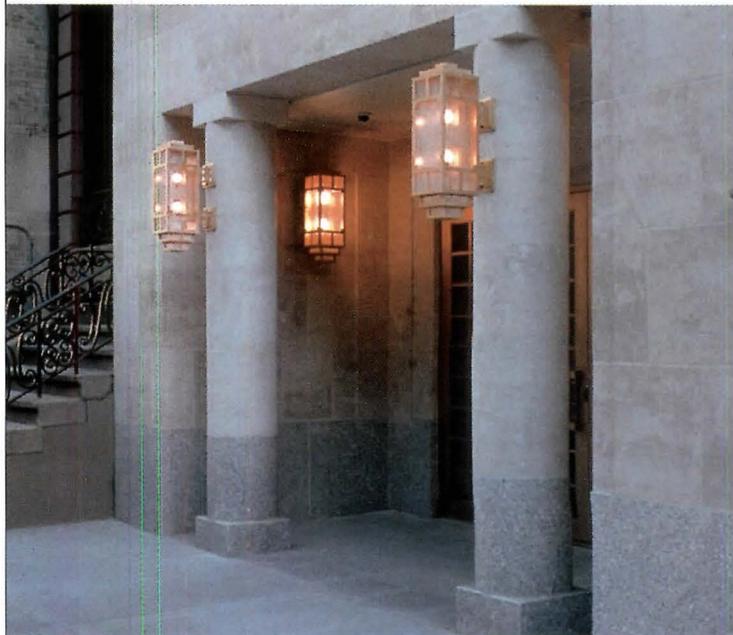
The Defiant series of vandal-resistant, wall-mounted luminaires provide high-output, low-glare lighting suited for damage-prone applications in outdoor public environments such as parking garages, sports facilities, apartments, schools, and transit facilities, wet or dry. Illumination is provided by a choice of High Intensity Discharge or Triple Tube compact fluorescent lamps. 800/865-5954. Morlite Systems Inc., Erie, Pa. **CIRCLE 209**



▼ A warm welcome

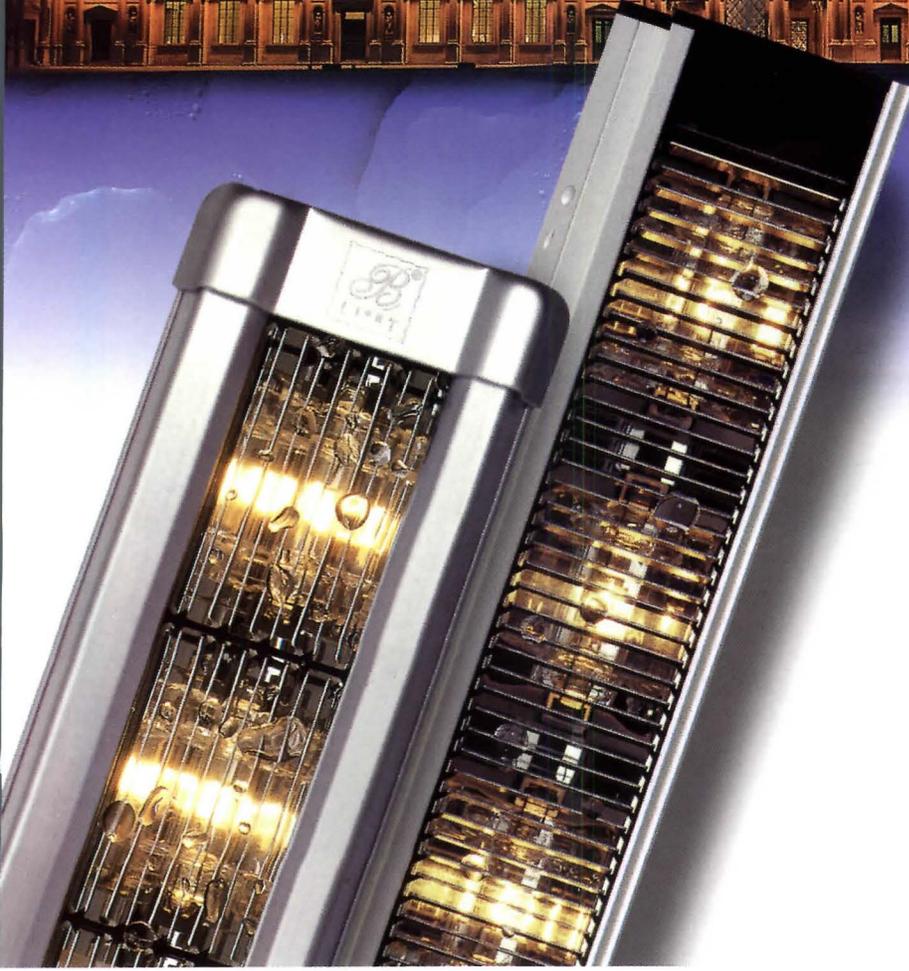
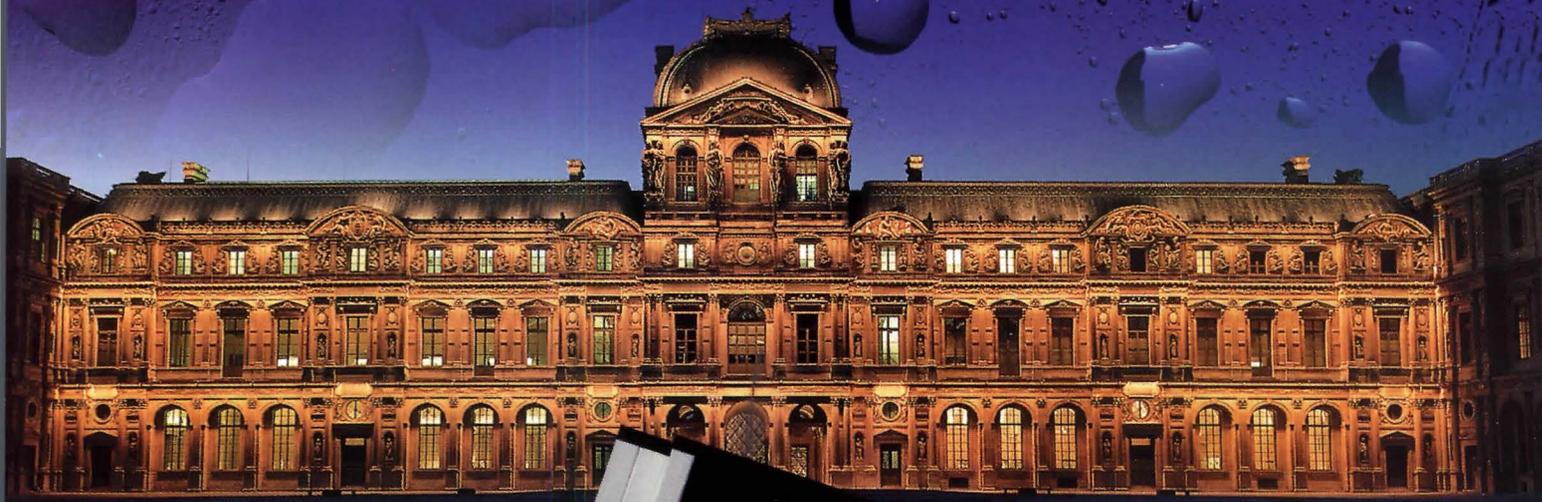
Starfire's exterior column- and wall-lighting entrance brackets provide ambient area lighting when mounted on outside building columns, walls, and entryways. The lights are shown below on the Council on Foreign Relations in New York

City, but are suited for a range of environments, including office complexes, upscale retail, and hospitality. The lights shown here feature incandescent lamps, satin brass housing, and "seeded" glass panels. 800/443-8823. Starfire Lighting, Jersey City, N.J. **CIRCLE 211**





THIS IS THE LIGHT THAT LIT THE LOUVRE
What architectural masterpiece do you need to light?



Now this revolutionary fixture is available in the US. Utilizing a Xenon 20,000 hour lamp, this tiny fixture virtually disappears from sight when mounted to the face of a building. No more hot spots, no more blinding flood lights. At last, you can highlight the true architectural detail of a building with the perfect amount of light.

Distributed in the USA by
LIGHT-PROJECT INTL INC.®



105 Executive Drive #210
Sterling, VA 20166-9558
Phone (703) 471-6411
Fax (703) 471-0312

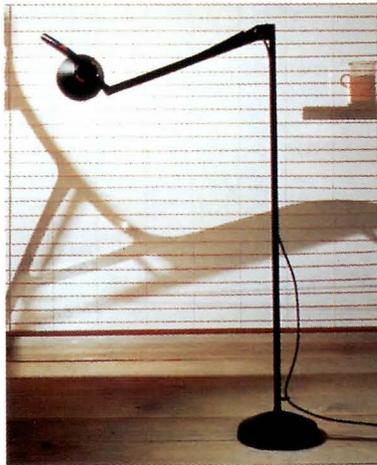
Visit our web page at <http://www.lightproject.com>

CIRCLE 71 ON INQUIRY CARD

Lighting Briefs

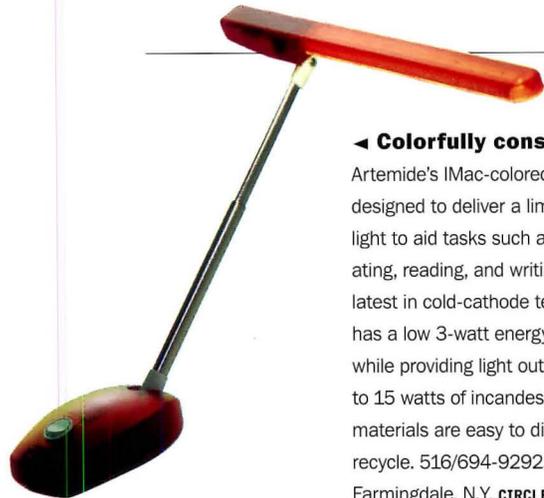
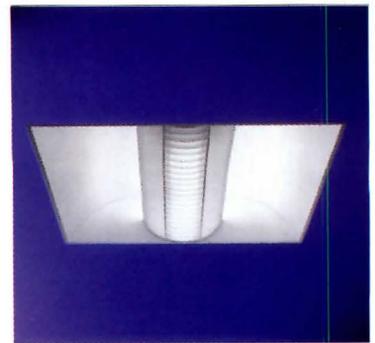
► No lightweight

The Fortebraccio ("strong arm" in Italian) collection of desk, floor, and wall-mounted fixtures feature conical shades, affixed to counter-balanced single or dual lamp arms with a center rotating vertical axis. A choice of handles extend down and out at the front of the shade for safe, precise placement of the lamp head. The light's arm is constructed of die-cast metal, galvanized for the natural or colored versions; chrome or nickel-plated in opaque black for the other versions. Energy-efficient, candelabra-base 60-watt incandescent lamps, 100-watt A-19 incandescents, or miniature 100-watt T-10 halogen lamps provide illumination. 212/989-6265. Luceplan USA Inc., New York City. **CIRCLE 212**



► Expansion of series

The Avante series of recessed direct/indirect fluorescent lighting for small and large area applications has been expanded. Avante offers fixtures with symmetric and asymmetric light distribution, allowing design flexibility, and is the only recessed direct/indirect lighting system with companion wall sconces. 770/922-9000. Lithonia Lighting, Conyers, Ga. **CIRCLE 213**



◀ Colorfully conscientious

Artemide's IMac-colored e.light is designed to deliver a limited amount of light to aid tasks such as computer operating, reading, and writing. Using the latest in cold-cathode technology, e.light has a low 3-watt energy consumption while providing light output comparable to 15 watts of incandescent lighting. The materials are easy to disassemble and recycle. 516/694-9292. Artemide Inc., Farmingdale, N.Y. **CIRCLE 214**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

FIREPROOFING WORTH THE LOOK!

A/D FIREFILM® II 

*Decorative Thin-Film
Fireproofing for
Structural Steel*

A/D FIREFILM® II combines ratings up to 3 hours and improved spray characteristics with the features and benefits you have come to expect from A/D FIREFILM®.

A/D FIRE PROTECTION SYSTEMS INC.

Call 1-800-263-4087

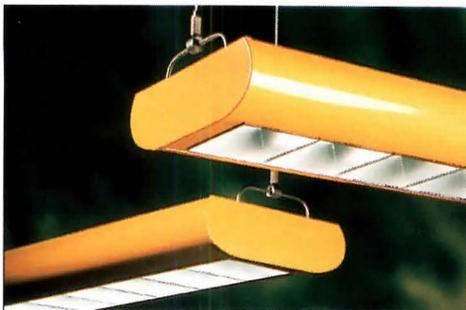


Photo: MacAlester College, St. Paul, MN
Architect: Holabird & Root
Photo By: Steven Bergerson Photography, Minneapolis
A/D FIREFILM® on structural steel

Lighting Briefs

Office help

Luxo's multidirectional, adjustable asymmetric task-light series mounts under cabinets, under shelves, or on office-system panels or walls. A swivel mechanism allows a 325-degree rotation of the unit, left or right, directing the shadow-free light across work surfaces rather than directing it on them. 914/937-4433. Luxo Corp., Port Chester, N.Y. **CIRCLE 215**



Atrium option

Solaris utilizes modern small-ballast technology for a compact, contemporary look for classrooms, high-ceiling offices, and large atrium areas. The parabolic louver provides lamp shielding and a visual highlight. The reflector system allows designers to

vary distribution and light levels for specific spaces in an environment. In addition to a standard 60 percent uplight, 40 percent downlight distribution, four other price-efficient options are available. Reflectors can be changed in the field to adjust distribution, as needed. 509/924-7000. Columbia Lighting Inc., Spokane. **CIRCLE 216**

Bright Italian designs

Two of Lucitalia's latest lights, Krisma and Karma, are line-voltage-adjustable fixtures made with an adapter for track mounting or with a canopy for wall or ceiling mounting. The lights feature a die-cast aluminum body and a Technopolymer base. Karma features a parabolic reflector with an asymmetric light pattern. 011/39/002/612-6651. Lucitalia SpA, Cinisello, Italy.

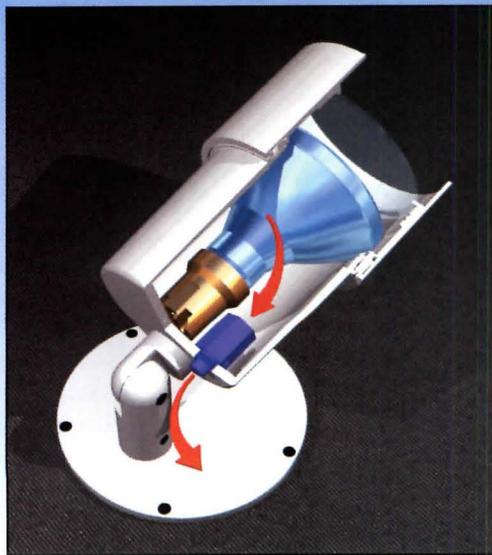
CIRCLE 217



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

The ACV™ Valve System

(patent pending)



The ACV™ Valve System (Anti-Condensation Valve) utilized in B-K Lighting's PAR30/PAR38 fixtures expels moisture-laden air from the hermetically sealed optical compartment, creating an internal vacuum and eliminating the possibility of condensation. Leading industry organizations have awarded the ACV™ Valve System for its unique and significant advancement to the art and science of lighting. Contact us today for more information.



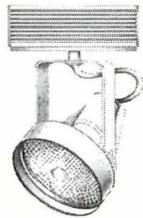
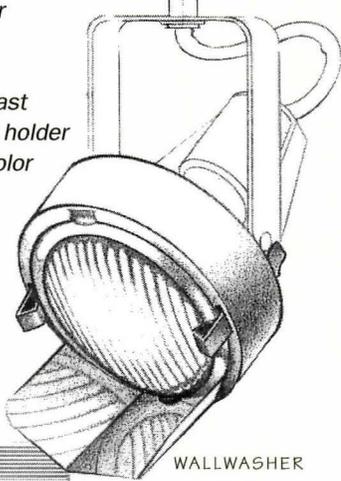
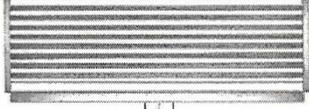
B-K LIGHTING... the number one choice in specification-grade, outdoor architectural lighting.

