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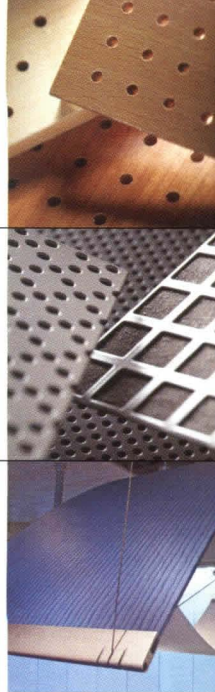




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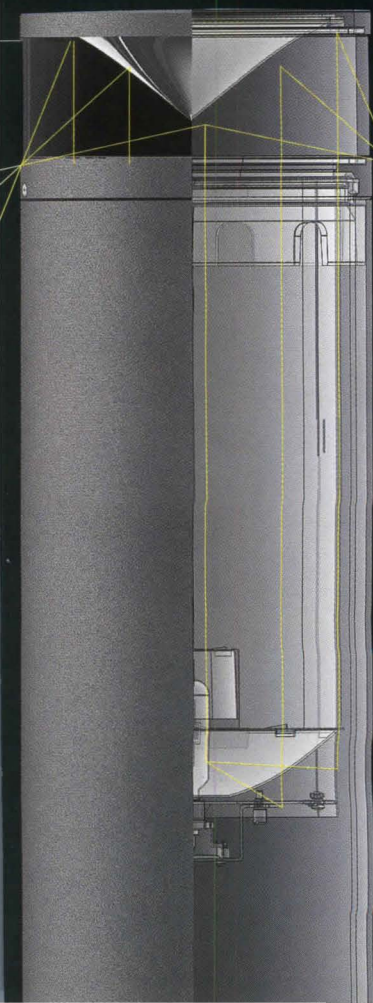
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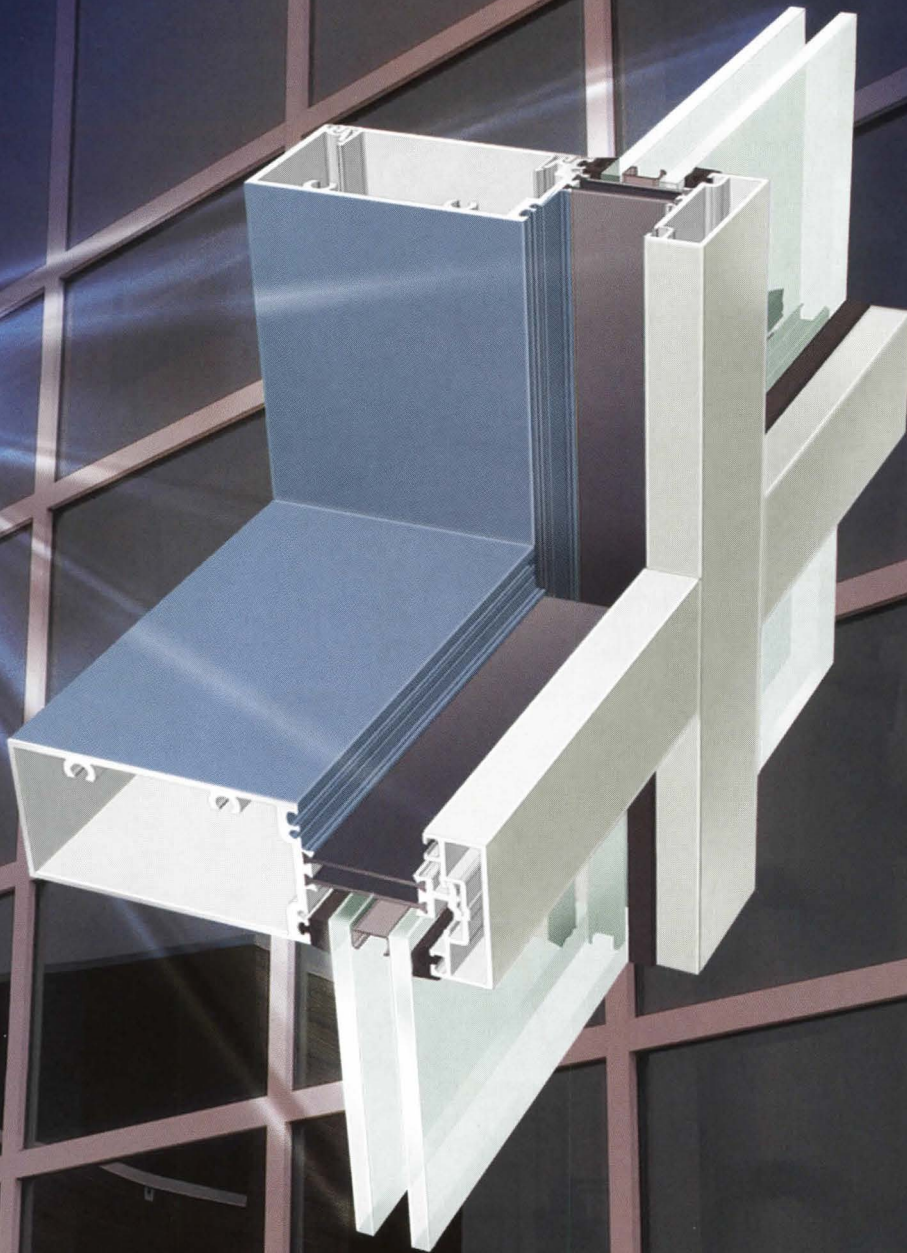


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*COVER AND ABOVE: The Bottari School in Moonkyong, South Korea. Photographs by Yong Kwan Kim.*



# CONTRIBUTORS



**1 PARSONS DESIGN WORKSHOP, PAGE 56** Parsons The New School for Design's Design Workshop on site in DeLisle, Mississippi (clockwise from top left): Sarah Coffin, Parker B. Lee, Dominic Griffin, Kip Katich, Dominique Gonfard, Joel Stoehr, Christian Eusebio, Emily Wetherbee, Huy Bui, Terry Erickson, Laura Lyon, Shana Sandberg, Kailin Gregga, Nora Meehan, and Ivan Chabra.

**2 FLAVIO STIGLIANO, PAGE 68** Currently with Diller Scofidio + Renfro, architect Flavio Stigliano has been practicing in New York City for 11 years.

**3 LILAS HARLEY, PAGE 28** Lilas Harley met Sergio Palleroni in May while managing a sustainable design symposium for Material Connexion in New York City. She now works for Earth Pledge, where she encourages New Yorkers to wear eco-friendly materials.