7595 N. Del Mar Avenue • Fresno, CA 93711 • (559) 438-5800 Fax: (559) 438-5900 • email: info@bklighting.com • web: www.bklighting.com

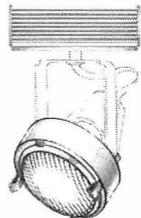
CIRCLE 73 ON INQUIRY CARD

HIGH TECH, LOW ENERGY

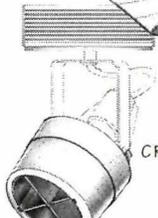
Energy-saving PAR30 and PAR38 metal halide lamps are now available with the stable, full-spectrum color you need for stores and display spaces. It's time for our **Minima 30 MH** and **Minima 38 MH** fixtures. Durable and optically precise, with a slim case for an electronic ballast and three snap-on accessories. Lens holder that can hold both spread lens and color filter. Deep cross-baffle for glare-free accent lighting. Wallwasher for floor-to-ceiling illumination. On SightLine® track or for surface mounting. For info and the name of your local representative, call 212-521-6900; fax 212-888-7981; info@epl.com



MINIMA MH



LENS HOLDER



CROSS-BAFFLE

WALLWASHER



because light matters.

CIRCLE 74 ON INQUIRY CARD



f o r m

and function

The new AF3P auto-lock hook: combining the convenience of the self-arresting Arakawa Gripper™ with the security of a carabiner-like spring to effectively secure your art.

Hang the AF3P from a cable on our wall-mounted rail, and you have an attractive system to quickly position art anywhere on the wall.

And you won't have to patch and paint any more nail holes.



toll free **Call us today.**

888.ARAKAWA



ARAKAWA HANGING SYSTEMS
1020 SE Harrison Portland, Oregon 97214 www.arakawagrip.com

CIRCLE 75 ON INQUIRY CARD

Lighting Briefs

► T5-lamped optical system

Ledalite's Minuet HO T5 combines the high-output T5 lamp and an advanced new optical system with a design element that suits contemporary office interiors, reception areas, libraries, and other commercial applications. Minuet comes prewired and ready-to-install and offers three distributions (indirect, semidirect, and



direct/indirect) that meet RP-1 standards for office lighting. 604/888-6811. Ledalite Architectural Products, Langley, British Columbia. **CIRCLE 218**

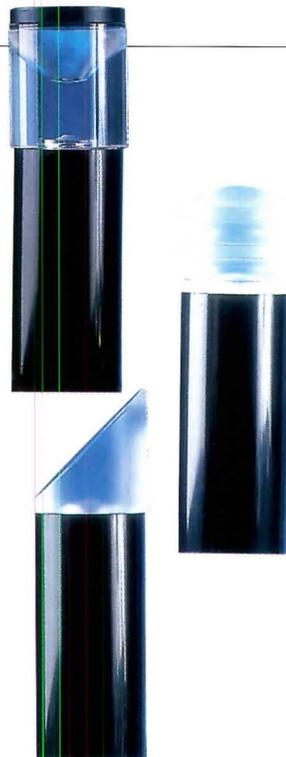
► Whatever the weather

The Stonco series of KnightWatch motion-sensor luminaires features a curved-lens design and longer life fixtures for energy-efficient security applications. The surface-mounted device uses advanced technology to provide performance from -40 to +120 degrees Fahrenheit, eliminating false triggering due to sudden weather or temperature changes. 908/964-7000. Stonco, Union, N.J. **CIRCLE 219**



◀ Decorative pathway lighting

Optiance by SuperVision, the fiber-optic lighting brand of Cooper Lighting, has introduced a family of nine different bollard-style fixtures of decorative pathway lighting (three shown). The lack of heat or electricity in fiber-optic fixtures makes them a safe choice in wet weather and around children and pets. Each fixture head in the series is made of solid, nonyellowing acrylic, while bodies are constructed of PVC plastic. Fixture-head choices include cylinder; stepped cylinder; slanted, tiered, and lantern shapes; and knurled, grooved, or inverted cylinders. 912/928-3843. Cooper Lighting, Americus, Ga. **CIRCLE 242**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

Lighting Briefs



◀ Easier coordination

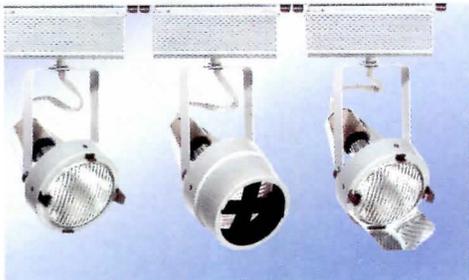
Canadian architect Gregory Henriquez, AIA, along with industrial designer Alex Feldman, developed the Orchestra family of light fixtures to help simplify the coordination and specification of lighting. While maintaining a consistent image, Orchestra offers distinctive shapes, sizes, and finishes which blend into every area of a building. Orchestra is listed to UL standards for wet locations. 888/650-5483. Rebelle Architectural Lighting, Maple Ridge, British Columbia. **CIRCLE 243**

▶ Minimizing energy use

Minima MH fixtures are track-mounted accent lights and wallwashers for use with metal-halide PAR 30 and PAR 38 lamps (spot and flood).

Edison Price developed the product family as part of a cost-sharing arrangement with New York State Energy Research and Development Authority to promote quality lighting fixtures that reduce energy. The fixtures use 39-watt, 70-watt, and

100-watt metal-halide lamps with a life up to 9,000 hours, resulting in less frequent relamping. 212/521-6955. Edison Price Lighting, New York City. **CIRCLE 244**



▼ Let me reintroduce myself

Louis Poulsen's series of PH classics has been expanded by a 2/1 shade size (2 refers to the upper shade, which is 20 centimeters), which was first launched in

1933. The faithfully reintroduced series includes a table lamp, a pendant, and a wall lamp. The light is constructed of chromated brass, and the shades consist of three layers of hand-blown glass that have a polished outside and a frosted inside finish, which emits a soft, diffused, light. 954/349-2525. Poulsen Lighting Inc., Ft. Lauderdale, Fla.

CIRCLE 245

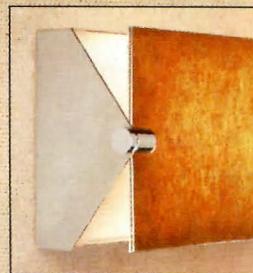


For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

BALDINGER



The Rockwell Group's new collection for Baldinger is innovative and imaginative. The Ricky and Little Ricky are new ADA compliant wall sconces available in a wide variety of diffusers and metal finishes. Chose a standard diffuser or create your own graphics. The possibilities are endless!



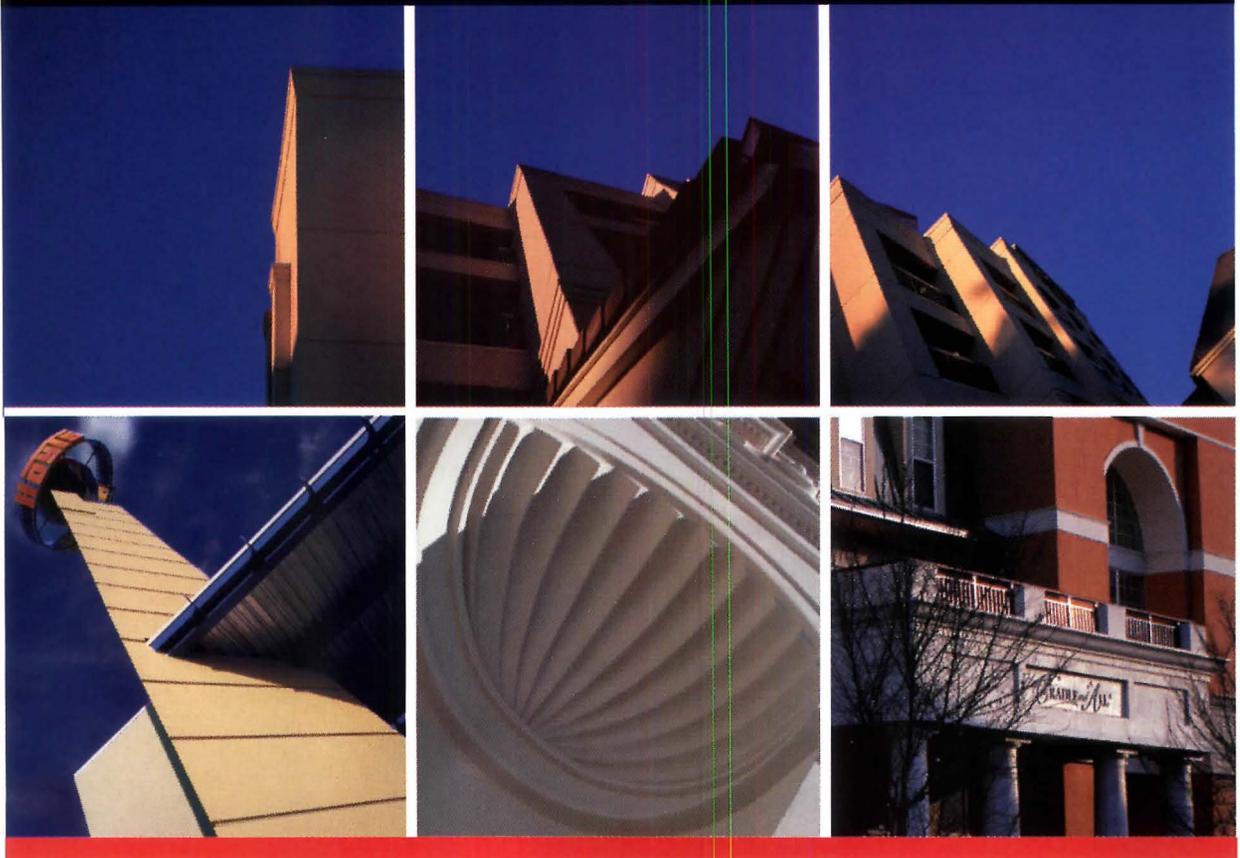
BALDINGER ARCHITECTURAL LIGHTING, INC
19-02 STEINWAY STREET, ASTORIA, NY 11105
TEL: 718-204-5700 FAX: 718-721-4986
visit our website at www.baldinger.com

CIRCLE 76 ON INQUIRY CARD

PAREX EIFS®

PB SYSTEMS • FLEXIBLE PM • SECONDARY BARRIER • DRAINAGE PM • DRAINAGE PB

We have the *S*ystem you need.



Just ask us...

PAREX®

800-537-2739 PAREX Inc. Headquarters: 1870 Stone Mountain-Lithonia Rd, Redan, GA 30074
800-780-6953 Western Region: 11290 South Vallejo Court, French Camp, CA 95231

Look for us on the Internet at:
<http://www.parex.com>

100%
ACRYLIC
POLYMERS

MEMBER OF



CIRCLE 77 ON INQUIRY CARD

New Products

We survived the 2000 countdown without violence, but architects should still make a resolution to design safer schools, embassies, and public buildings. There are a legion of security products that can help take away power from terrorists, but even the best system won't work if proper procedures aren't followed. *Rita F. Catinella*

LAMINATED GLASS TAKES A DANGEROUS WEAPON OUT OF THE TERRORIST'S ARSENAL

Corps Base in Virginia last May. Three glass panels (supplied by Viracon), including ordinary panes of 3/8-inch annealed glass, 3/8-inch laminated glass, and insulating laminated glass (two panes of 3/8-inch laminated glass spaced 1/2 inch apart), were subjected to 50 pounds of TNT on each of the four days of the bomb blast demonstration (far left, bottom).

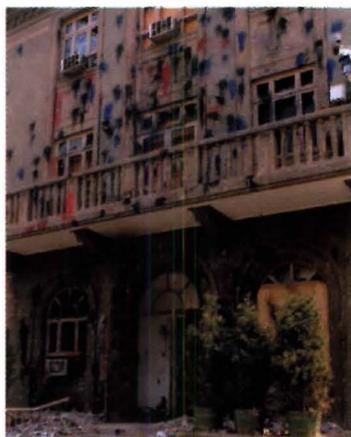
opening. Similarly, no glass shards were observed on the ground in front of the laminated insulating window unit.

Solutia, which owns the trademarked Saflex plastic interlayer, has worked with the General Services Administration to clarify the value of using laminated glass in government buildings at home and abroad. Flying glass shards were the number one cause of injury and death at the two Embassy bombings in East Africa in August 1998, according to the Accountability Review Boards' assessment. After the bombings in Africa, Solutia turned its attention to the State Department and started helping with overseas facilities.

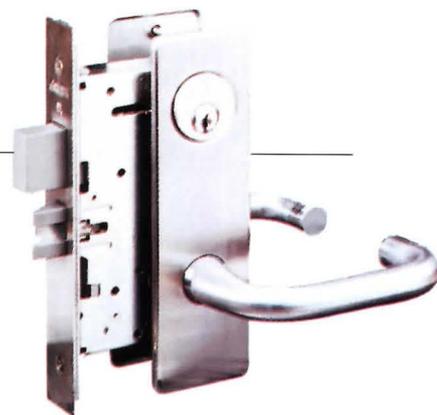
When the U.S. Embassy in Beijing was under siege last year, Solutia donated laminated glass to help the state department retrofit the embassy. The company sent approximately 130 pieces of glass laminated with Saflex to retrofit broken windows (left, before and after).

Due to the growing threat of terrorism, the U.S. has changed its glass or "glazing" policy to increase the physical security of its posts around the world. The new policy includes the continued use of high-strength laminated glass in all new construction—this can cost 20 to 30 percent more than using ordinary tempered glass—and the possible inclusion of laminates in any major building renovation projects.

"Glass is the shrapnel a bomber can use to perpetrate his deed," says Greg Wilson, director, federal affairs, Solutia Inc. "We want to take that shrapnel out of the terrorists' hands." 800/24-TOUGH. Saflex, St. Louis. **CIRCLE 220**



After the blast (far left, top), all three window glass constructions were fractured to some degree. The ordinary window glass specimen exploded into numerous glass shards. The shards from the single-laminated glass adhered to the Saflex PVB interlayer, and the whole assembly remained in the



LOCKING UP STUDENTS TO SAVE THEIR LIVES

The disturbing increase in the frequency of deadly school shootings has created a need for architects to design more secure learning environments, even if it means allowing teachers to lock students inside classrooms and away from potential danger.

Part of the Classroom Security Series, Corbin Russwin's ML2072 is a grade-1 classroom-function lock-set that incorporates deadbolt operation into a traditional classroom lock. To gain access to a locked classroom, a key in the outside cylinder will retract the latchbolt and deadbolt, allowing access to the classroom. When admitting students to class, retracting the latchbolt by either the inside or outside cylinder will unlock the outside lever. Once class begins, the teacher can again throw the deadbolt from inside to secure the door.

For quick egress, operation of the inside lever retracts the latchbolt and deadbolt simultaneously, meeting life-safety requirements. 800/543-3658. Corbin Russwin, Monroe, N.C. **CIRCLE 221**



When a blast occurs, the ordinary window glass found in most buildings breaks into shards that pose a significant threat to people in the vicinity. Not only can the air blast pressure damage the building and injure the personnel within it, but that pressure can also destroy everyday office fixtures and turn them into deadly missiles. The blast wave effect causes the majority of damage to a building's interior after an explosion.

One way to help save lives in a bomb explosion or other violent attack is to use laminated glass. This glass is made when a polyvinyl butyral (PVB) sheet is bonded with intense heat and pressure between two panes of glass.

The security value of laminated glass was illustrated at the second Department of Defense Force Protection Equipment Demonstration at Quantico Marine

New Products



◀ Bullet-proof camera

The V100 bullet-resistant surveillance camera combines durability with high-performance video imaging. Ideal for the most extreme of situations, the V100's lens window of ½-inch Lexguard polycarbonate will withstand the impact of a bullet from a 9mm handgun and a 12-gauge shotgun. The enclosure is made from marine-grade aluminum and is fully weather sealed. 604/574-1526. Silent Witness Enterprises Ltd., Surrey, British Columbia. **CIRCLE 222**

▼ ADA-compliant turnstile

To let companies install optical turnstiles without drilling holes or otherwise defacing the floor on which they stand, Omega introduces the MB2000 integrated pedestal/platform system. The optical

turnstile works in concert with card-access control systems to detect unwanted or unauthorized visitors by making them pass through a security curtain in building lobbies. All wiring for power and communication travels

through a custom raceway in the steel structure of the platform assembly. The system is ADA compliant and wheelchair friendly. 925/609-6339.

Omega Corporation, Walnut Creek, Calif.

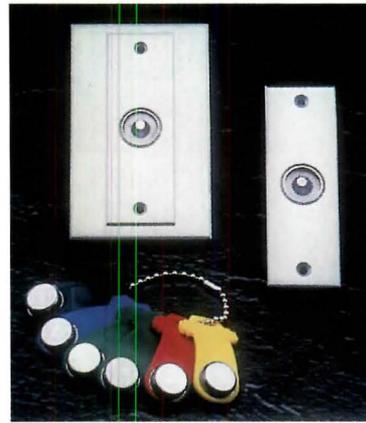
CIRCLE 223



▼ Surveillance recorder

Sony offers a digital hybrid recorder that features both a hard-disk drive and a digital-video tape drive. The hybrid nature of the recorder reduces the burden on the tape drive, resulting in reduced main-

tenance. It can connect to up to 16 cameras and be preprogrammed to record in multiple modes, including one with more than 500 lines of resolution. 800/686-SONY. Sony Electronics Inc., Park Ridge, N.J. **CIRCLE 224**



▼ Toxic chemical protection

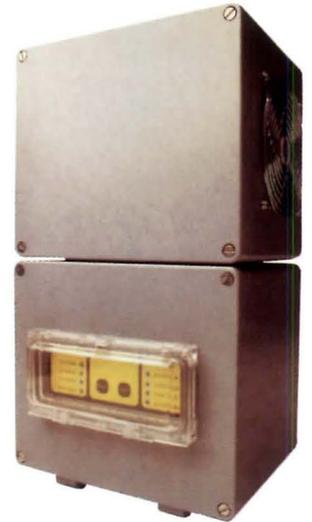
CW Sentry is a compact instrument that detects trace levels of chemical warfare agents. It is fully automatic and designed for fixed installations, such as subway systems, where 24-hour monitoring is required. It is compatible with standard fire-alarm systems. 407/884-3300. Microsensor Systems, Orlando.

CIRCLE 226

▲ Controlling access

The e.Primus access-control system is designed to operate hard-wired door hardware such as electric panic or fire-exit hardware, electric strikes, electromagnetic locks, and other electric locks. Using the new time functions, specific activation times can be assigned to user keys to allow entry only during certain periods. Expiration dates and times can also be assigned. 317/897-9944. Ingersoll-Rand Company, Von Duprin Division, Indianapolis.

CIRCLE 225



▲ Indoor/outdoor turnstile

The CATG2 series security turnstiles make sense when an unobtrusive security profile is necessary and when unmanned access to a secured area is a must. The turnstile is durable enough for

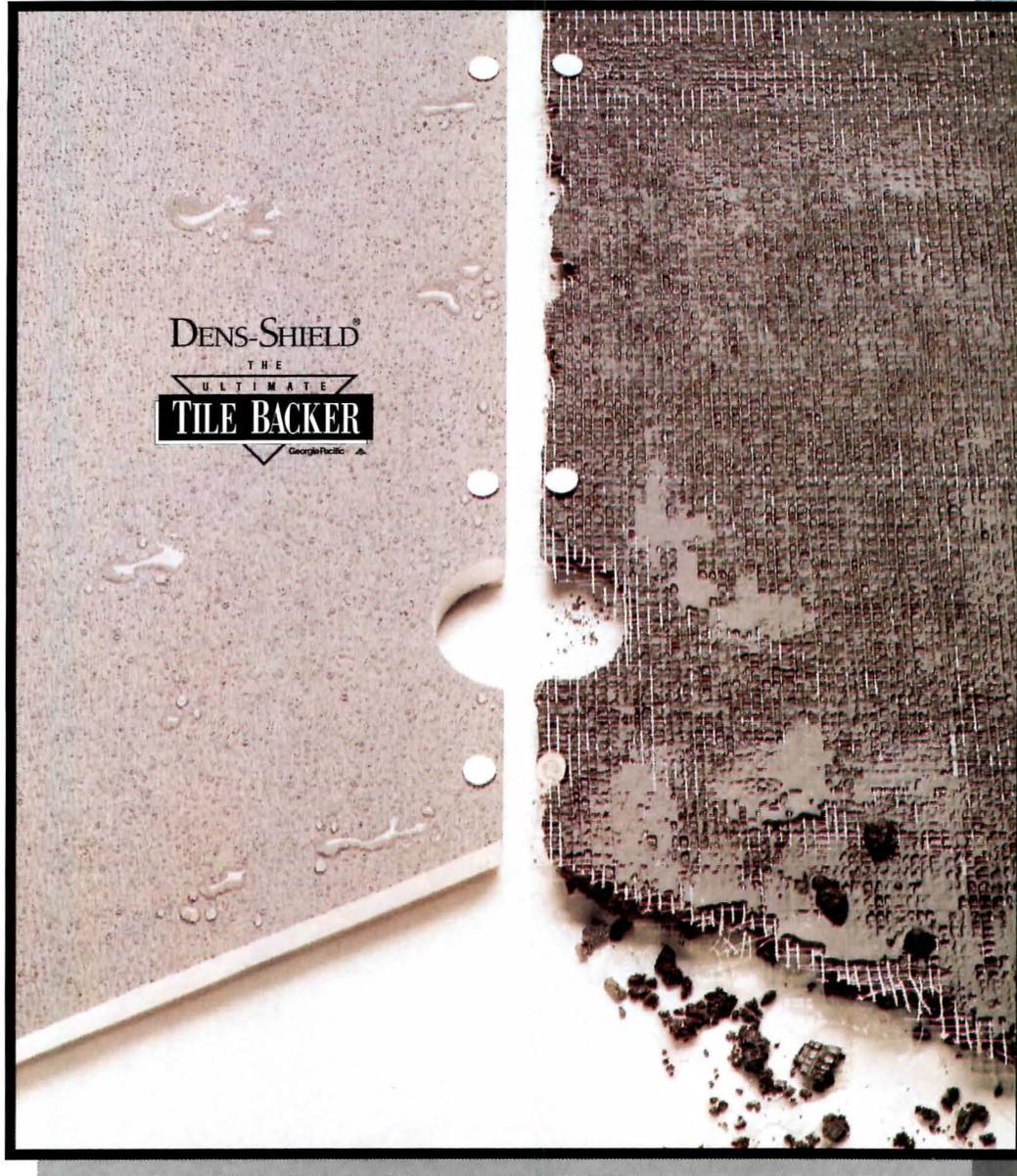
both indoor and outdoor use. Each electrically controlled model contains an advanced programmable logic

controller board (PLC) that rapidly processes information to catch and interrupt functions for a high-speed response. The system is also available with the added security of metal detection. 717/295-2900. Philips Communication & Security Systems, Inc., Lancaster, Pa.

CIRCLE 227

The best, high performance tile backer board on the market

is Dens-Shield® the Ultimate Tile Backer from Georgia-Pacific. It installs as easily as greenboard and outperforms heavy, hard to work with cement board. Plus, Dens-Shield features a built-in surface coating that stops water at the surface, protecting the wall cavity and tile installation. Our 5/8" Dens-Shield is the only backer board that's both fire- and water-resistant and meets ASTM C1178 criteria. And, Dens-Shield is backed by a 20-year limited warranty*. For tile and non-tile, wet and high humidity installations specify Dens-Shield, the Ultimate Tile Backer.



WANT A TILE BACKER THAT PROTECTS YOUR WALL SYSTEM FROM MOISTURE RELATED PROBLEMS, WHILE MEETING YOUR FIRE RATED SYSTEM NEEDS?

NOT A PROBLEM.

Dens-Shield®
The Ultimate
Tile Backer

Proprietary lightweight treated, water-resistant core - for added protection

Embedded glass mat adds strength

Heat cured acrylic coating. Stops water at the surface, protecting the tile installation and wall cavity

**SOLVE IT
WITH G-PSM**

1-800-BUILD G-P
For technical information
call 1-800-225-6119
<http://www.gp.com>

CIRCLE 78 ON INQUIRY CARD

G-P Dens-Shield:
Performance cement board
and greenboard
can't touch.


Georgia-Pacific

DENS-SHIELD is a registered trademark and SOLVE IT WITH G-P is a servicemark of Georgia-Pacific Corporation. ©1999 Georgia-Pacific Corporation. All rights reserved.
*See Warranty for details.

Perfection in Grout

To create your own Masterpiece you need a great design, the finest materials, and the expertise that only LATICRETE can offer! Our extraordinary grout colors will create a lasting impression.

- **LATAPOXY[®] Stainless Epoxy Grouts** never need sealing, clean up with water, and are stain and chemical resistant.
- **LATICRETE[®] Cementious Grouts** are hard and durable, job-proven and worry free, the industrial standard.
- **LATICRETE[®] Tri-Poly Fortified Grouts** just mix with water, the only polymer fortified grout worthy of the LATICRETE name.

Make the LATICRETE "Renaissance of Color" a part of your next Masterpiece.

Call 1 (800) 243-4788,
Ext. 265 for your
1999 Grout Color
Chart.



LATICRETE INTERNATIONAL, INC. • 1 LATICRETE PARK NORTH, BETHANY, CT 06524-3423 • 800-243-4788 • www.laticrete.com

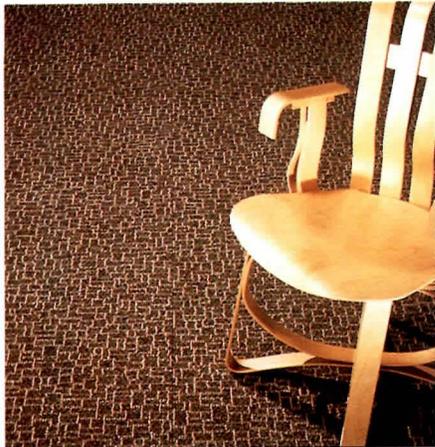
Ballroom of Radisson Hotel, St. Paul, Minnesota • Waterjet design & fabrication by Creative Edge Corporation, Fairfield, Iowa

CIRCLE 79 ON INQUIRY CARD

Products Briefs

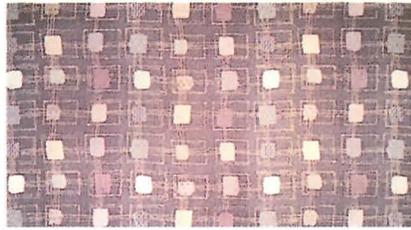
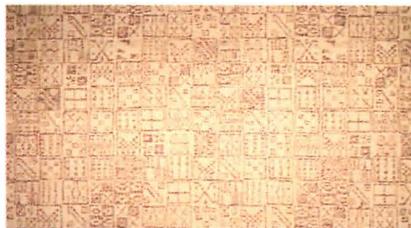
▼ Coordinating carpet

Among other applications, the small-scale *random grid* pattern of Collins & Aikman's Wayfarer could be used for the lounges, retail areas, and corporate meeting rooms of a hotel. Wayfarer is made on an Accuweave Patterned Loop tufting machine, using 100 percent solution-dyed nylon. As with all Collins & Aikman products, it features the patented ER3 backing made from 100 percent reclaimed carpet. 706/259-9711. Collins & Aikman Floorcoverings Inc., Dalton, Ga. **CIRCLE 246**



◀ Classy coverings

Scalamandré Contract includes a range of historic, classic, and contemporary themed upholstery for the contract and hospitality markets. Shown here are Inca, a nylon/polyester mix inspired by the designs for "cumbi," the finest fabrics reserved for the privileged individuals of the Inca, and Transistor Radio, a rayon/polyester mix. 718/361-8500. Scalamandré, Long Island City, N.Y. **CIRCLE 247**



► Luxury boutique hotel collection

Donghia has introduced Donghia Studio, a new division to address the new breed of luxury hotels, clubs, and restaurants. Three new collections, Destination, Venture, and Travellers, offer well-tailored upholstery and maple or beech casegoods. The universal pieces in the collections currently consist of a media cabinet to house a television, music equipment, a refrigerator and bar, and a storage trunk that can be used as seating or at the foot of the bed. Each Donghia Studio piece is available in



custom dimensions and finishes and with custom hardware. 212/925-2777. Donghia, New York City. **CIRCLE 249**

▼ Good room service

DesignTex Hospitality, a new division of DesignTex, is aimed at the hotel, restaurant, and cruise-ship design field. The first collection, New Arrivals, offers residential-colored tapestries, damasks, chenilles, velvets, matelasses, pocketweaves, and repp weaves. Five more collections in the works for this year will focus on specific hospitality needs. 800/221-1540. DesignTex Hospitality, New York City. **CIRCLE 248**



▲ Sunshade to go

The La Playa beach umbrella is lightweight, crafted of Jarrah wood, and has a two-part center pole designed for quick and easy on-site assembly. With its own carrying case—making it easy to transport from cabana to surfside—La Playa is ideal for hospitality applications. 800/919-9464. Santa Barbara Designs, Santa Barbara, Calif. **CIRCLE 250**



◀ One tough character

Armadillo, a new wall-covering line from England's Anaglypta, consists of four paintable, textured patterns, from checks and weaves to natural plaster and wood effects. If accidentally flattened, the patterns spring back to their original shape, making them ideal for high-traffic areas in offices, hotels, and restaurants. 800/422-2099. Crown Corporation, Denver. **CIRCLE 251**

► Entertaining table

The Bistro collection provides a range of upholstered pull-up, stackable, and nonstackable seating and occasional tables. Bistro is durable enough for commercial lounges, cafes, hospitality suites, and corporate dining and training rooms. Durable solid-core Trespa tabletops provide a moisture-resistant, easy-to-clean surface ideal for hospitality applications. 888/289-4724. Grahl Industries Inc., Coldwater, Mich. **CIRCLE 252**



Product Briefs



▲ Express it naturally

Pergo introduces its new vintage wood collection and stone designs within its Pergo Original line, as well as a new concept in laminate flooring, called Pergo Expression. Pergo Expression works

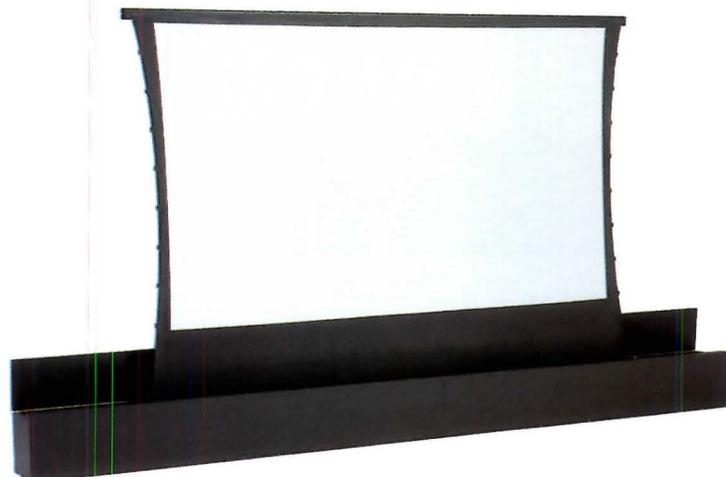


alone or with Pergo Select to create borders or unique patterns. The new Pergo Expressions concept includes Aurora (above), a combination of leather and slate textures with a mix of strong colors; the Asian influenced Kanji (left), painted on textured paper with natural Walnut pigment; and Papyrus, an abstract birch-look, painted and textured on a Japanese paper. 800/33-PERGO. Perstorp Flooring Inc., Horsham, Pa. **CIRCLE 253**

▼ Ascending screen

Da-Lite Screen Company has expanded its electric-screen product line with the Ascender Electrol screen. Designed for a recessed, concealed floor-mount installation or for a decorative surround installation, the Ascender Electrol provides the solution for environments where mounting a traditional ceiling or fixed wall screen is not practical. The

screen features Da-Lite's patented in-the-roller motor mounting system. A motorized spring-assisted scissors mechanism raises the screen surface while ensuring a quiet, uniform performance. A trapdoor housing features a safety device that prevents the screen surface from rising if obstructed. 800/622-3737. Da-Lite Screen Company Inc., Warsaw, Ind. **CIRCLE 254**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



The Architect's Advantage

A TECTUM roof deck can support a lot. Like your reputation.

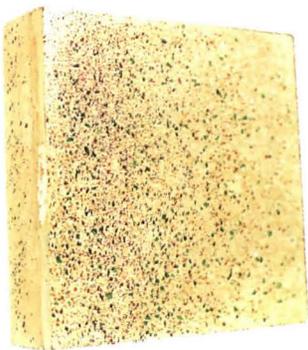
Your reputation has been built by delivering the best in commercial design. What if you could deliver a roof deck system that would pay back your client multiple times over the life of the project – from fast and easy installation through years of attractive, noise and abuse-resistant space? In thousands of school and civic applications, TECTUM® Roof Deck Systems are chosen for superior field performance. TECTUM III, for example, offers all-in-one excellence. A nailable surface. Superior DowST insulation. A decorative and durable acoustical ceiling.

For the right system to support your quality reputation, call toll free **1-888-977-9691**.