**4 ANITA MORYADAS, PAGE 18** Anita Moryadas, a real estate developer in Scottsdale, Arizona, was educated at SCI-Arc and New York University's Real Estate Institute

**5 THOMAS FISHER, PAGE 79** Dean of the College of Design at the University of Minnesota, Fisher has published widely in numerous books and journals, in addition to writing *In the Scheme of Things: Alternative Thinking on the Practice of Architecture* (University of Minnesota Press, 2000), and *Lake/Flato: Buildings & Landscapes* (Rockport Publishers, 2005). Fisher is *Architecture's* education columnist.

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EDUCATION THOMAS FISHER

HISTORY & THEORY KAZYS VARNELIS

MATERIALS JOHN E. FERNANDEZ

PUBLIC REALM MAX PAGE

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URBANISM DAVID GRAHAME SHANE

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### CONTRIBUTING EDITORS

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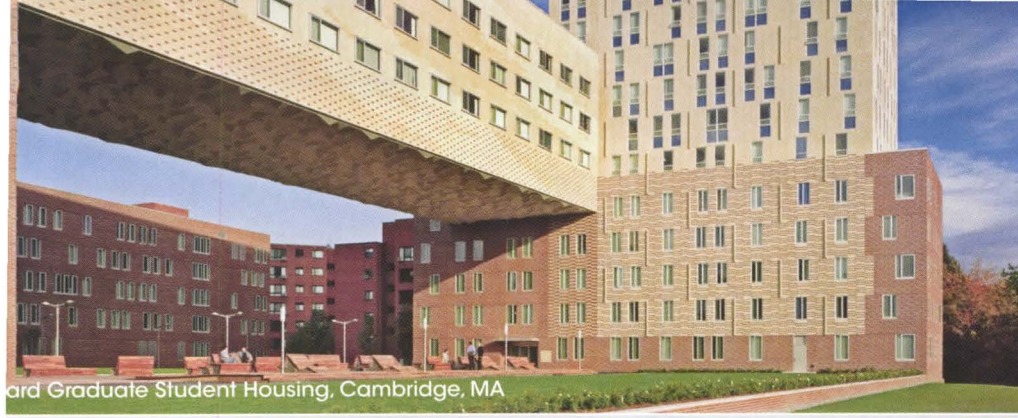
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### EDITORIAL INQUIRIES

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E [INFO@ARCHITECTUREMAG.COM](mailto:INFO@ARCHITECTUREMAG.COM)





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## KEVIN MARTY GROUP MARKETING MANAGER

KMARTY@VNUBUSPUBS.COM T 646 654 7369

## VINCE HABICK PRODUCTION MANAGER

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# FORMATIVE YEARS

A KOREAN MIDDLE SCHOOL WRAPS ITS STUDENTS IN A PERMEABLE SKIN.

BY MICHELLE KANG PHOTOGRAPH BY YONG KWAN KIM





The mention of junior high can stir up memories of stuffy classrooms and sterile corridors, but a newly constructed annex to an existing private middle school in Moonkyong, South Korea, provides a graceful alternative to the no-frills norm. The Bottari School, connected to the facility's main campus via a footbridge, was initially commissioned as a library to replace a reading room. The project was later expanded to house eight classrooms, including music and science rooms and the new library, in a 12,000-square-foot building.

Ascape, a New York City-based firm headed by Choon Choi and Stacey Jacovini, conceived the structure in terms of voids and volumes, defying the conventional plan of classrooms arranged along a corridor. Each interior space features an exterior counterpart: Classrooms are paired with courtyards, and hallways with patios. Even the façade of the three-story building is a rhythmic pattern of windows and brick, providing 50 percent transparency (a standard ratio in Korean school construction). The assemblage recalls a *bottari*, or bundle, wrapping together the interior spaces. Ascape's delicate balancing act results in a building of palpable lucidity. Students can see and feel the surrounding landscape from deep within the facility, and benefit from outdoor lectures and seminars. They may even find respite from academic demands exploring the ins and outs of their new environment. □







## THE WRECKING BALL STRIKES AGAIN

Preservationists have lost the battle to save the vast stained-glass window at American Airlines' Terminal 8 at John F. Kennedy International Airport. Designed by Robert Sowers, it is one of the largest stained-glass installations in the world, measuring 317 feet long and 23 feet high. The piece was the signature façade of the 1960 building by Kahn & Jacobs, which will be replaced by a DMJM Aviation design that consolidates two existing terminals and is scheduled for completion in 2007.

While plans to save the abstract window were considered, the cost of preserving and storing the primarily red-and-blue expanse proved prohibitive, according to an American Airlines spokesperson. The airline is approaching arts institutions to gauge interest in taking some, or all, of the window, but no definite strategy is in place. However, the airline does plan to distribute small pieces of the window to its employees as souvenirs.

The \$1.1 billion construction project, begun in 1999, promises to deliver the largest terminal building at the airport. Thirty-six gates will shuttle 1,800 passengers-per-hour through the 1.5-million-square-foot space. While portions of the project have already opened to serve American's domestic service, demolition of Terminal 8 isn't expected until next year. **BY KATIE GERFEN**

## KEEPING UP WITH THE JONESES

When the Scottsdale Museum of Contemporary Art (SMoCA) called architect Eddie Jones to discuss a retrospective of his 27-year-old Phoenix-based firm's work, he was receptive to the idea of showing architecture in the museum but unenthusiastic about the format. "Retrospectives are time-consuming and expensive to mount," said Jones. "And in the end you're looking at images created just for the show. That's a limited vision, one that often doesn't say so much about either the architecture or the work behind it." So in order to adequately explain Jones Studio's design process, he decided to move the whole office into a gallery at SMoCA, where it resides through September 24. All of the firm's business is conducted there, and is transparent to the public. One wall shows a series of completed projects, and another is a "work in progress" space, a pin-up area for current designs. Gallerygoers can ask questions of any of the staff, or even pull up a chair and join in a meeting with a client. The exhibition is interactive, yet not a performance. By allowing visitors to engage with everyday office operations, the show opens the practice of architecture to the public in a meaningful way. **BY ANITA MORYADAS**