P.O. Box 3002
Newark, OH 43058-3002

Product Briefs



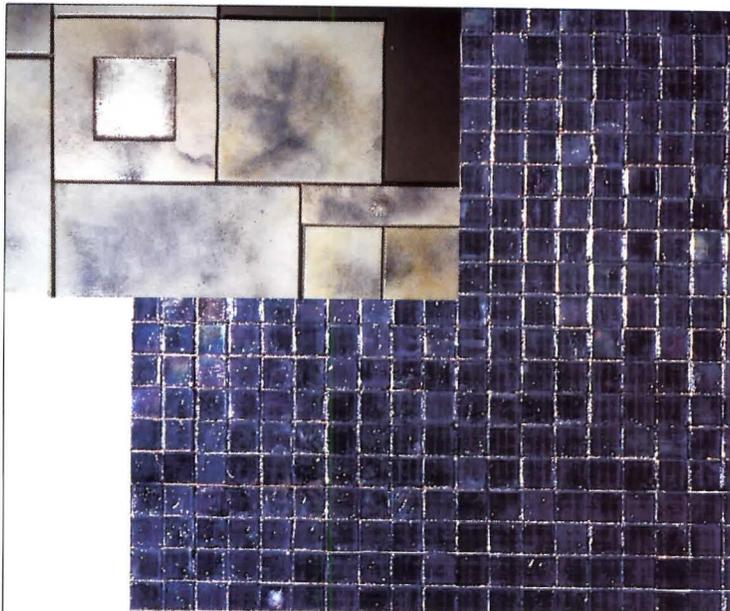
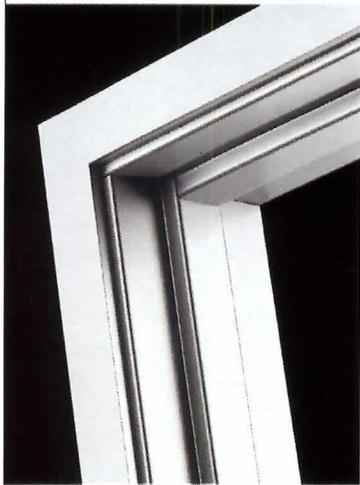
▲ Better the second time

Echo Environmental has established an agreement with Columbia University to market and sublicense technologies that use recyclable products for building and construction materials. A new material brings together the versatility of concrete and the aesthetic qualities of colored glass, as seen in this glass concrete tile. 212/363-8181. Echo Environmental Inc., New York City. **CIRCLE 255**

▼ Colorful door frames

Alumatone, the latest addition to Timely's inventory of colors, provides the look of clear anodized aluminum in a prefinished-steel door frame. Specifiers can now coordinate clear, anodized exterior aluminum windows with color-matching door frames from Timely. Timely steel frames will meet code requirements, including full 90-minute fire ratings. 818/896-3094. Timely, Pacoima, Calif.

CIRCLE 256



▲ Trendy tiles

Several ceramic tile trends emerged at the CERSAIE tile and bathroom exhibition, held in Bologna last October. The 106,000 visitors who made the trip saw tile in modular rectangles, cut-out geometrics, terrazzo, textile textures, metal and glass, surface relief, and various

stone looks. Fire, from Maestri Maiolicari, is shown above in a steely blue with gray inserts framed in borders. Sisis introduced Iridium (shown below), a series of iridescent glass tiles in 41 luminous colors. 212/980-1500. Italian Trade Commission, Ceramic Tile Department, New York City. **CIRCLE 257**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

*If you envision the beauty of patina in 25 years,
EverGreen® has it today.*



Pre-patinated copper by Revere: Proven across America.

With Revere *EverGreen* pre-patinated architectural copper, you can visualize the warm elegance of patina – and realize it immediately. Wherever your imagination takes you, from rooftops to vertical applications, *EverGreen* adds distinctive character and charm.

Quickly matures after atmospheric exposure. Don't wait any longer; call for details today.

Revere Copper Products, Inc.
One Revere Park
Rome, NY 13440-5561
800-448-1776
Fax: 315-338-2105
www.reverecopper.com



EverGreen is a registered trademark of Revere Copper Products, Inc.

Malden Mills
Laurence, MA

CIRCLE 81 ON INQUIRY CARD

Product Briefs

▼ Make a clear impression

Because of its ability to capture continuous-tone photographic art in glass, Cesar Color's GlassFresco process has been used by artist Mariko Mori to produce her internationally acclaimed work (*Burning Desire* shown). Through its patented process, Cesar Color can

recreate virtually any type of image or artwork on a special plastic interlayer permanently bonded between two lights of safety glass. Other technologies from Cesar Color include ImpressionGlass, which adds three-dimensional texture to the surface to create customized embossed glass patterns, and ChromaFusion, which manipulates the translucence of glass in either solid or patterned applications. 800/275-7272. Cesar Color Inc., Phoenix. **CIRCLE 258**



◀ Decorating with metal

Decorated or textured sheet metal in stainless steel, brass, or aluminum can be used on hotel lobby walls and elevator door facings as an alternative to expensive veneers and granites. Installation is relatively easy: paint, wallpaper, and dry-wall do not need to be removed in most cases, and old elevator doors and frames do not need to be dismantled, because new metal facings and jambs are simply adhered over the old. 877/626-2596. SD+T Marketing, Miami. **CIRCLE 260**

► Starting switches

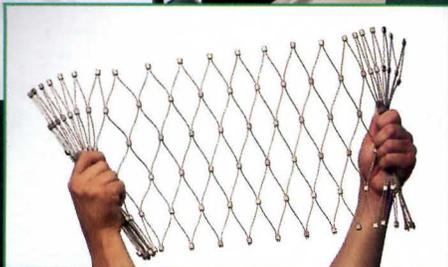
A new line of Industrial AC motor-starting switches provide positive On/Off control for a variety of horsepower-rated motor loads and other general purpose loads. These devices provide switching control for a variety of inductive and resistive loads in industrial applications, including conveyor lines, air compressors, HVAC, and large fans. 800/323-8920. Leviton Manufacturing Co. Inc., Little Neck, N.Y. **CIRCLE 259**



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info



© Photo by Lynn Massimo
MTV, New York, NY
Architect, Guenther Petrarca



Stay flexible.

X-TEND®

The flexible cable net for indoor and outdoor use.

- Perfect for your most challenging balustrade designs.
- Meets all current local and national codes.
- Beautiful and maintenance-free alternative to glass.
- Quick and easy to install.
- Design assistance available.

Call or e-mail us for more information
or visit our website.

D É C O R
C A B L E
I N N O V A T I O N S



660 W. Randolph Street
Chicago, Illinois 60661
Telephone: 312-474-1100
1-800-444-6271
Fax: 312-474-1789
Web: www.decorable.com
Email: sales@decorable.com

Product Briefs

▼ Sound good, look good

Owens Corning's SelectSound acoustical system can be used to create the ideal listening environment for homeowners. SelectSound components include speaker wells, diffusers, a retaining system, and fabrics (shown). The fabric is made-to-order with sewn seams for a customized finish. A large selection of colors and styles are available. 800/GET-PINK. Owens Corning, Toledo. **CIRCLE 261**



▲ Sculptural furnishings

Sculptor and artist Michael Gutzwiller designs custom metal furniture, including nightstands, beds, dressers, desks, and tables. The artist's work has been featured in a number of exhibitions and solo shows, and his commissions include an aluminum time capsule for the Western Reserve Historical Society in Cleveland and a metal globe stand for the Cleveland Main Library. Smaller pieces take 3 to 4



weeks to complete, larger ones take 4 to 5 weeks, and bedroom take 8 to 12 weeks from delivery of material. 970/407-8277. Gutzwiller Originals, Fort Collins, Colo.

CIRCLE 263



► Recycled ramping system

Made of 100 percent recycled rubber, the EZ Edge modular ramping system can be applied with silicone adhesive to concrete, tile, marble, glass, wood (including painted surfaces), and natural and synthetic fibers. The modular ramping system features a slip-resistant, speckled black surface that alerts pedestrians of an immediate vertical rise. 800/497-2003. The Access Store, Chico, Calif. **CIRCLE 262**

For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

Still struggling with design-build RFPs and proposals?

Uncoil your design-build RFPs and proposals; organize them with UniFormat. Break free of treacherous language when you craft these documents using our master database of pre-formulated, easy-to-edit performance statements. Avoid legal entanglement—clear criteria backed by hard numbers and phased substantiation produce an understandable and enforceable design-build contract.

PerSpective™

The Performance System for Project Teams

A CSI/DBIA JOINT VENTURE PRODUCT

For your 30-day free trial of PerSpective™,
call toll-free **1.877.893.0896**

www.PerSpectiveNet.com

CD runs on Microsoft®
Windows 95, 98, or NT



The Construction
Specifications
Institute

DBIA



DESIGN-BUILD
INSTITUTE OF AMERICA

CIRCLE 83 ON INQUIRY CARD

TWO WRONGS...



ONE RIGHT



Nothing equals the performance of Mortar Net™. Nothing.

Not straight strips and not pea gravel.

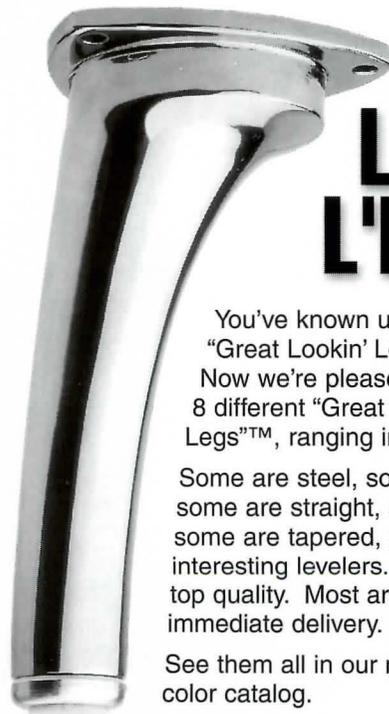
Only Mortar Net's patented dovetail design breaks mortar into clumps on two surfaces so water always has an unobstructed path to the weep holes. Straight strips and pea gravel just raise the mortar dam. And that can inhibit water flow and potentially dam up the cavity entirely.

So don't be fooled by cheap imitations. For trouble-free cavity walls that last a lifetime, specify Mortar Net every time.

For more information, call 800-664-6638
or visit our Web Site at www.mortarnet.com

Strait strip products and pea gravel do not effectively break up mortar into clumps on two surfaces like Mortar Net's patented dovetail shape.

CIRCLE 84 ON INQUIRY CARD



GREAT LOOKIN' L'IL LEGS

You've known us for our 27" to 34" "Great Lookin' Legs"™ for years. Now we're pleased to offer you 8 different "Great Lookin' L'il Legs"™, ranging in size from 4" to 6".

Some are steel, some are aluminum, some are straight, some are curved, some are tapered, some have interesting levelers. All are our usual top quality. Most are in stock for immediate delivery.

See them all in our new 124 page full color catalog.

Doug Mockett & Company, Inc.

P.O. Box 3333 • Manhattan Beach, CA 90266

☎ (800) 523-1269 • FAX (800) 235-7743

E-mail: info@mockett.com

"Fine Architectural Hardware For Your Fine Furniture"™SM

CIRCLE 85 ON INQUIRY CARD

Product Literature

NEW SITES FOR CYBERSURFING

American Standard has enhanced its site www.americanstandard-us.com



Commercial door-opening product library www.essexopenings.com

Playful home furnishings and accessories www.girthdesign.com

Crestline has redesigned its site www.crestlinewindows.com

Window/door installation and accessory details added to site www.traco.com

Desk-system details

A new 20-page brochure illustrates the full line of Brisk modular desk components. 800/444-8812. Geiger Brickel, Atlanta. CIRCLE 228

Commercial flooring catalogue

Art in Structure is a 28-page catalogue published by Tarkett to showcase its ColorWorks system of commercial sheet flooring and floor tile. 800/225-6500. Tarkett Inc., Whitehall, Pa. CIRCLE 229

Ceramic tile from A to Z

Assopiastrelle, the Association of Italian Ceramic Tile Manufacturers, has produced the pocket-sized *Italian Ceramic Tile Dictionary* as a guide to the most common terms used in the ceramic tile trade. 212/980-1500. Italian Trade Commission, Ceramic Tile Department, New York City. CIRCLE 230

Enhanced CD-ROM

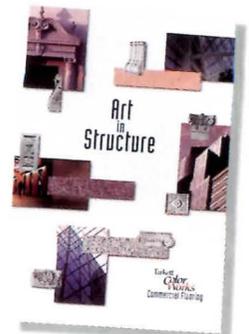
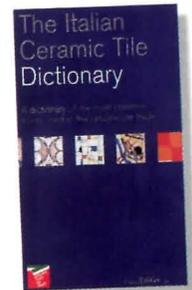
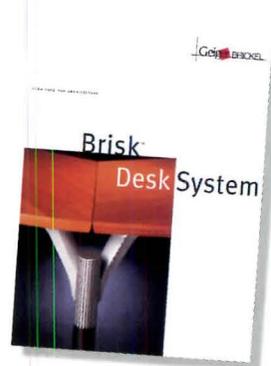
A new architectural CD-ROM contains architectural specifications for Hurd aluminum-clad and primed-wood windows and patio doors. 800/2BE-HURD. Hurd Millwork Company Inc., Medford, Wis. CIRCLE 231

Metal product catalogue

Custom Panel Industries has published a new general catalogue describing the company's comprehensive line of metal roofing and wall systems and other formed metal products for commercial, industrial, institutional, and agricultural applications. 909/829-8618. Custom Panel Industries LLC, Fontana, Calif. CIRCLE 232

EIFS on CD-ROM

Parex has launched a CD-ROM designed to put the company's entire EIFS product line on the desktop for easy reference. 770/482-7872. Parex Inc., Redan, Ga. CIRCLE 233



For more information, circle item numbers on Reader Service Card or go to www.architecturalrecord.com Advertiser & Product Info

Product Literature

Technical manual for panels

Centria's Formawall Dimension Series Design Manual contains technical data sheets and horizontal, vertical, and profile application details. 412/299-8000. Centria Architectural Systems, Moon Township, Pa. **CIRCLE 234**

Bath solutions

Duschqueen's new literature features its all new line of solid brass-framed shower enclosures along with its frameless glass enclosures. 800/348-8080. Duschqueen Inc., Wyckoff, N.J. **CIRCLE 235**

Hurricane shingle brochure

A new brochure highlights the features and colors of the Stormfighter AR shingle for hurricane regions. 800/641-4691. Tamko Roofing Products Inc., Joplin, Mo. **CIRCLE 236**

Window solutions brochure

A new Wausau Window and Wall Systems brochure includes case studies and information on aluminum windows and curtain-wall systems suitable for both new construction and renovations. 877/678-2983. Wausau Window and Wall Systems, Wausau, Wis. **CIRCLE 237**

Awning and umbrella fabrics

Glen Raven Custom Fabrics brochure highlights new additions to its Sunbrella line of awning and umbrella fabrics for the 2000-01 season. 336/227-6211. Glen Raven Custom Fabrics, Glen Raven, N.C. **CIRCLE 238**

Carpet selection CD

Lees has updated its Thought Patterns CD-ROM and catalogue to let designers see patterns and colorways, which can also be printed for colorboards and presentations. 336/379-2000. Lees, Greensboro, N.C. **CIRCLE 239**

Lighting basics brochure

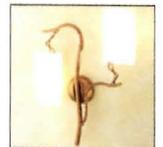
Holophane's 24-page brochure provides information on lighting basics, light sources/lamp characteristics, photometry, calculations, and lighting quality. 740/349-4130. Holophane Corporation, Newark, Ohio. **CIRCLE 240**

Decorative glass for doors

ODL offers a comprehensive 44-page 2,000 product catalogue featuring dozens of glass options for doorlights, sidelights, and transoms. ODL offers seven series of products for the residential market in the new catalogue. 800/253-3900. ODL, Zeeland, Mich. **CIRCLE 241**



over 5000 lighting products from which to choose



the designer brands you know



online tools designed specifically to meet your professional needs

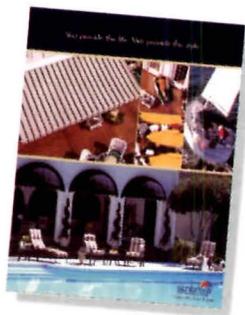


Selection • Services • Value

10% off next purchase.
Savings Code: 0200AR

"The Professional's Lighting Store"
LightingUniverse.com

888.404.2744
www.LightingUniverse.com



Show us One good example of a "good design" that met the bottom line.

Enter the Annual Business Week/Architectural Record Awards.

Clients and architects who collaborate to solve diverse business challenges should get what they deserve – an award of international standing. The Annual Business Week/Architectural Record Awards, sponsored by The American Institute of Architects, honors the achievement of business goals through architecture and distinguished collaboration between clients and architects.

Judges include major business leaders and renowned architects. Categories include interiors,

new construction or renovation projects with budgets ranging from under \$1 million to \$25 million plus. Award recipients are featured in both *Business Week* and *Architectural Record*, read by more than six million of the most influential people in business and design.

Get what you deserve. For registration information, call 888-242-4240. Outside the U.S., call 202-682-3205. Or go to www.aiaonline.com. Register by March 16, 2000. Submissions must be postmarked by April 18, 2000.

BusinessWeek

**ARCHITECTURAL
RECORD**



THE AMERICAN INSTITUTE OF ARCHITECTS

Dates & Events

Calendar

San Francisco: Work by Steven Holl

San Francisco
Through February 20
On display are the architect's models, photo collages, and drawings visualizing the imposition of form on urban landscape. San Francisco Museum of Modern Art. 415/357-4000.

Montreal: Eric Price: Mean Time

Montreal
Through February 27
The exhibition are the often humorous built projects of English architect Eric Price, who explores how architecture can adapt itself to new uses over time. Canadian Centre for Architecture. 514/939-7000.

Chicago: Design from the Heartland

Chicago
Through February 27
The exhibition featuring the work of three pioneering industrial designers: Henry Glass (American Way furniture), John Polivka (equipment and graphics for Control Data Systems), and Richard Ten Eyck (Cessna aircraft and Vornado fans). Art Institute of Chicago. 312/443-3600.

W. Godwin: Aesthetic Movement Architect and Designer

New York City
Through February 27
The first U.S. exhibition devoted to the work of this 19th-century British polymath; Godwin was an accomplished architect, designer, interior decorator, antiquary, theatrical producer, and critic. Bard Graduate Center for Studies in the Decorative Arts. 212/501-3072.

Chicago: The End of the Century: 100 Years of Architecture

Chicago
Through March 12

A traveling multimedia exhibition highlighting major trends in 20th-century architecture. Museum of Contemporary Art. 312/280-2660.

The Pritzker Architecture Prize 1979-1999

Pittsburgh
Through February 27
An exhibition highlighting a single, signature project for each of the 22 Pritzker laureates. Carnegie Museum of Art. 412/622-5551.

ModernStarts: Places

New York City
Through March 14
An exhibition demonstrating how particular spaces, real and imagined, urban and rural, were conceived and represented by artists between 1880 and 1920. Museum of Modern Art. 212/708-9750.

The Architecture and History of the Garment District

New York City
Through March 15
An exhibit on the loft buildings of this industrial neighborhood in the heart of Manhattan, presented in conjunction with a lecture series and walking tours. The Urban Center. 212/935-3960.

A Century of Design, Part I: 1900-1925

New York City
Through March 26
The first in a series of exhibitions surveying 20th-century design of furniture, metalwork, glass, ceramics, textiles, jewelry, and drawings. The Metropolitan Museum of Art. 212/535-7710.

Triumphs of the Baroque

Montreal
Through April 9
An exhibition of European architecture from 1600-1750, highlighted by 30 large-scale architectural models.

The Montreal Museum of Fine Arts. 514/285-1600.

En chantier: The Collections of the CCA, 1989-1999

Montreal
Through April 30
Celebrating its 10th anniversary, the CCA displays the best of its collection of architectural drawings, renderings, models, and photographs. Canadian Centre for Architecture. 514/939-7000.

See the U.S.A.: Automobile Travel and the American Landscape

Washington, D.C.
Through May 7
This exhibition celebrates roadside architecture and the culture of the automobile, featuring photographs by John Margolies, author of 10 books on the subject. National Building Museum. 202/272-2448.

The Corner Store

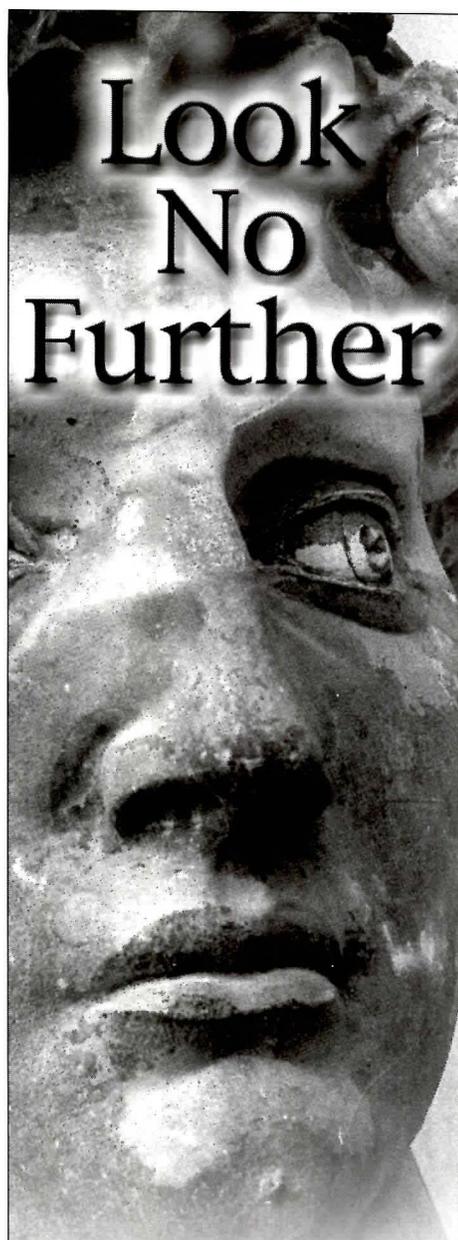
Washington, D.C.
Through March 6
An exhibit tracing the history and cultural impact of a vanishing American typology: the local grocery. National Building Museum. 202/272-2448.

Ralph Rapson: Sixty Years of Modernism

Washington, D.C.
Through May 28
The first comprehensive exhibition of the work of this prominent Midwestern modernist, whose achievements encompass the realms of architecture, furniture design, and urban planning. The Octagon. 202/638-3221.

Material Evidence: Chicago Architecture at 2000

Chicago
Through March 5
Guest-curated by Cynthia



THE SINGLE SOURCE OF
INFORMATION FOR THE
WORLD'S FINEST STONE

WWW.
marblefromitaly
.com

Offers stone ASTM, online
directory, FREE Buyers Guide
& MARMORA books



Italian Trade Commission
1801 Ave. of the Stars, Suite 700
Los Angeles, California 90067
Phone 323 879 0950 Fax 310 203 8335

CIRCLE 87 ON INQUIRY CARD

Dates & Events

Davidson, this exhibition investigates how the use of materials drives contemporary Chicago architecture. Featured architects include Ron Krueck, Obi Mwazota, Carol Ross Barney, and Joe Valerio. Also on display are commissioned installations by Sarah Dunn/Martin Felson, Studio Gang/O'Donnell, Doug Garofalo, and Helmut Jahn. Museum of Contemporary Art. 312/280-2660.

AGC Super Conference Dallas

February 9-11
Associated General Contractors' annual conference covering matters related to construction project delivery. Westin Galleria. Call 703/548-3118 for information, or visit www.agc.org.

Security in the Civic Realm New York City

February 12
The New York chapter of the AIA is sponsoring this conference, exploring how public institutions should be designed for security. To register for the conference, call Michelle Livingston at 212/683-0023 x17. Foley Square Courthouse.

Water Sensitive Ecological Planning and Design Cambridge, Mass.

February 25-26
An international symposium that explores promising procedures, options, and limitations in water management. Part of Harvard's lecture and exhibition series, "100 Years of Landscape Architecture." Harvard Design School. 617/496-0436.

Frank Lloyd Wright: Windows of the Darwin D. Martin House Washington, D.C.

February 18-August 20
An exhibition of art-glass windows, doors, and skylights that Wright cre-

ated for the house. National Building Museum. 202/272-2448.

Restoration & Renovation Boston

February 27-29
A tradeshow and conference dedicated to architectural rehabilitation, cultural landscape preservation, collections care, and historically inspired new construction. Hynes Convention Center. 800/982-6247.

Harvard Asia Design Conference Cambridge, Mass.

March 9-11
This conference will explore Modernism's inroads into Asia. Call 617/621-9963 or visit gsd.harvard.edu/asiagsd for more information.

Urban Wilderness—Chaos Transformed: Photographs by Irving Greines Washington, D.C.

Through March 21
This California photographer takes on the streets of Manhattan, focusing on the ephemeral nature of the urban landscape. AIA Headquarters Gallery. 202/638-3221.

Competitions

Young Architects Forum: Second Nature

Submission deadline: February 18
Sponsored by the Architectural League of New York, this ideas competition is open to architects who have graduated from architecture programs within the last 10 years. Winners receive a cash prize and are invited to exhibit their work and present lectures in May and June. For an entry form, call 212/753-1722.

New York State Architecture, Planning, and Design Grants

Application deadline: March 1
Architects, planners, designers, and scholars who are residents of New York State can apply for \$10,000 grants for projects that contribute to the public's understanding of the designed environment. Call 212/387-7157 or E-mail

mwinder@nysca.org.

Developments for Amphibious Living

*Application deadline: March 1;
submission deadline: April 1*
This ideas competition, sponsored by the soggy Dutch province of South Holland, is for designs that best show how living and working can take place in a watery environment. Entries will be made over the Internet, and all competition information can be found at www.amfibischwonen.nl.

Plan: Section

Submission deadline: March 2
Arcade magazine is sponsoring an easy-to-enter competition: submit one plan, one section, and one sentence about a completed, in-process, or speculative building. E-mail arcade00@msn.com for a full prospectus, which will be available January 12.

Business Week/Architectural Record Awards

*Registration deadline: March 16;
submission deadline: April 18*
This annual awards program recognizes distinguished collaboration between clients and architects to achieve strategic business goals. Entrants submit a mission statement and business plan describing how the project fits into an organization's overall goals. Also submitted are descriptions of both the process of design and how the project resulted in business success, including measurements of results where available. Eligible are public- and private-sector projects of any budget, both new construction and renovations, completed anywhere in the world since January 1, 1997. Winners will be featured in fall issues of Business Week and record. To register, call 888/242-4240, or visit www.architecturalrecord.com.

DuPont Benedictus Awards

*Submission deadlines: March 6
(professional architects); March 24
(students)*
This international awards program,

open to professional architects and students from any country, recognizes the use of laminated glass in commercial and residential projects. Winning architects receive a sculpture by glass artist Hans Fräbel; winning students receive cash awards for their programs. Entry forms are available from the AIA and the UIA and can be downloaded from www.e-architect.com/pia. For inquiries, call E. Jackson Jr. at the AIA, 202/626-7446, or Joanna Hanes-Lahr at the DuPont Benedictus Awards, 202/393-5247.

AIA Young Architects Forum/Germantown, Pa., Habitat Competition

Submission deadline: April 1
This design competition coincides with the 2000 AIA convention in Philadelphia. "Building Livable Communities" asks entrants to design an urban rowhouse prototype for Germantown, Pa. The competition is open to young architects (licensed 10 years or fewer), architectural interns, and students. E-mail mottc@aiaemail.aia.org.

Martin Luther King, Jr. National Memorial

*Registration deadline: April 1; sub-
mission deadline: May 1*
Entrants in this international competition to design the King memorial for its site on Washington's Tidal Basin, are asked to embody "the man, the movement, and the message." Anyone can enter; interdisciplinary teams are encouraged. To register, send a check for \$75 accompanied by a letter listing the entrant's address, phone number, and E-mail address. Checks should be made out to "M.L. King Jr. National Memorial" and sent to Dr. E. Jackson Jr., Design Committee, Martin Luther King Memorial Project Foundation, Dept. 211, Washington, D.C., 20055. Visit cluser1.bellsouthonline.com/mlk to know more. ■

Please submit information for the calendar to jessica_dheere@mcgraw-hill.com at least six weeks before the magazine's publication date (February 15 for the April issue).

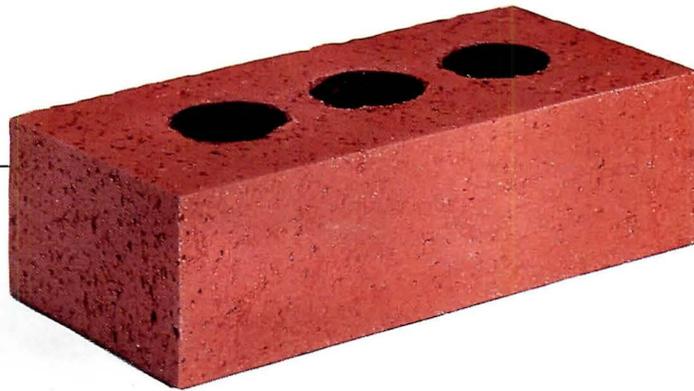
Sixty second guide to Belden Brick:

COLORS



Belden Brick is made in over 116 colors that include 2 choices in black, 28 browns, 7 tans, 8 buffs, 3 creams, 8 grays, 16 pinks, 26 reds, and 8 whites. In addition, it is made in 12 different textures, although not all our brick is made in the same range of textures.

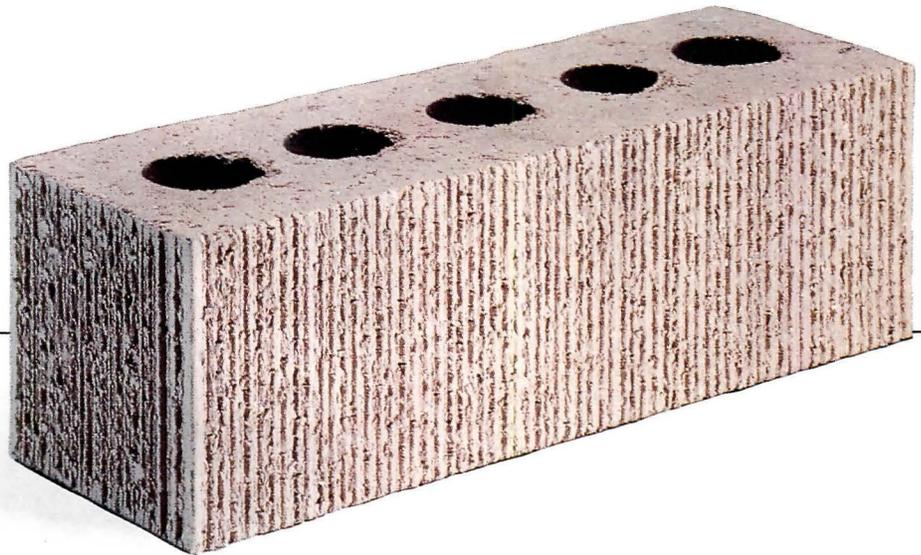
Belden also offers a choice of extruded brick or molded brick (with the character of hand-made brick.) Each category includes a wide range of colors and textures providing more than adequate design latitude.



SIZES



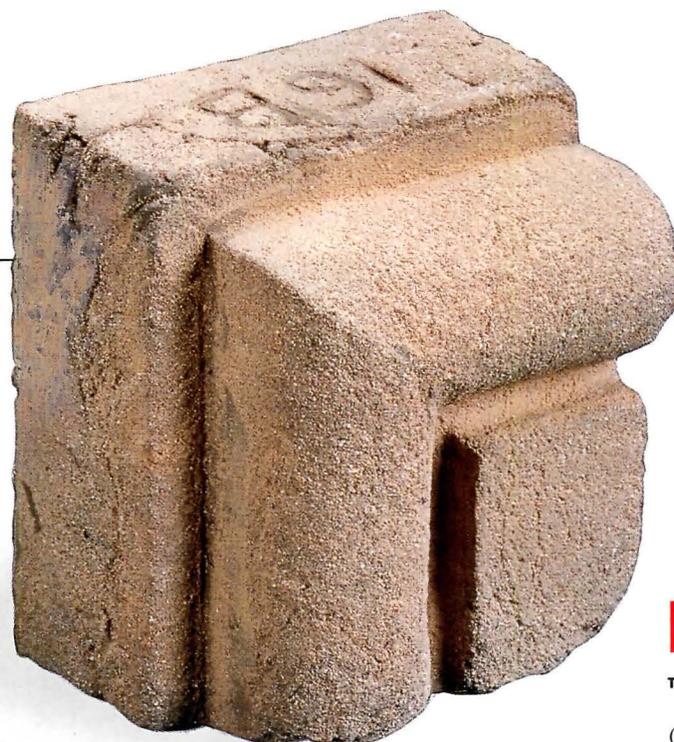
Belden Brick is predominantly made in thirteen different sizes, representing the spectrum of Belden Brick colors and textures. Your design opportunities are broadened by the availability of virtually every Belden Brick color choice as pavers.



SHAPES



We've made hundreds of different shapes to provide special structure details, and a week seldom passes without our custom-making a new special shape to meet individual design requirements. If you need an "impossible" special shape to complement the brick structure you're planning, call Belden. We've seen the impossible become reality.