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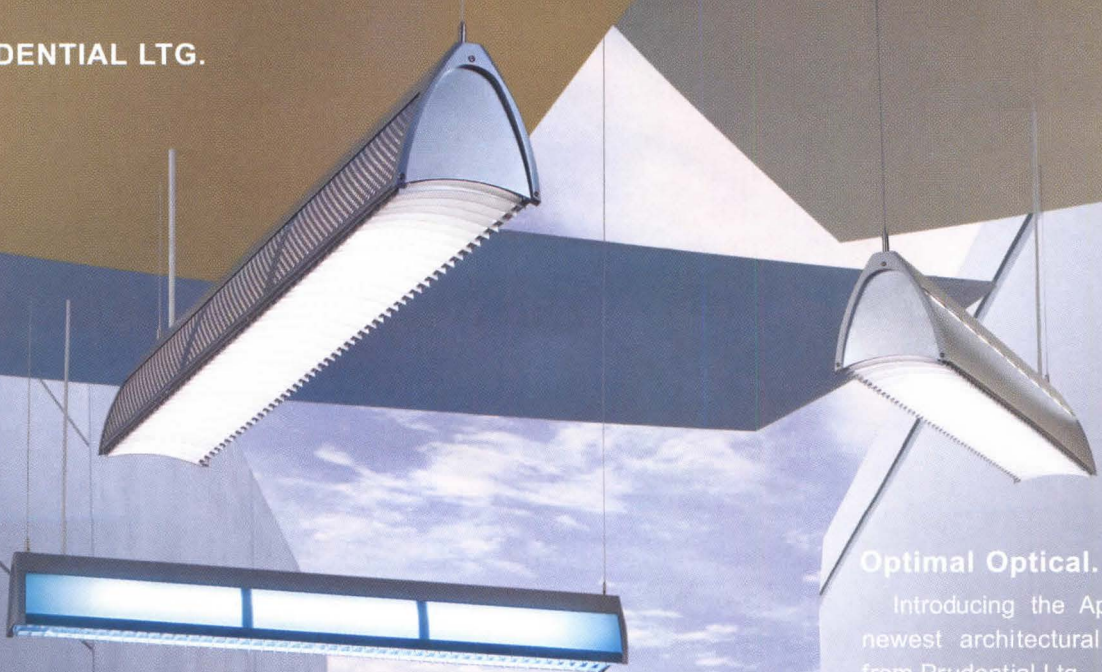
## ABOUT-FACE AT CARSON PIRIE SCOTT

Restoration of the terra-cotta façade of Louis Sullivan's 1899 Carson Pirie Scott building in Chicago has been completed in time for the architect's 150<sup>th</sup> birthday this fall. The original cornice was removed in 1948 to prevent the ornament from falling to the streets below, and this spring it was replaced with glass fiber-reinforced concrete. To recreate Sullivan's design, building owner Joseph Freed and Associates hired T. "Gunny" Harboe, then with the local firm Austin AECOM. He worked closely with the city's cultural historian, Tim Samuelson, to match the color of the façade as well as to decipher blurry historical photographs, consult the architect's drawings (they called for marble but did not include details), and analyze the building's remaining ornament to supplement missing data. The face-lift is part of a multi-million renovation of the upper floors of the department store, which will house Illinois state offices as well as the Art Institute of Chicago administration and interior architecture design studios. **BY NATHALIE WESTERVELT**

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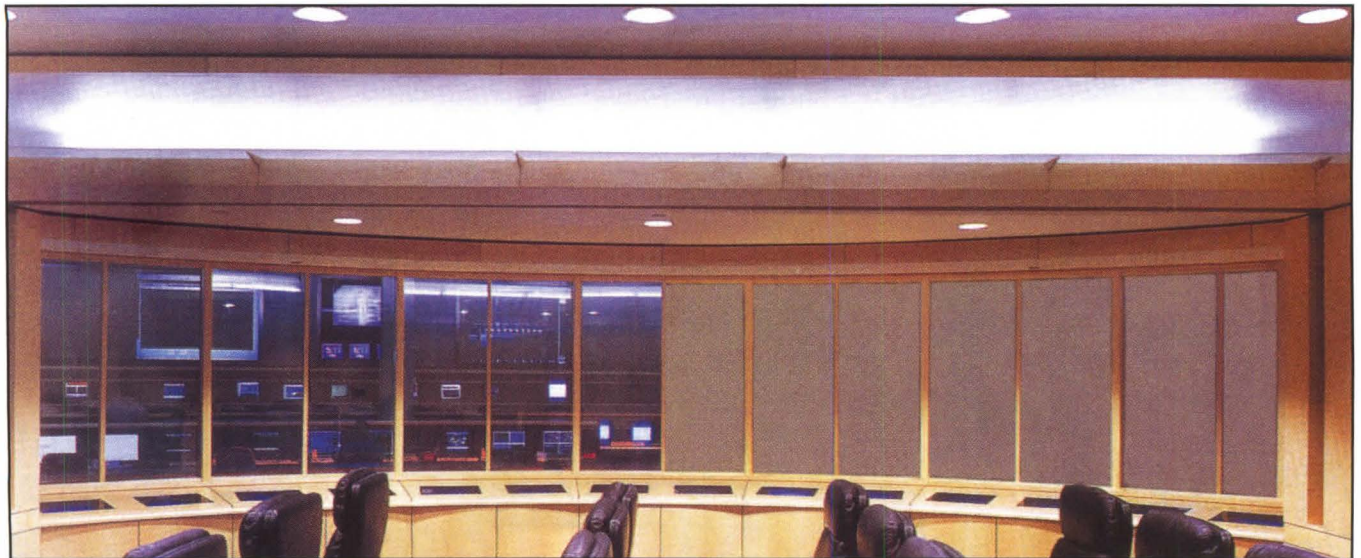
## HERZOG & DE MEURON PILE IT ON AT THE TATE

Tate Modern, the Thames-side power station turned mega-museum, is about to get bigger—much bigger—and only six years after the original design's completion. The architects are the same, too; only this time, Herzog & de Meuron are international stars and their expansion plans are cosmic in scale.

If planning approval is secured next spring, the Switzerland-based duo will embark on a 250,000-square-foot addition, more than doubling the size of the British arts institution. Faced with accommodating 4 million visitors a year, Tate Modern took the opportunity to increase its space following the decision of EDF Energy Networks, which owns and operates the electrical substation that still services the City of London, to relocate to smaller quarters within the original Giles Gilbert Scott-designed complex. The plant's move opens up space on the southwest side of the building, where the architects intend to construct a jumbled stack of cast-glass-wrapped boxes to a height of 230 feet. The "ziggurat," as Jacques Herzog and Pierre de Meuron call their scheme, will include 75,000 square feet of exhibition and display space, two performance halls located in retrofitted subterranean oil storage tanks, education facilities, a rooftop terrace, and six bars and cafés.