CIRCLE 88 ON INQUIRY CARD

BELDEN

THE BELDEN BRICK COMPANY

(330) 456-0031
An ISO 9002 Registered Company
Canton, Ohio 44701-0910



**AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION**

ANSWERS

Questions appear on page 134. To receive CES credits, fill in the education reporting form below or on our Web site (www.architecturalrecord.com).

1. The goal of each seismic device is to dissipate or absorb the force of the earthquake, decreasing the demand on the building structure and helping to keep it intact. What type of device is selected depends on the location of the project, design parameters, the owner's requirements, building codes, and costs. Basic code requirements say that a building must be intact enough to allow safe egress immediately following a quake. Among the systems represented, base isolators, paired with braces, shear walls, or dampers, are generally the most effective for preventing seismic damage. Shear walls alone, however, are most cost effective.
2. Shear walls may be added to an existing building or designed into a new one to add strength and stiffness. Normally made of reinforced concrete, they may be constructed from other materials as well. Shear walls are usually heaviest at the base, where seismic forces are strongest, and become thinner as they go up through the building. They are also one of the most cost-effective devices, though their thickness—often 12 to 18 inches or more—limits building design and eats up square footage.
3. Braced framing stretches diagonally from the beam and column

joints to create a triangulated vertical frame. Bracing limits building design because it requires consistent floor design so the braces can go through from top to bottom without interrupting the usage of space. If each floor is programmatically different, positioning the bracing is an architectural challenge. Bracing may be shaped in a variety of ways—x, v, and chevron shapes are among the most common.

4. There are four varieties of dampers: visco-elastic, friction, metallic, and viscous. Dampers soak up the energy of earthquake-induced motion, thereby limiting structural damage. They are also effective at stopping the swinging motion a building is prone to with earthquake vibrations. Directing the earthquake energy to the dampers stabilizes the structure; the piston component, common to all types of dampers, pumps back and forth, releasing the energy—often in the form of friction or heat.
5. Base isolators come in three varieties, high-damping rubber, lead-core rubber, and friction pendulum. All three have basically the same effect, allowing the building to move independently of the shifting ground. They perform differently, however. Rubber or elastomeric isolators are available in varying degrees of softness, which allow different levels of movement. These allow the building to move, but pull it back into place. Lead-core inserts in a rubber isolator absorb some of the seismic energy and force the isolator to snap back into place more quickly, bringing the building back to level. Friction pendulums consist of sliders that slip around on a concave, nonstick steel plate. They rely on the weight of the structure to recenter the building after an event. ■



AIA/CES EDUCATION REPORTING FORM

(Use to report learning unit hours earned for ARCHITECTURAL RECORD only.)

Member information:

Last Name First Name Middle Initial or Name

AIA ID Number

Program/project title: Architectural Record (02.00)

"Seismic Systems that Stand Up to Nature" [page 127]

Completion date (M/D/Y): _____ / _____ / _____

AIA/CES Credit: Each article or sponsored section will earn you one AIA/CES LU hour of health, safety, and welfare credit.

Fill in: _____ total LU hours.

Material resources used:

Journal article or sponsored section: This article or sponsored section addresses issues concerning the health, safety, or welfare of the public.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature Date

Send completed form to University of Oklahoma, Continuing Education, AIA/CES, Room B-4, 1700 Asp Avenue, Norman, OK 73072-6400; fax 405/325-6965. To respond by E-mail, visit www.architecturalrecord.com and click on Continuing Education. For more information, call 800/605-8229.

MUST ATTEND

CONVENTION
AIA
EXPO
2000
PHILADELPHIA

AIA 2000 NATIONAL CONVENTION AND EXPOSITION

MAY 4-6, 2000 • PHILADELPHIA, PA
PENNSYLVANIA CONVENTION CENTER

NEW CENTURY



NEW VISION

LIVABLE COMMUNITIES
FOR AMERICA'S FUTURE

VISIT AIA ONLINE AT WWW.AIAONLINE.COM FOR UP TO THE MINUTE
CONVENTION INFORMATION. FOR MORE INFORMATION CALL 617 859.4475. FAX
YOUR REQUEST TO 617 859.4354. EMAIL YOUR REQUEST TO AIAEXPO@HHCC.COM

C

CES Providers Award for Excellence



THE AIA/CES AWARD FOR EXCELLENCE HONORS REGISTERED PROVIDERS AND THEIR COMMITMENT TO QUALITY PROGRAMMING AND PROFESSIONAL DEVELOPMENT. THE JUDGING CRITERIA INVOLVED A DETAILED ANALYSIS OF THEIR EDUCATION PLANNING, DELIVERY, AND EVALUATION PROCESS. FROM A TOTAL OF SIX JUDGING CATEGORIES, THE FOLLOWING FOUR WINNERS WERE CHOSEN TO RECEIVE THE 1999 AWARD:

LARGE FIRM

Hellmuth Obata + Kassabaum, Inc.
Jerry Sincoff, FAIA, Chief Executive Officer and President
For information contact:
Marsha Littell, Dean, HOK University
211 North Broadway, Suite 900,
St. Louis, MO 63102
Phone: 314.421.2000 x2134 Fax: 314.421.2152
Email: marsha.littell@hok.com; www.hok.com

AIA CHAPTER/COMPONENT

AIA North Carolina
Timothy D. Kent, CAE
115 West Morgan Street
Raleigh, NC 27601
Phone: 919.833.6656
Fax: 919.833.2015
Email: aianc@interpath.com
www.aia-nc.org

EXTERNAL PROFESSIONAL PROVIDER

AccessibilityUSA
Robert V. Buck, AIA
13438 Bandera Road, Suite 104
Helotes, TX 78023
Phone: 800.279.2699
Fax: 210.695.5329
Email: mail@accessibility.com
www.accessibilityusa.com

EXTERNAL COMMERCIAL PROVIDER

Laticrete International
Karen A. Nordlum
91 Amity Road
Bethany, CT 06524
Phone: 800.243.4788 x239
Fax: 203.393.1948
Email: kanordlum@laticrete.com
www.laticrete.com



With generous support of W.P. Hickman Systems, Inc. and Architectural Record
AIA, CES, Thom Lowther, 202.626.7478; (fax) 202.626.7399; tlowther@aia.org; www.aiaonline.com

Applications



The new flush exit device is designed for use on TOTAL DOORS in single, pairs & double egress pairs. Ideal for corridor & elevator lobby applications in all commercial facilities. The exit device allows continuous, uninterrupted sight-lines in corridors when doors are pocketed in the open position. Its quiet operation is ideal anywhere noisy hardware is a problem. TOTAL DOORS can be retrofitted into existing door frames, saving time & expense.

Openings

CIRCLE 150 ON INQUIRY CARD

Concrete Waterproofing by Crystallization



Applied as a slurry coating Xypex is a chemical treatment that waterproofs by penetrating the concrete with a crystalline formation that "plugs" the pores of the structure preventing water seepage. Xypex is ideal for use on the "inside" of wet underground structures.

Xypex Chemical Co.

CIRCLE 151 ON INQUIRY CARD

Custom Metal Graphics

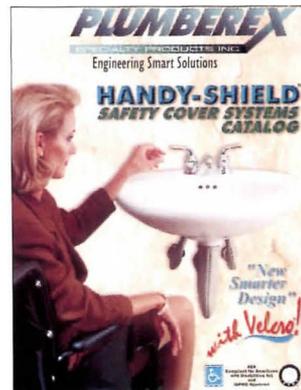


We make metal look beautiful! These custom brass elevator door facings with a "Celtic Knot" pattern have been finished with a multi-directional satin and nickel plated decoration. There is virtually no limit to the types of designs and patterns that can be created on most vertical surfaces with these processes. Visit us at www.sdtmarketing.com or call our in-house design team at 877-626-2591, fax: 305.856-1287.

SD+T Marketing Inc.

CIRCLE 152 ON INQUIRY CARD

ADA Insulation Safety Covers



Plumberex Specialty Products, Inc. is the only company that manufactures a complete line of ADA safety covers for commercial & residential applications, meeting all building & fire codes with a -0- smoke rating. The Handy- Shield™ Safety Cover is the one and only ADA safety cover on the market with a "Dual" fastening system to help deter theft! For more information call (800) 475-8629, Website: www.plumberex.com or email: plumberex@earthlink.net.

Plumberex Products, Inc.

CIRCLE 153 ON INQUIRY CARD

Three-Sided Fireplace for Unlimited Installations



Heat-N-Glo introduces model PIER-TRC, a three-sided direct vent fireplace that can be terminated vertically or horizontally to accommodate nearly any application. The PIER-TRC is perfect as a room divider, bar, end of counter or a wide variety of creative installation possibilities. As with all Heat-N-Glo fireplaces, the PIER-TRC can be operated by remote control for the ultimate in convenience. Call (888) 427-3973.

Heat-N-Glo

CIRCLE 154 ON INQUIRY CARD

Ornamental Picket Fence with a Purpose

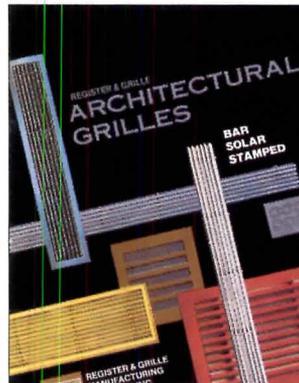


We have given special attention to each & every component of our fence. Every item is designed for strength, durability and low maintenance. No other company builds a complete fence - rail, rivets, brackets, pickets and posts, that are stronger, more durable, have more security or lower maintenance costs than our fences. Monumental Iron Works, 6500 Eastern Ave., Baltimore, MD 21224. Tel: (410) 633-6500, Fax: (800) 239-2963.

Monumental Iron Works

CIRCLE 155 ON INQUIRY CARD

Decorative Grilles

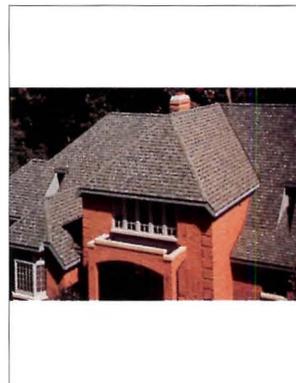


Unusual visual effects emerge when our grilles are designed for area effects. Versatility is the theme. R&G offers architects and interior designers many ways to express the changing forms of metal with the integrity of R&G's architectural grilles. Custom or standard finishes are available plus any grille can be made in matching color to blend with your deco. 202 Norman Ave., Bklyn, NY 11222. 800-521-4895, Fax: 718-349-2611.

Register & Grille Mfg., Co

CIRCLE 156 ON INQUIRY CARD

Grand Manor Shingle®

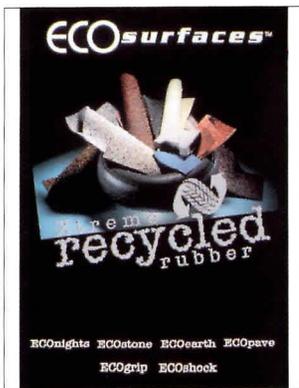


CertainTeed's Grand Manor Shingle® is a super heavy-weight shingle built on two full-size one-piece shingles with random 8" tabs applied on top. Patented shadow lines and a unique color palette give Grand Manor the look and depth of natural slate and wood. UL Class A. Lifetime limited, transferable warranty. Algae-resistant. UL Certified to meet ASTM D 3462.

CertainTeed Corporation

CIRCLE 157 ON INQUIRY CARD

**Dodge-Regupol
Launches ECOsurfaces™**

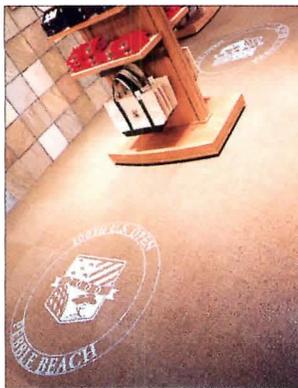


Dodge-Regupol (DRI), the world's largest converter of post-consumer tire rubber, launches Ecosurfaces™, xtreme recycled rubber™ flooring for both indoor & outdoor commercial applications. Not only environmentally sound, but also available in 38 vibrant colors, Ecosurfaces in rolls & tiles responds directly to designers' needs & their budget concerns. For a fresh new colorful way to create attractive environments, call Gerbert Ltd @ 1-877-Ecosurfaces (1-877-326-7873)

Gerbert Ltd

CIRCLE 158 ON INQUIRY CARD

**Graphic Projection
Systems**



DERKSEN (USA), INC. is the exclusive U.S. Distributor of Derksen Graphic Projection Systems. Project razor-sharp images, graphics or logos onto virtually any surface, indoors or outdoors. Images can be b/w or color, static or with motion. Contact us for free color literature or to discuss your specific applications at (916) 988-0390/ fax (916) 988-3575/ e-mail: inquiries@derksen.com website: www.derksen.com

DERKSEN (USA), INC.

CIRCLE 159 ON INQUIRY CARD

**Luxalon Wide
Panel Systems**



The revolutionary ceiling system offers nominal 12" (300mm) wide panels in lengths up to 19'0" creating a clean sophisticated, monolithic ceiling plane. Long spans are available with a soft beveled edge or a reveal edge. The system provides both acoustics and aesthetics with easily installed panels. Available in 8 finishes and 2 perforation patterns. For further information call 800-366-4327

Hunter Douglas

CIRCLE 160 ON INQUIRY CARD



The No 2006 is a Bauhaus handle based on a Walter Gropius design. Nanz manufactures this and a wide range of other levers, knobs, locks, hinges and cabinetry hardware. Fax a request for our free Product Selection Guide or our \$20 catalogue featuring this and over seventy other handles. phone 212 367 7000, fax 212 367 7375

Nanz Custom Hardware Inc

CIRCLE 161 ON INQUIRY CARD

**New Presage™
Whirlpool**

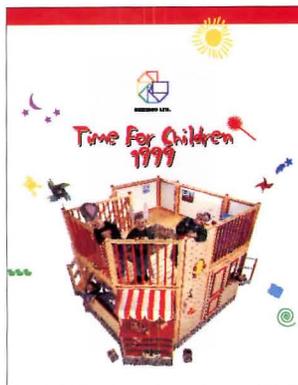


Designed for corner installations, the new Presage™ whirlpool bath by Jacuzzi Whirlpool Bath features ten adjustable jets. An ideal complement to the Presage, the Trivella™ Suite features a one-piece toilet with elongated rim and terraced tank lid as well as a pedestal lavatory. (800) 288-4002. www.jacuzzi.com.

Jacuzzi Whirlpool Bath

CIRCLE 162 ON INQUIRY CARD

**Unique Earlychildhood
Furniture**

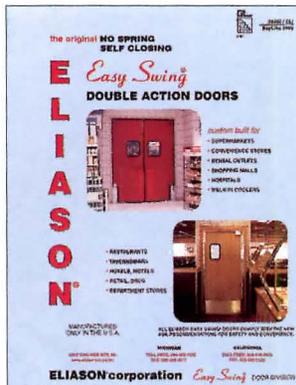


GRESSCO, Ltd introduces HABA® a new line of children's modular Loft furniture, shelving, platforms and room partitions in addition to our existing array of KinderSystem™ reading furniture. Now you can create a truly unique children's area in your hospital waiting room, daycare center, church or library. Call Gressco today for a FREE catalog at 1-800-345-3480, www.gresscoltd.com.

GRESSCO Ltd.

CIRCLE 163 ON INQUIRY CARD

Eliason Easy Swing Doors



Eliason double action doors are for use in all service, traffic and convenience doorways. Doors can be custom built to fit existing openings. Available in singles or pairs in a variety of sizes, styles and decor options. A light assist opens the doors and the closing action is positive and automatic. Doors are sold direct and a Price/Spec catalog will be sent no charge. Eliason Corporation, P.O. Box 2128, Kalamazoo, MI 49003. E-mail: doors@eliasoncorp.com

Eliason Corporation

CIRCLE 164 ON INQUIRY CARD

Columns and Balustrades

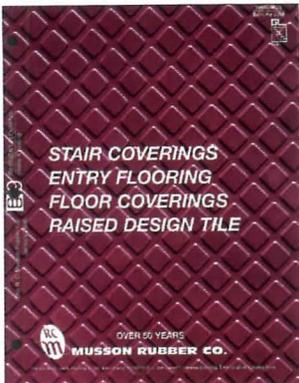


Melton Classics' complete line of columns and balustrades are classically authentic yet affordable priced. Enhance your next project with fiberglass, marble/resin or wood columns for paint or stain, synthetic stone columns and balustrades, or choose from our comprehensive cast stone and polyurethane millwork products lines. 800-963-3060 or www.meltonclassics.com

Melton Classics, Inc.

CIRCLE 165 ON INQUIRY CARD

Rubber and Vinyl Stair and Floor Systems



Install the best safety application for your stairs & floors. Safety regulations make attractive many of our products such as fire safety, grit strip, visually impaired, glo strip & aluminum stair systems. Matching entry flooring including disco, low disc, square, diamond, fluff cord & traffic tiles are displayed in new expanded color line with related accessories. To request copies, contact Bob Segers, Musson Rubber Co., P.O. Box 7038, Akron, OH 44306, 1-800-321-2381. Fax 1-330-773-3254, E-mail info@mussonrubber.com, www.mussonrubber.com

Musson Rubber Co.

CIRCLE 166 ON INQUIRY CARD

Ventilate All Baths With One Quiet Fan

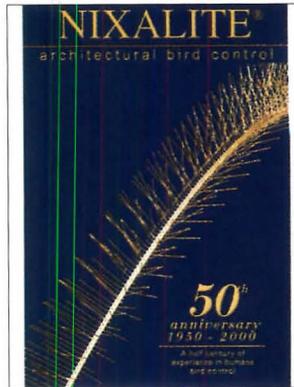


ALDES' MPV fan is designed for multiple and extensive duct runs. Remote mounting of fan assures almost silent operation. Up to 6 exhaust points at 50 cfm each. Equipped with a continuous duty motor, the MPV may be used also to provide IAQ Ventilation. Super Quiet, Powerful & Versatile. 3 year warranty. Cost Effective. American ALDES Ventilation Corp. 4537 Northgate Court, Sarasota, FL 34234, Call 1-800-255-7749, http://www.americanaldes.com

American ALDES

CIRCLE 167 ON INQUIRY CARD

Birds Take Flight From Nixalite!

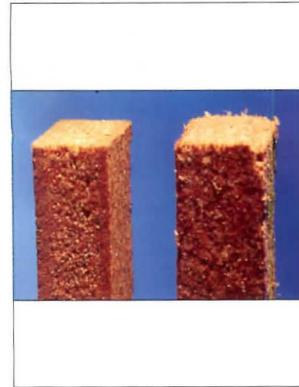


Persevere architecture treasures with Nixalite bird control. Effective and humane, these stainless steel strips provide a protective barrier that is long lasting and inconspicuous. With the addition of Colorcoat™, a color powder coating option, Nixalite is almost invisible. For information, call 800-624-1189, Fax 309-755-0077 or visit our website at http://www.nixalite.com

Nixalite® of America Inc.

CIRCLE 168 ON INQUIRY CARD

Duraflake Particleboard



Duraflake MR® moisture-resistant particleboard absorbs less moisture & exhibits minimal thickness swell compared to standard particleboard. For interior applications where exposure to high humidity & intermittent contact with water is common. It has a fine surface for laminating & exceptional strength. Applications include bathroom & kitchen cabinets & counters, casework, display fixtures, entryways & other moisture-prone areas. To request information call 1-800-887-0748 ext. 300.

Willamette Industries, Inc.

CIRCLE 169 ON INQUIRY CARD

Pflow Lifts Safely Move Materials Between Levels



Pflow Vertical Lifts transport materials between two or more levels. Designed for mezzanines, through floor, interior & exterior applications. Capacities from 10 lbs. to 100,000 lbs., vertical heights to over 200', carriage sizes to 30' x 30'. Mechanical, hydraulic and fully automated systems. Guaranteed code approval. Call 414-462-8810 Fax 414-462-2673 www.pflow.com

Pflow Industries, Inc.

CIRCLE 170 ON INQUIRY CARD

Xenon Luminaries

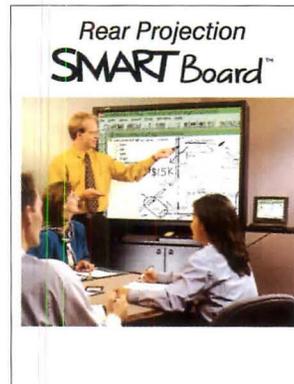


Space Cannon Illumination Inc. introduces the Litehose, the latest in linear lighting technology made of extruded, durable optical-grade acrylic. Available in different diameters and sizes, reflective paints and films are not required. The Focus is an architectural coloured luminaire utilizing a 1200w lamp source designed to work with the Litehose or separately. 1-888-705-1028.

Space Cannon

CIRCLE 171 ON INQUIRY CARD

Interactive Whiteboard



The Rear Projection SMART Board™ is an interactive whiteboard that allows you to control projected Windows® or Macintosh® applications and other multimedia by pressing on the Board's large, touch-sensitive surface. Write over top of applications and your notes are saved for future reference and distribution. Architects and facility designers can request the SMART Product Kit by calling 1-888-427-6278 or by visiting www.smarttech.com/productkit.

SMART Technologies Inc.

CIRCLE 172 ON INQUIRY CARD

Concord Horizon—the Commercial Accessibility Solution

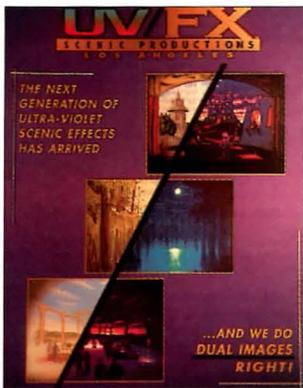


The Horizon is one of Concord's fully enclosed elevators. Its innovative cable hydraulic drive system delivers reliable, quiet & smooth operation while serving two to six stops. The Horizon is the ideal commercial accessibility solution for the physically disabled. Standard features include emergency battery powered door operation & lowering, a slack cable safety device, & emergency cab lighting. For information, please call 1-800-661-5112 or visit us at www.concordelevator.com.

Concord Elevator Inc.

CIRCLE 173 ON INQUIRY CARD

**UV/FX
Scenic Productions**

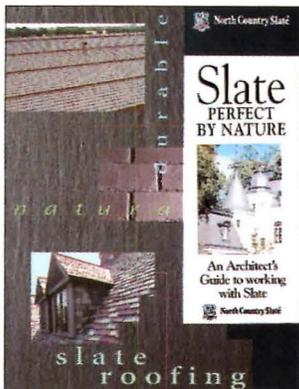


UV/FX wrote the book on Ultra-Violet Visual Effects which are designed, art directed and painted (and now even printed). UV/FX specialize in Dual Images, Complete Invisible treatments, Day to Night Effects, 3-D scenery and more for changing themed walls, backdrops and ceilings. www.uvfx.com, Tel./Fax 310-392-6817.

UV/FX

CIRCLE 174 ON INQUIRY CARD

Slate Roofing



Natural North Country slate. For enduring character, nothing else compares. No wonder—it's perfected by nature! Free product brochure showcases the wide variety of sizes and colors, and comes with our Architect's Guide to working with this remarkable roofing material.

North Country Slate

CIRCLE 175 ON INQUIRY CARD

Matrix Composites Inc.

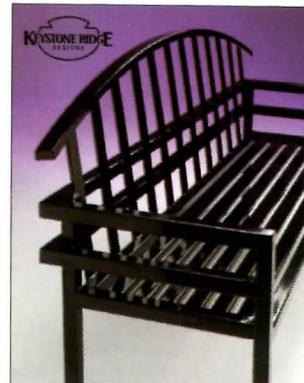


Chosen by a distinguished panel of Architects for Architectural Record as one of the best new finishes for 1999, Madera Tile is made from an exciting new material known as Lignasil®. Using 100% post-use hardwood in a patented process, Madera forges new ground in "green" building material technology. Several textures are available in an exciting range of solid colors and unique color blends for your sustainable design solutions. Call (800) 767-4495 www.maderatile.com

Matrix Composites Inc.

CIRCLE 176 ON INQUIRY CARD

**Site Furniture
of Distinction**

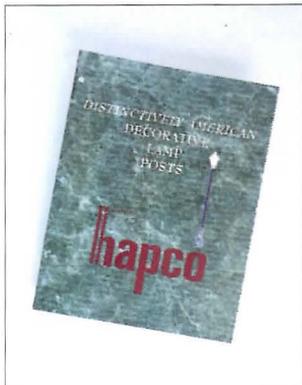


Keystone Ridge Designs, Inc. is the architect's choice for premier site amenities. Offering a full line of steel furnishings, we pride ourselves on exclusive designs and our patented powder coat finish, KEYSHIELD™, that is unparalleled in the industry. Quality, craftsmanship, and dedication to your creative vision are the hallmarks of Keystone Ridge Designs. For more information please call 1.800.284.8208 or e-mail KeystonRdg@aol.com. www.keystoneridgedesigns.com

Keystone Ridge Designs

CIRCLE 177 ON INQUIRY CARD

**Distinctively American
Decorative Lamp Posts**

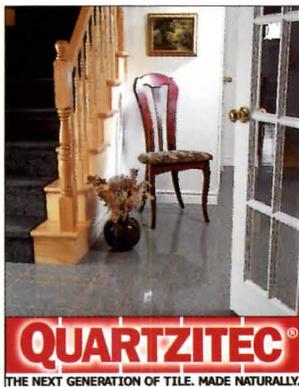


HAPCO Decorative Lamp Posts are designed and crafted to rigorous in-house standards using lightweight, durable aluminum castings and extrusions with durable thermoset powder paint finishes. Period lamp posts enhance outdoor lighting for historic preservations, downtown renewals, parks and recreational areas, subdivisions and roadways. 1-800-368-7171 E-mail - www.hapcopoles.com & info@hapco.com

HAPCO

CIRCLE 178 ON INQUIRY CARD

**The Next Generation
Of Tile**

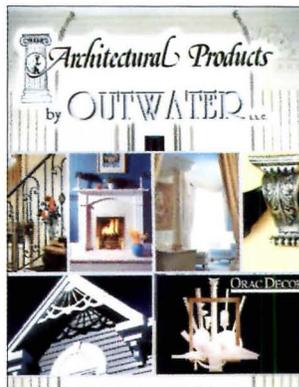


With QuartzStone agglomerate tile, we've set new standards in terms of strength, performance, beauty and affordability. This stunning floor is made from pure crushed quartz, which is more durable than either marble or granite. But it costs far less. What's more, these tiles can be installed with simple mortar, and don't require polish or wax. For more info, call 1-877-255-9600 or visit www.quartzitec.com

Quartzitec Inc.

CIRCLE 179 ON INQUIRY CARD

**Architectural Products
by Outwater**

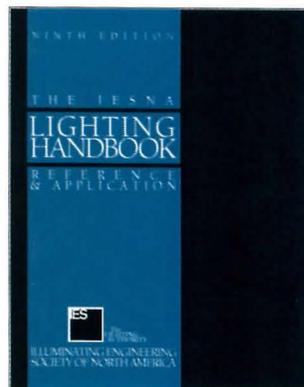


Free 950+ Page Master Catalog for 2000 is your most important building and renovating tool. The catalog features 35,000 newly introduced and regularly stocked standard and innovative component product essentials comprising Interior/Exterior Millwork, Columns, Wrought Iron Components, Brass Hardware, Lighting and more. Call 1-800-835-4400 / Web site: www.outwater.com

Architectural Products by Outwater

CIRCLE 180 ON INQUIRY CARD

**The Illuminating Engineering
Society of North America**



IESNA was founded in 1906 to advance knowledge & disseminate information for the improvement of the lighted environment to the benefit of society. IESNA serves 10,000 members & offers over 100 standards & publications, the IESNA Lighting Handbook, LD+A, & hosts LIGHTFAIR & the Annual Conference. To receive a copy of the Lighting Source Catalog, or to order publications, contact Albert Suen at 212-248-5000, ext. 112 or e-mail asuen@iesna.org. Visit our website at www.iesna.org

IESNA

CIRCLE 181 ON INQUIRY CARD

POSITIONS AVAILABLE



KAISER PERMANENTE

Kaiser Permanente California Facilities Development Dept. is responsible for all aspects of the design and construction process. As a Facilities team member, you will be involved in all aspects of scoping, planning, designing and constructing Kaiser Permanente's inpatient, outpatient and support facilities.

Project Managers

Scopes, plans, designs & administers design & building process for multi. projects w/budgets of \$125 million w/in our standards & quality guidelines. Accountable for regulatory agency requirements. Coordinates project teams. Resp. for defining project scope, budget, schedule & producing design contract documents for all design/building projects. Req: BA/BS or cert. in Architecture, Engineering or related; 4+ yrs' managing design & construction activities for primarily medical/ institutional facilities.

Equipment Planners

Evaluates, locates & recommends equipment/furniture to be purchased for new facilities, major renovations & expansions. Identifies equip/design conflicts during the design process. Develops, manages & updates project budgets. Sets daily priorities to meet established project deadlines. Req: BA/BS or equiv; 3+ yrs' planning equip/furniture for medical facilities.

For immediate consideration, please fax your resume to Attn: P. Duffield at (909)353-4533.

EEO/AA Employer.

**AMAZING ARCHITECTURAL
OPPORTUNITY**

Why work in an architectural firm as one of many when you could work for an individual patron? This sensational opportunity is for someone who has creativity and refinement with a minimum of 5 years of luxury house building experience. This full time position is to design and build and oversee 3 extraordinary and unique residences in 3 diverse and challenging environments. Each project is over 30,000 square feet. Please fax resume to Ms. Galindo at 212-371-8042.

**INTERIOR DESIGNERS/ARCHITECTURE/
FURNITURE DEALERSHIPS**

American Personnel specializes in corporate designers and furniture specialists, established since 1969, are in constant search for prospective employees, to fill our various job opportunities with our national clients. Project Managers/asst. Project Mgrs./Sales associates/Sales assts./AutoCADD operators/Administrative support/Entry level designers. Clients are based out of New York City, New Jersey, and other locations. For more details on our services, please feel free to call Frank Cassisa - Executive V.P., Ph: 212-233-2900, Fax: 212-233-3043 or after 7pm at 732-360-0655.

ARCHITECTS - \$40,000 - \$135,000

Key positions nationwide with leading A/E Regional and National firms. Management, design, staff and marketing positions. Highly Confidential! No fee! Group One Search, 639 N. 7th Str, Grand Junction, CO 81501. Tel: (970) 241-2499, fax (970) 241-2504, e-mail: Grp1Search@aol.com. Visit our website @ www.grouponesearch.com today!



**MICHAEL LATAS
& ASSOCIATES**

*Executive search and professional recruiting services.
Serving the construction industry exclusively
nationally and internationally since 1975.*

Your premier source for executive, managerial, and difficult-to-fill professional-level needs.
Contact our Architecture/Engineering Division.

MICHAEL LATAS & ASSOCIATES

1311 Lindbergh Plaza Center
St. Louis, MO 63132

(314) 993-6500 • Fax: (314) 993-0632
(800) 280-7811 • <http://www.Latas.com>

LABARGE ENTERPRISES

REGISTERED ARCHITECTS AND ARCHITECT ENGINEERS'
FOR DESIGN-BUILD PROJECTS IN TV-BROADCAST STUDIOS,
HOSPITAL AND HEALTH CARE, E-COMMERCE BUILDINGS
DATA PROCESSING AND CALL CENTERS AND TELE-
COMMUNICATION FACILITIES. POSITIONS NATIONWIDE—
FAX 972/980-0090 WEBSITE WWW.HARDHATJOBS.COM

COLORADO SEEKS

ARCHITECTS AND INTERIORS

Looking for a job in the field of architecture? View our Free Job Board listings @ www.aiacolorado.org. Listings updated weekly.

ARCHITECTS NEEDED!

Senior Level Architects, are you interested in a career change or are you searching for better opportunities? Executive search and recruiting firm with 25+ years of experience in the architectural and engineering industry serving the nation's leading A/E firms. Please submit your resume to: CSS Search and Recruiting, c/o Duane McClain, 115 5th Ave. S., Suite 501, La Crosse, WI 54601. Fax: 608-784-4904. Telephone: 608-784-4711. Email: css@csssearch.com. For a current list of our job openings, log on to our web site at <http://www.csssearch.com>.

PROJECT ARCHITECT

Requires Master's degree in architecture GA. Regis. architect proficient with Arris 7.0 CAD software, & strong conceptual design & technical skills involving office & industrial projects. Duties: design, development & implementation of comm. & industrial projects from conceptualization thru construction, including client development, programming, design, production of documents using Arris 7.0 software & construction administration. Perform project management including development of client design criteria, schematic design, production of construction documents, project coordination with owner, contractor & consulting engineers. Responsible for construction administration including document coordination, site visits, change orders & submittal review. Prepare presentation materials including computer-generated 2-D & 3-D renderings & models, 40 hrs/wk., 8:30 - 5:30. Salary: \$45,000/yr. Apply with resume to L. Hughes, Macgregor Assoc. Architects, Inc., 2675 Paces Ferry Rd. NW, Suite 210, Atlanta, GA 30339. NO CALLS

RESIDENTIAL ARCHITECT WANTED

Sensitivity to design of detail and proportion in residential architecture; strong CAD skills; small high profile design office; exclusive clientele specializing in expensive, highly-detailed single family residences and estates. Please call (214) 521-8763 and ask for Linda.