The expanded Tate Modern aims to be the centerpiece of the Bankside neighborhood's ongoing transformation into a cultural hub that will include new homes for the Design Museum and the Architecture Foundation, the latter by Zaha Hadid. Completion of the estimated \$400 million museum project is slated to coincide with the 2012 London Olympics. **BY ABBY BUSSEL**

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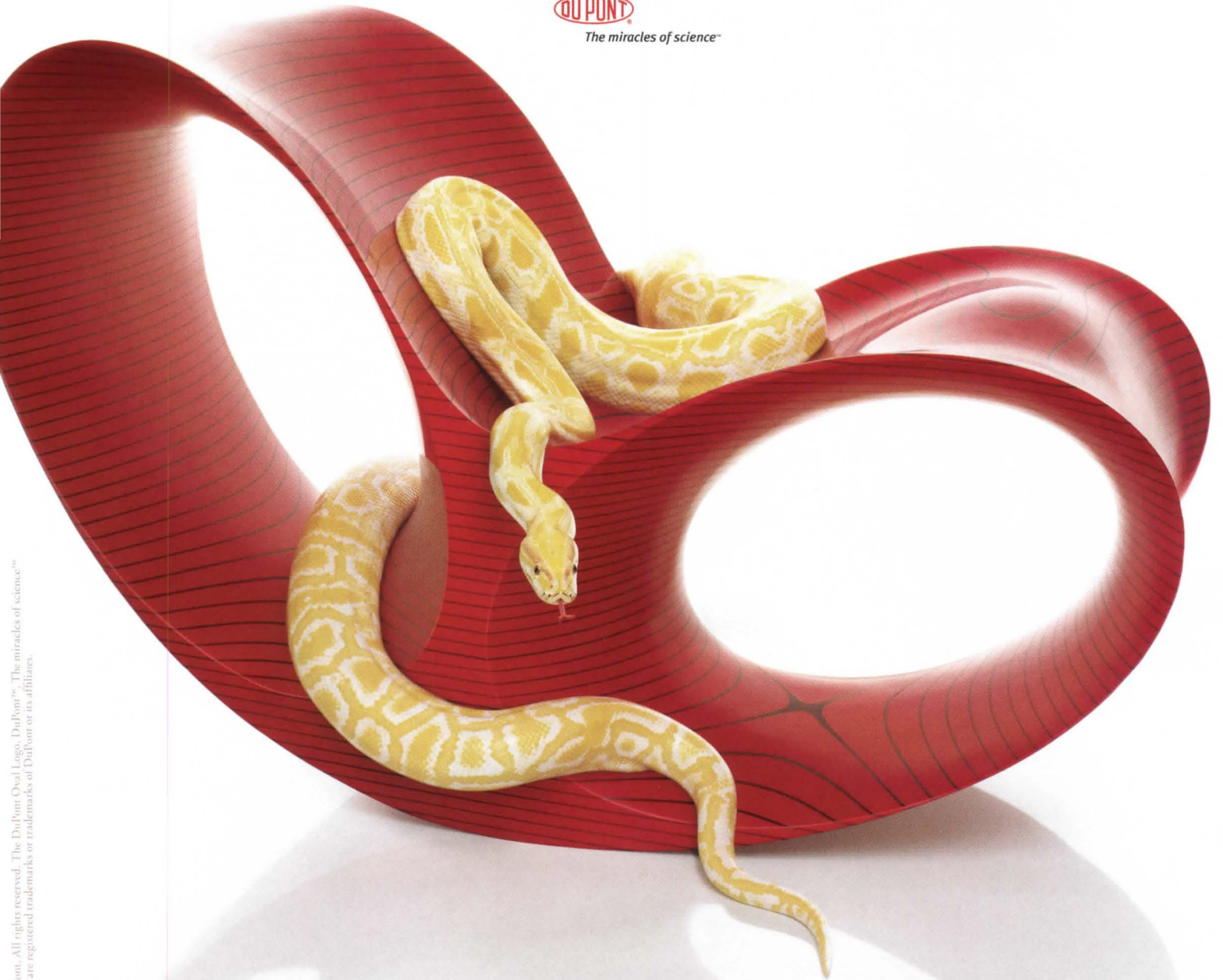
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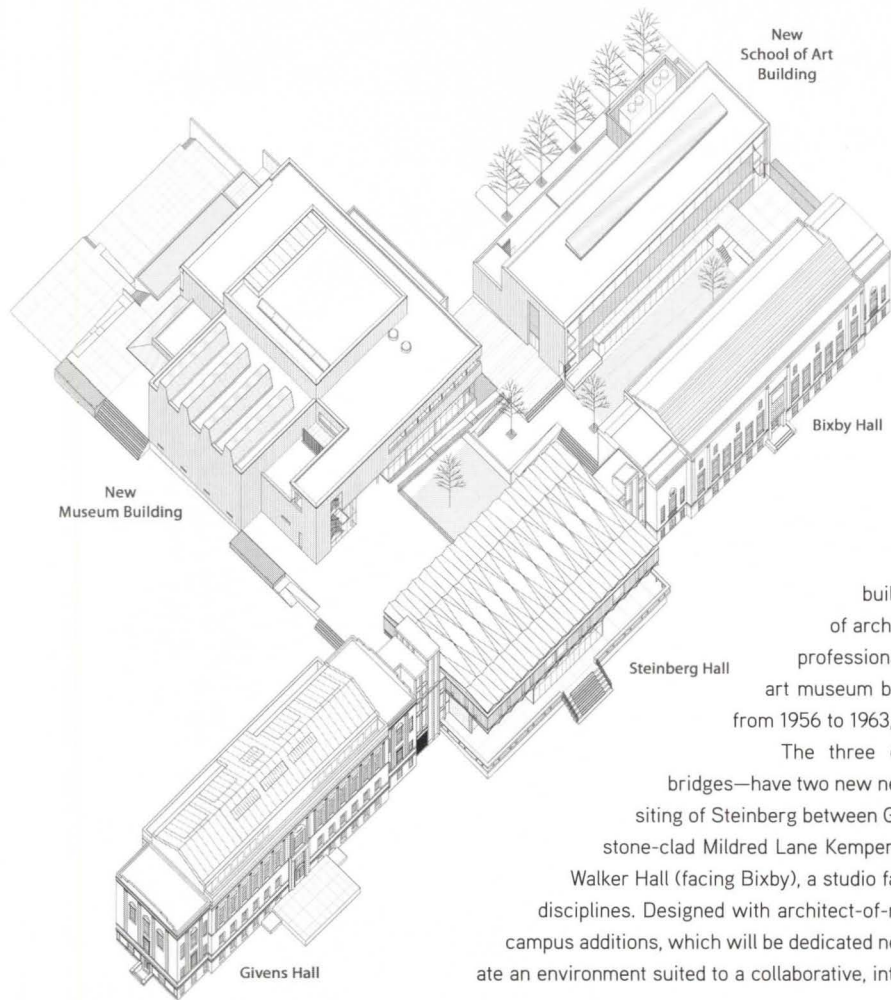
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# MATCH GAME

MAKI REVITALIZES WASHINGTON UNIVERSITY—AGAIN.

BY ELIZABETH DONOFF

An institutional evolution is taking shape on the campus of Washington University in St. Louis, Missouri, and the author of that transformation, Fumihiko Maki, is once again leading the way. Forty-six years after the Pritzker Prize-winning architect's Steinberg Hall opened, he has added two new buildings to the campus, part of a reorganization of arts programming within the recently renamed Sam Fox School of Design & Visual Arts.