URBAN DESIGNER

Architectural firm seeks urban designer to supervise major urban design and planning projects for institutional/university clients. Required to use AutoCAD, 3D studio Max and PhotoShop and 2D/3D computerized mapping techniques. Master's degree in architectural design and experience in urban design required. Send salary requirements and resume to: Sue Scanlon, Venturi, Scott Brown, 4236 Main St., Philadelphia, PA 19127.

**INTERN ARCHITECTS
JOB CAPTAINS**

Required by client firms in FL, PA, NC, MD, IL, CO, MI and other locations nationally for qualified degreed and nondegreed professionals with dd, cd, ca and project coordination experience. All positions are permanent status with paid fees, relocation, etc. Mail confidential resume to: G. Marshall Assoc. -P.O. Box 66083-Chicago, IL 60666 or fax: 773-736-1802. Nationally known recruiters of architectural professionals for thirty years.

INTERIOR ARCHITECT

40 hours per week from 9:00 am to 5:00 pm with a rate of pay of \$15.99 per hour for designing, drafting and producing detailed drawings and specifications of architectural designs and plans for buildings and existing spaces, in both imperial and metric systems, in accordance with both AIA and UIA codes, standards and regulations. Convert architectural drawings and specifications from United States codes into French, Romanian and Russian codes, rules and regulations. Generate CAD modeling and rendering as well as creating walk-through computer animation of architectural spaces. Educational requirement: Bachelor's Degree with major field of study in architecture. Experience required: one year in the job offered. Prior experience to include one year in CADVANCE 7 & 8 (FIT), ALLPLAN FT. V12 (Nemetschek), 3DS, MAC/V1Z 12 (Kinetix), DataCAD 8 (DataCAD LLC), Architectural Desktop (Autodesk), Auto-Architect (Softdesk 8), Graphic Studio (Adobe), Graphics Suite 2 (Micrografx). Must have proof of authority to work permanently in the United States. Send resumes to the Illinois Department of Employment Security, 401 S. State Street-7 North, Chicago, Illinois 60605, Attn: Leila Jackson, Reference No. V-IL 19276-J. An employee paid ad. No calls, send two copies of both resume and cover letter.

**ASSOCIATE URBAN DESIGNER
PROJECT MANAGER**

Responsible for assisting in representing the company in communications with clients as directed by the Principal-in-Charge of Projects (PICP) or Project Coordinator throughout entire course of agreement activity, communicating with PICP and Project Coordinator relative to project status and performance, and taking leadership role and assisting in managing project design and production team; also serves as lead designer on project. Includes design conceptualization and review of 90% of projects in 20-person office; design graphics and presentation materials; preparation of marketing materials for office marketing and portfolio; and team leader-manage specific projects from start to finish for 3-person design team, including design conceptualization, review, graphics production (construction drawings and marketing), client presentation, bidding, consultant selection, and construction coordination and observation. Requires Master of Architecture degree in Urban Design and minimum three years of exp. in large urban design and planning projects, including exp. in computer graphics from conceptual to construction drawings; free-hand graphics incl. 3-dimensional perspective renderings in watercolor, color pencil, pastel, marker, and black and white; conception and presentation of design solutions in charrette form; conception of design solutions; and supervision of staff. 40 hrs. per week, 8:00 am-5:00 pm, M-F. Job site: Charleston, SC. Salary: \$46,400/yr. Send resume to W. Scott Parker, Principal/Partner, DesignWorks LC, 371 King Street, Charleston, SC 29401. All applicants must have legal right to work in the US.

BUSINESS OPPORTUNITY

FOR SALE

Vermont Architectural Firm. Owner retiring, professional staff of 5. Confidentiality agreement required. Vermont Business Brokers 802-878-3900. vbb@together.net

INVESTMENT OPPORTUNITY

National architectural practice with significant work on the eastern seaboard seeks opportunity to discuss alliance or merger, preferably in the Philadelphia area. Looking for interested parties with public and private sector experience, marketing contacts and an energetic approach. Send inquiries to: EFCO-52, 7211 NW 83rd St., Suite 210, Kansas City, MO 64152. EOE

FOR SALE

SANTA FE ARCHITECTURAL FIRM

Owner interested in selling Santa Fe, New Mexico based, projects and contracts in place. Confidentiality agreement required. Qualified purchasers only. Please respond to: AR Box# 8506.

RENDERINGS

RENDERINGS: COMPUTER & TRADITIONAL
Architectural Art is a large studio serving the rendering and illustration needs of architects nationwide. Tight deadlines accommodated. Call for a brochure or to discuss an upcoming project. Phone 888-665-2300 x22. Or visit our website, www.architecturalart.com.

ARCHITECTURAL RENDERINGS

Fortune 500 clientele, Watercolor: 11" x 17", \$899 + tax, 3 days. 16" x 22", \$2,199 + tax, 5 days. Visa, MC, Am Ex. Mayron Renderings, (212) 633-1503, or 1-800-537-9256.

SPECIAL SERVICES

WANTED TO BUY

Designer & architectural furniture, drawings, etc.: Eames, Nelson, Panton, Girard, Paulin, Saarinen, Nakashima, Paul Evans, Noguchi, Wharton Esherick, etc. We have a particular interest in anything by Knoll or Herman Miller. Please call 1-800-720-2585. Thank you!

ARCHITECTURAL RAILINGS

Stainless steel wire and cable fittings for custom made interior and exterior railings. The choice of discerning professionals. For details and free estimates, call...The Ship's Store & Rigging, 1 Lagoon Road, Portsmouth, Rhode Island 02871, 401-683-0457, fax 401-683-5908, e-mail JLDSHIP@AOL.com

FACULTY POSITIONS

ARCHITECTURAL ENGINEERING TECHNOLOGY ASSISTANT/ASSOCIATE PROFESSOR

University of Cincinnati, OMI College of Applied Science, Construction Science Department invites applications for a tenure-track faculty position at the Assistant or Associate Professor level in the area of architecture. The faculty member is expected to teach a range of courses from design to advanced computer applications, building systems, and office practice; and participate in departmental, college and university activities. Minimum qualifications: Master's degree, architectural registration, five years of professional architectural experience, and previous teaching experience. The ideal candidate would possess a degree beyond a professional master's degree and be able to teach across disciplinary lines. The applicant must be a US citizen or permanent resident. Position will be available September 1, 2000, pending funding approval. Applicants should send a detailed resume (including control #20UC6020), a description of teaching interests, and a list of at least three professional references to the Melinda Stout, College of Applied Science, 2220 Victory Parkway, Cincinnati, OH 45206-2839, Fax (513) 556-4599, Email: Melinda.stout@uc.edu. Evaluation of applications will begin March 1, 2000 and continue until the position is filled. The University of Cincinnati is an Affirmative Action/ Equal Opportunity Employer

EDUCATIONAL SERVICES



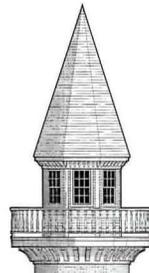
COMPLETE PREPARATION FOR THE REGISTRATION EXAM

Architectural License Seminars

Web: www.alsOnline.com Tel: (310) 208-7112
E-mail: alsOnline@earthlink.net Fax: (310) 824-7028

COMPUTER SOFTWARE

Power, Functionality & Attention to Detail



...Abundant 2D Tools; Easy to Learn and Use...
...Powerful and Useful...
Catalyst Magazine, October 1996

Call (800) 247-2032 for Free Working Demo

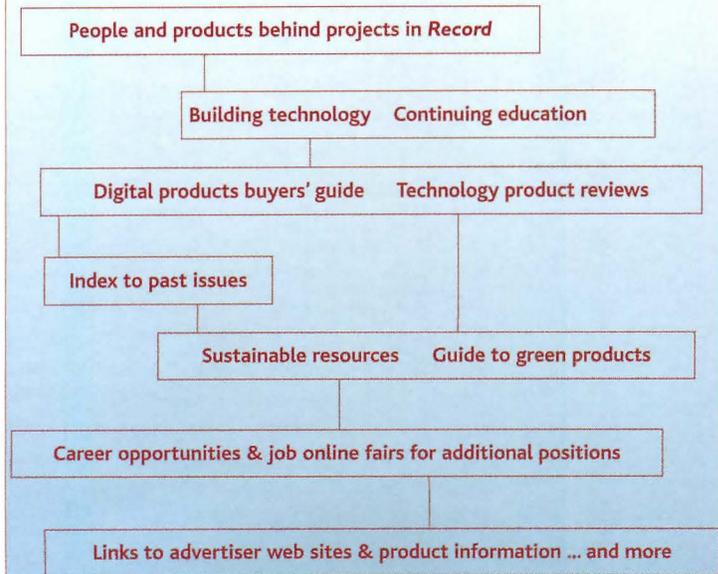
FLATLAND 6... Serious Two Dimensional Drafting for Building Design Professionals



Ashcraft Architectural Computer Graphics
220 Glen Street, Glens Falls, NY 12801 (518) 798-4631 (800) 247-2032

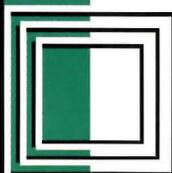
CIRCLE 182 ON INQUIRY CARD

GET **CONNECTED!**
GO TO www.architecturalrecord.com



architecturalrecord.com:

YOUR LINK TO THE WORLD OF ARCHITECTURE.



ARCHITECTURAL SALES REPRESENTATIVES

www.lafargecorp.com

Lafarge Gypsum a nationally recognized manufacturer of gypsum wallboard products, has immediate openings for Architectural Sales Representatives in the North Central and Southeast markets.

Apply your background in the building products industry to increasing our product awareness within the architectural community, and managing all related contact activities. Requires strong organizational, communications, customer service and PC skills. A BS/BA in a related field and knowledge of gypsum products are an advantage.

We offer a competitive salary, bonus and benefits package. For confidential consideration, please send your resume to: Lafarge Gypsum, ATTN: Recruiting Manager, 11130 Sunrise Valley Drive, Suite 100, Reston, VA 20191.

EOE, M/F/D/V.

CIRCLE 91 ON INQUIRY CARD



Profile



Artist Rick Lowe preserves humanity in Houston

Interviewed by Jessica Dheere

In 1993, artist Rick Lowe founded Project Row Houses to rehabilitate 22 shotgun houses in Houston's rundown, mostly African American Third Ward. Somewhat counterintuitively, he established art galleries first, for which artists would design temporary installations relating to the neighborhood's past and present. Then, he created homes. In January, he received the American Architectural Foundation's Keystone Award for using architecture to "elevate and enrich the human experience."

Q: *Do you have a special affinity for buildings?* I don't just love buildings. I love how they function and what they do for the community.
What do your buildings do? We try to link the histories [of the shotgun houses] with the activities of a general area or neighborhood, to weave

existing architecture into current lifestyle and to create a dialogue between the artists, the residents, and the buildings.

Why did you create the art galleries before renovating the houses? We thought the art would create the dialogue that would present the opportunity to develop the rest of the project. It had to be about more than a housing development, it had to be about cultural dialogue.

What kinds of installations have been done? We focus mostly on African

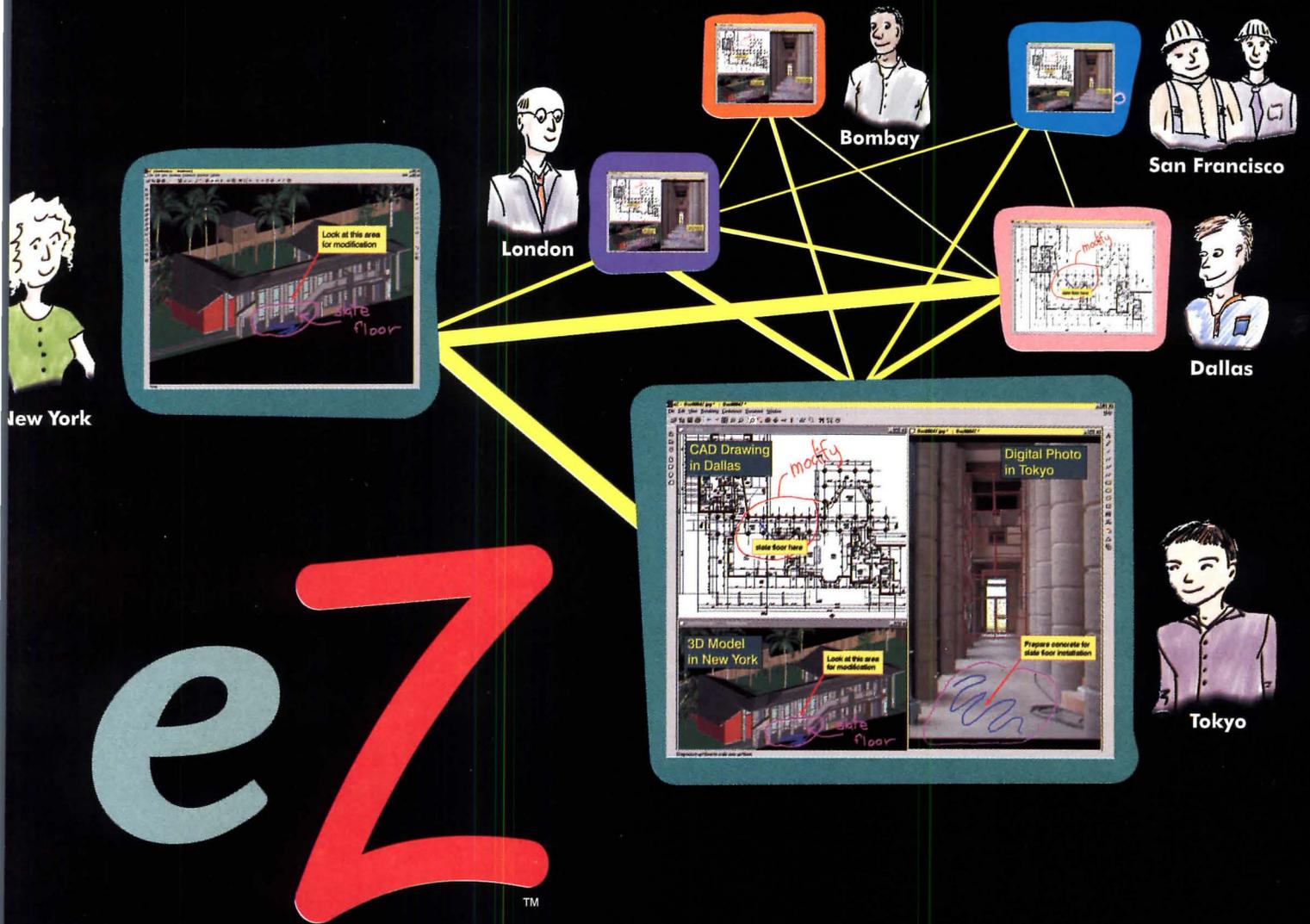
American artists, but one of the best projects we've had was by a middle-aged white man. His work was about archiving and preserving histories. He gave out about 100 disposable cameras to Third Ward residents to let them document the neighborhood the way they saw it. He got about 75 back, developed the film, and put the photos in canning jars. People came out in droves to see themselves as a part of this exhibit, and they learned that their

lives were worthy of public attention and acknowledgment.

Where do you see Project Row Houses in 25 years? By 1997, 85 to 90 percent of commercial activity left [the Third Ward] to get away from the guns and the drugs, basically causing "black flight." Going into the future, we're going to have to regain commercial activity along with the housing. As those resources—grocery stores, laundromats, drugstores—come, they're going to bring people from different parts of the city. It's already a strong neighborhood in terms of cultural identity; a good middle class will help stabilize it. Twenty to 30 years down the line, this will be a wonderfully mixed neighborhood, not just a typical one-group-moves-in-and-the-other-group-moves-out kind of place. ■

Photograph by Janice Rubin

INTERNET TECHNOLOGY



- ✓ Simple
- ✓ Easy to Use
- ✓ **Internet Based** Multi-Site Conferencing
- ✓ "Real Time" Multi-File Collaboration
- ✓ View CAD Files, 3D Models & Digital Images
- ✓ Mark-up & Redline Tools
- ✓ Easy to Buy (Only **\$199**)

www.eZmeeting.com

1-888-990-0900

CIRCLE 92 ON INQUIRY CARD

Cambridge, Massachusetts 02138

Telephone 800 OK KROIN
Telefax 617 492-4001

stainless steel basins are hot!

Design: Professor Arne Jacobsen, MAA
Selected for the Design Collection, MoMA.

For information Circle 100.