For four decades the visual arts have occupied three separate buildings on the campus: the Beaux Arts-style Givens Hall, home to the school of architecture; its twin, Bixby Hall, occupied by the school of art; and Maki's first professional commission, Steinberg Hall, houses the art and architecture library and art museum beneath a folded-plate roof. A member of the architecture school faculty from 1956 to 1963, it is fitting that he has once again re-energized these schools.

The three existing buildings—connected via enclosed second-floor pedestrian bridges—have two new neighbors, all connected by a series of outdoor spaces. Much in the way his siting of Steinberg between Givens and Bixby knitted the two older buildings together, Maki's new limestone-clad Mildred Lane Kemper Art Museum (located across from Steinberg) and Earl E. and Myrtle E. Walker Hall (facing Bixby), a studio facility, aim to foster communication and collaboration between the artistic disciplines. Designed with architect-of-record Shah Kawasaki Architects of Oakland, California, these light-filled campus additions, which will be dedicated next month, serve as counterpoints to the earlier structures and help to create an environment suited to a collaborative, interdisciplinary approach to education in the twenty-first century. □





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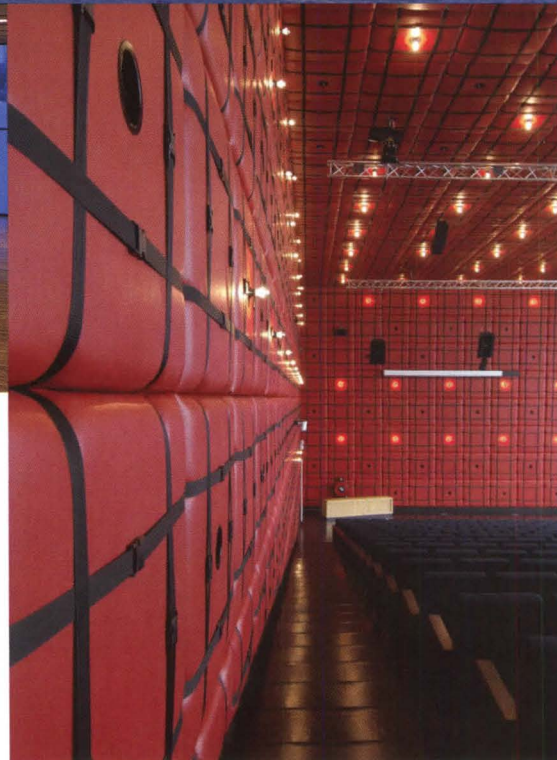


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## SEA WORLD

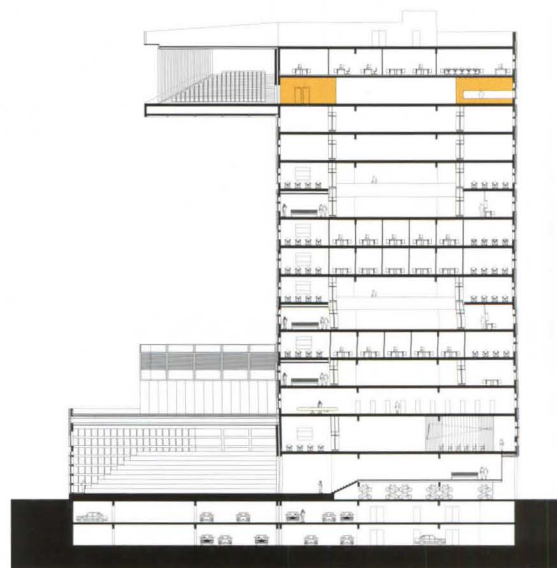
A DUTCH MARITIME COLLEGE EDUCATES CAPTAINS AND CRANE OPERATORS.

BY AARON BETSKY PHOTOGRAPHS BY JEROEN MUSCH

Rotterdam's Shipping and Transport College is a beast somewhere between a boat and a skyscraper. Local architects Willem Jan Neutelings and Michiel Riedijk of Neutelings Riedijk Architects like to think of their buildings as "urban animals." In this case, the 16-story college is a Cyclops looking out from its perch on the newly redeveloped Muller Pier at the largest port in Europe.

Neutelings Riedijk chose to make a "vertical college" for 3,500 students because the institution is the result of a series of mergers that brings everyone from aspiring captains to future dredging-crane operators together in one school. The architects wanted to make sure the students could meet each other, so vertical circulation occurs as a spine of orange-painted escalators (only staff and the physically challenged have access to the building's one elevator). The main assembly room and cafeteria is a stepped auditorium where students eat on long, recycled-wood benches beneath sailcloth panels while enjoying the view over the harbor. The largest lecture hall is the Cyclops' eye, cantilevered 14 floors above the ground and clad with customized life preservers instead of acoustical tiles.

The heart of the 323,000-square-foot building is the group of nine different types of simulators that allows students to get a feel for what it is like to steer a tanker into Singapore's harbor or dredge sand off the coast of Kuwait. Although the architects had little to do with these black boxes and workstations, they have contained them in a building that makes the experience seem real. By using materials that allude directly or indirectly to ships and shipping, including a skin of corrugated steel that brings to mind the containers stacked all around the harbor, they gave the college a character appropriate to its function. And by shaping those references into a clear form housing carefully composed spaces, the designers turned one of modern architecture's oldest fashions around: Instead of being inspired by an ocean liner, this building is an inspiration for aspiring builders and users of maritime architecture, as well as a fixed symbol for that transitory world's presence in Rotterdam. □





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# A RIVER RUNS THROUGH IT

SERGIO PALLERONI'S GRAY-WATER STRATEGY GREENS TAIPEI.

BY LILAS HARLEY PHOTOGRAPH BY DAVID CHEN

Architect and educator Sergio Palleroni, a visiting professor at the Center for Sustainable Development at the University of Texas, Austin, and winner of a 2005 Cooper-Hewitt National Design Award, is known for developing solutions in marginalized communities around the world. So the recent large-scale greening of the National Taipei University of Technology campus might seem like a departure, as Taiwan is densely urban, hyperindustrialized, and with a highly educated population. However, by using local materials and collaborating with the Taipei City Government and Planning Department in designing a new bioswale and student center, the architect stayed true to his principles. With the Chung Hsiao East Road Biological Corridor, Palleroni and Taipei professor Jen-Hui Tsai radically reshaped the university's relationship with the environment.

In an effort to include the entire city in a discussion about sustainable practices, the duo suggested the university demolish the wall that had long separated it from Taipei's main eight-lane thoroughfare. In its place now stands a 1,000-foot-long natural gutter that catches runoff from the green roofs of adjacent buildings and filters gray water from the school's washrooms of toxins and bacteria. The tree-lined brook also offers passersby a glimpse of Taipei's leafier past while raising their consciousness about the water cycle in their midst, in effect transforming the university from ivory tower to cultural and environmental resource.

Palleroni's work highlights water's power to revivify the concrete jungle. Completed in January, the student building is entirely off-the-grid, gaining solar power through collectors on its window awnings. Because it's sited among shade trees with a north-south orientation, and uses lightweight materials such as bamboo, heat gain is minimized. Rainwater and sink water collected from the building feed nearby plants and pools before draining into the swale to be filtered. Says Palleroni, "Something that was hidden, one now sees it captured, how it nourishes plants, how it sinks into the soil: The whole biological system is revealed."

The bioswale began treating dirty water in March, and its influence continues to resonate. By repaving driveways and walks and tapping into buildings' gray water systems, 10 blocks of the campus, at latest count, have been transformed into an area for groundwater recharge. Additionally, other structures have received solar panel window awnings and green roofs. Thanks to the latter, Palleroni expects to see a noticeable reduction in radiant solar exposure by the end of the year on all the buildings on the southern, eastern, and western edges of campus. Beyond helping humans, the flourishing green gardens also protect migrating birds, which use them as rest stops on the way to the sea. □



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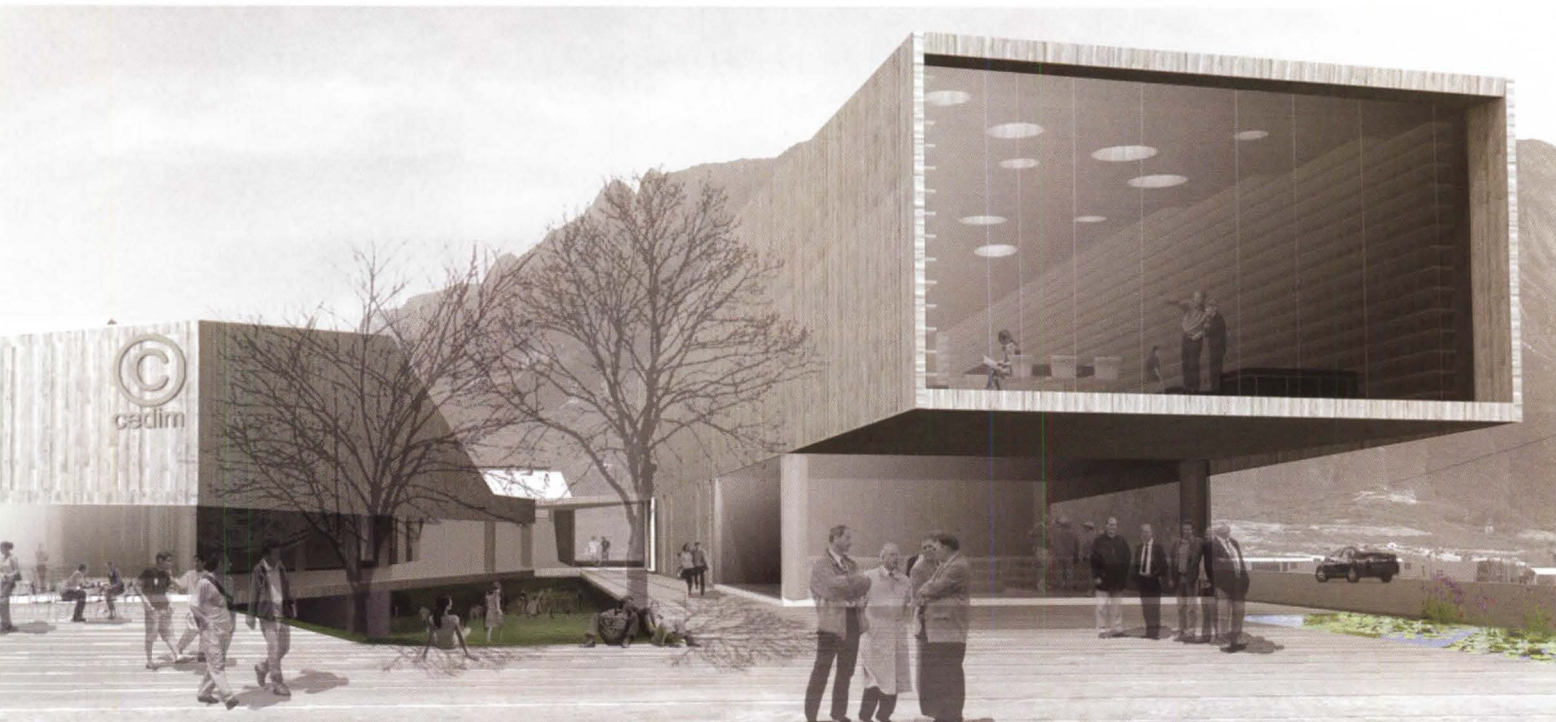
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## FREE HAND

**CEDIM CAMPUS EXPANSION**  
*ARQUITECTURA 911SC WITH FERNANDA CANALES*

A new campus expansion for a private university in Monterrey, Mexico, explores the adaptive potential of architecture. Centro de Estudios Superiores de Diseño de Monterrey (CEDIM) was founded in 1978 to provide undergraduate education in interior design; today, it offers degrees in architecture, art, interior design, and fashion, as well as graphic, visual, and industrial design. Over the summer, CEDIM sponsored a competition to explore options for growth; proposals were guided by the two goals of maximum flexibility in the use of the buildings and a desire to foster greater social interaction among students. The winning design, by arquitectura 911sc in collaboration with Fernanda Canales, resembles a series of fingers stretched out over the two-acre site. Five buildings, laid out side by side, bend, lift, or twist according to the lay of the land. One cantilevers over a welcoming plaza while another bridges an artificial ravine. The complex is strung together by an interior street that can also function as a fashion-show runway, a gallery, or simply a central gathering area for students. Constructed of steel frames and clad in concrete panels and corrugated sheet metal, this bold, 49,000-square-foot anthropomorphic exercise is scheduled to be underway in 2007. **BY MICHELLE KANG**

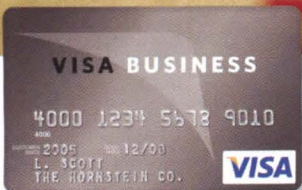




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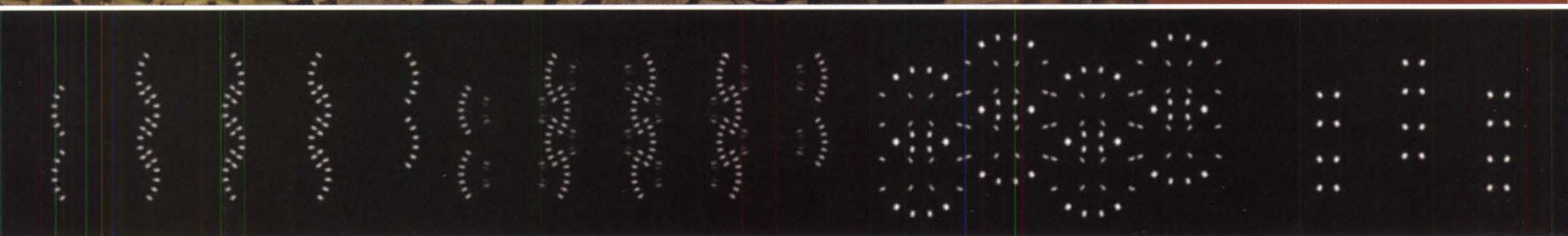
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# HANDLE WITH CARE

A BERKELEY STUDIO MINES THE MUNDANE FOR ITS STRUCTURAL AND SCULPTURAL INTEGRITY.

BY JULIE SINCLAIR EAKIN PHOTOGRAPH BY RAVEEVARN CHOKSOMBATCHAI DIAGRAM BY CLAUDIO MARTONFFY

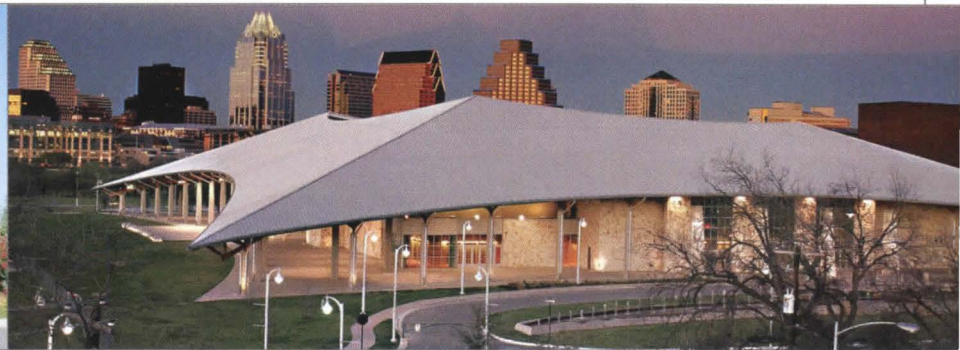
The basic idea behind the Accretions studio at UC Berkeley's College of Environmental Design was that "complexity is desirable," says Raveevarn Choksombatchai, who designed the course for 15 upper-level graduate students. To illustrate that point, the studio members selected, somewhat ironically, the most mundane of materials: recycled cardboard egg crates. Their challenge specified studying something comprising one unit with its own integrity and organizational logic that could also occur in multiples. They were to focus on both its formal and performative aspects, with the goal of understanding the material on a cellular level.

After using Maya and Rhino to model their research, groups of two or three students worked together over four weeks to employ their findings in a full-scale installation mid-semester. A model of nanotechnology became useful, as it summoned properties ideally in play: position and self-replication. The resulting continuous wall took on various characters according to its authors' sections, and lived as a presence in the studio space for 10 weeks. "They became well aware of its successes and failures," says their instructor. (Two incarnations are shown above.)

To add another set of parameters to the equation, the studio applied its investigations to an architectural problem, a site for government offices and mixed-use buildings in nearby Alameda. "Ultimately, they understood a structural system and were equally interested in its formal and infrastructural implications," says Choksombatchai, who tries not to presume what her students will take from their collaborations—a practice that in this case ushered them all into valuable uncharted territory. ▣



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# THE COMPLEXITY OF CONTRADICTION

MARC ANGÉLIL REWRITES DESIGN PEDAGOGY.

INTERVIEW BY NINA RAPPAPORT

*Marc Angélil, a founding partner of AGPS Architecture, with offices in Zurich and Los Angeles, is a professor and chair of first-year design at the Swiss Federal Institute of Technology Zurich (ETH) and the author of *Inchoate: An Experiment in Architectural Education* (Actar/ETH Zurich, 2004).*

**NINA RAPPAPORT** How would you classify the architecture department at ETH and its programs, which are part of a technical school?

**MARC ANGÉLIL** Architecture as an art form is the oddity within the ETH constellation of disciplines, including science and engineering. My part within this framework is the overture of the game—the opening chess move—teaching architectural design at the introductory level of the curriculum. What is required is a specific form of organizational thinking—what we term an architecture of education—that attempts to merge the challenge of quantity with the demand for quality.

**RAPPAPORT** What is “an architecture of education”?

**ANGÉLIL** Teaching is about initiating the buildup of passion and obsession vis-à-vis a particular field of endeavor, the grounds on which a discipline operates, and its intellectual as well as physical practices. Notwithstanding the optimistic implications of such a claim, teaching

inevitably involves a contradictory bias both in favor as well as against the discipline at issue, promoting an understanding of its regulating principles, while questioning the seemingly secure basis on which it is presumed to stand. Teaching simultaneously introduces a distancing from the very subject matter that it promotes.

Operating within frameworks delimited by convention, the design course borrows all the resources of the existing system in order to undermine it. In disagreement with our predecessors, we do not progress in a Cartesian sense from the simple to the complex, nor do we move gradually from anchored foundations to so-called higher domains. Such a line of development would presuppose a center, a core knowledge delimited by boundaries. Instead a strategy is pursued proceeding not from the center but from the edges. In that sense, teaching traces the margins between what is perceived to be of the discipline and [what is] outside its territories. Teaching architectural design along such trajectories means to operate on grounds that are not secure. The paths taken comprise a type of inquiry, a search, or research, in which hypotheses are tested, rejected, and reformulated. What our students acquire is a twofold sensibility: While learning the tools of the trade—and, this is extremely important to us, for we teach them a *métier*—they learn to critically interrogate recognized standards.

**RAPPAPORT** What traditions in architecture are you trying to get the students to look at in a different way?

**ANGÉLIL** Our teaching promotes a discourse on method from the very beginning. Rather than conceiving design in terms of predetermined ends, it is perceived as a deployment of means. Within this, a significant role is attributed to experimentation, for it contains a subversive component by introducing within its procedures an element of doubt vis-à-vis established certainties: authorship, autonomy, typology, function, and tectonics. Investigatory work carries qualities that are unforeseeable, allowing new venues and territories to be explored. Experimentation thus takes on the role of an operational strategy, deployed in the production of architecture as an ambiguous construction. We train our students to learn to deal with uncertainties, to intelligently operate within a complex field of constantly changing exigencies. ▢





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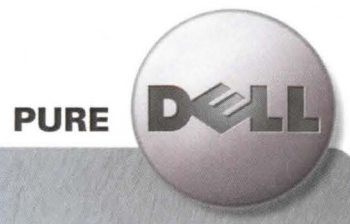
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# EYE TECH

BY MIMI ZEIGER

STUDENTS EXPLORE WITH CAMERAS, HAMMERS, AND ITUNES.

It is oft-quoted that the study of architecture changes how you see the world. This pedagogical overstatement implies that after visiting Ronchamp or surviving a tough all-night charette a transformation occurs. The truth is, changes do happen, but that vision is shaped over time by myriad forces: artworks, cities, shop classes, and design studio, to name just a few—and that transformation isn't always limited to architecture students.

This autumn the National Building Museum's second-floor galleries will be filled with the photographs, drawings, stories, and poems of D.C.-area teens. The work is the outcome of Investigating Where We Live (IWWL), the institution's five-week outreach program. Middle and high schoolers use digital cameras to explore their neighborhoods; creative writing exercises document the community's history and identity. Volunteers, culled from the city's design professionals and coordinated by museum staffers Kate McGill and Liz Guthrie, lead the summer sessions. Along with IWWL, the museum offers the Design Apprenticeship Program, or DAP Squad. In the fall a group of juniors and seniors will work with architects, artists, and contractors to build a donation collection box using green materials. The hands-on challenge introduces students to the fundamentals of crafting a design.

Take neighborhood investigation and combine it with construction, or in this case, deconstruction, and you get the University of Detroit Mercy undergraduate studio run by Will Wittig. Over the course of the past spring semester, students designed a new house in Detroit's Woodbridge district that they plan to build (once they get a buyer) using material recycled from a demolished 1920s mansion in





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# The Vertical Challenge

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This large barn structure, designed by LSC Design Inc., was then capped with 42,000 sq. ft. of Charcoal SNAP-CLAD Panels, complete with two 30 foot cupolas topped with a 7 foot weathervane in the shape of a bear. This 4-story building serves as a retail store for Boyd's Bear Collectibles, houses their corporate offices, a museum and a food court to accommodate large bus tours.

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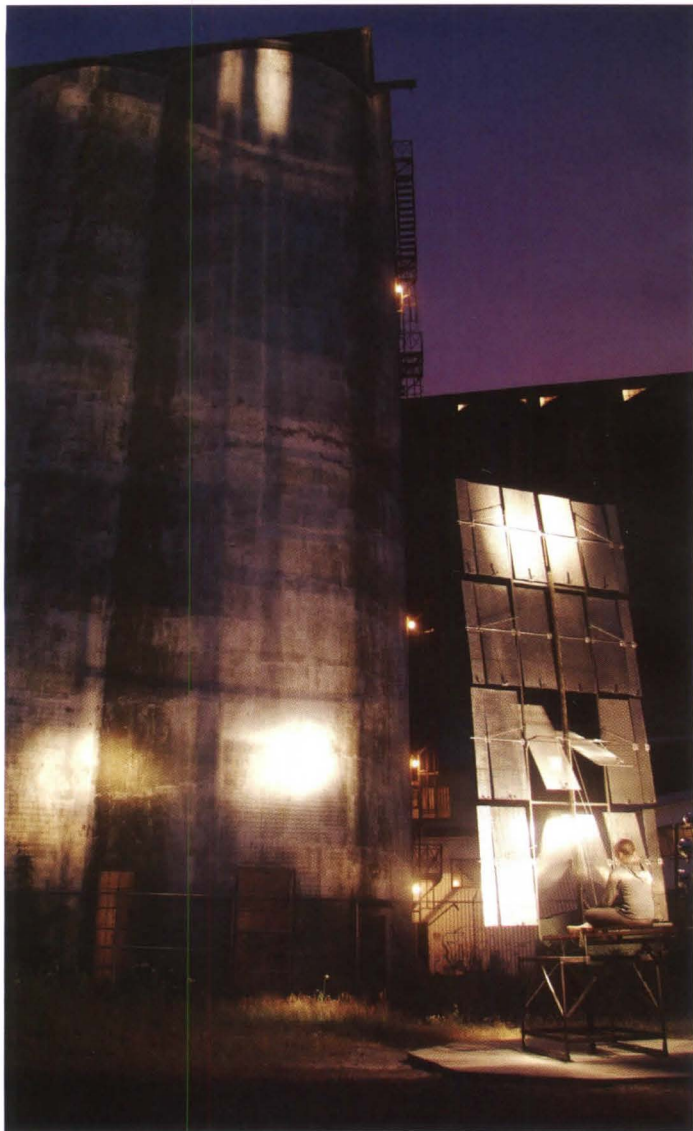


Highland Park, Illinois. By partnering with the Woodbridge Neighborhood Development Corporation and the Architectural Salvage Warehouse of Detroit, the school hopes to initiate a community program that can serve as a model for other cities.

Tim Gray, an assistant professor of architecture at Ball State University, collaborates with his undergrads on full-scale projects in more rural locales. Last spring, he and a group enrolled in an elective course revamped an 1870s shed located on a former farm in central Indiana. Influenced by the work of Gordon Matta-Clark and Robert Irwin, the piece, *milkHAUS*, is as much about the history of the site as it is about construction; students learned how to think abstractly *and* build. As if uncovering an archeological site, they carefully noted how the wood-framed shed was put together before crafting their intervention. The installation, a bridge made of wood recycled from the site, hovers four inches above the floor of the old structure. "The materials and fabrication inform the concept and vice versa," explains Gray. "Once any program in a conventional sense is stripped away, the students are forced to engage in the more poetic issues of the place."

Recently, Gray and a team of students from Dalhousie University in





DALHOUSIE UNIVERSITY ARCHITECTURE STUDENTS ENGAGE WITH *LIGHTSAIL*, PROJECTING DIFFUSED SHADOWS ONTO A STAND OF GRAIN SILOS (ABOVE AND LEFT).

Halifax, Nova Scotia, created their site-specific installation *LIGHTSail*. Viewers were asked to actively engage the piece by climbing into the steel armature hung with salvaged diffusers where floodlights project participants' shadows onto a backdrop of existing grain silos, giving a dramatic vision to the agricultural site.

Equally interactive, but with a high-tech twist, was the interdisciplinary class taught to a mixed group of grads and undergrads last semester by adjunct professor Jordan Geiger at the California College of the Arts. With a linguistic wink, the studio, named *On the Air*, describes both bulbous, pneumatic structures and digital video broadcasts made for iPods (page 36). Geiger asked the students to film the inflatable pods they designed. Then, using video-editing software, they worked that footage into podcasts, analyzing how that means of representation can be used to quickly disseminate design ideas. (The students' work is viewable on Apple's iTunes.) Although documenting architecture on film is not new, the mass accessibility of digital downloads provides a novel, and potentially even radical, way of seeing. □

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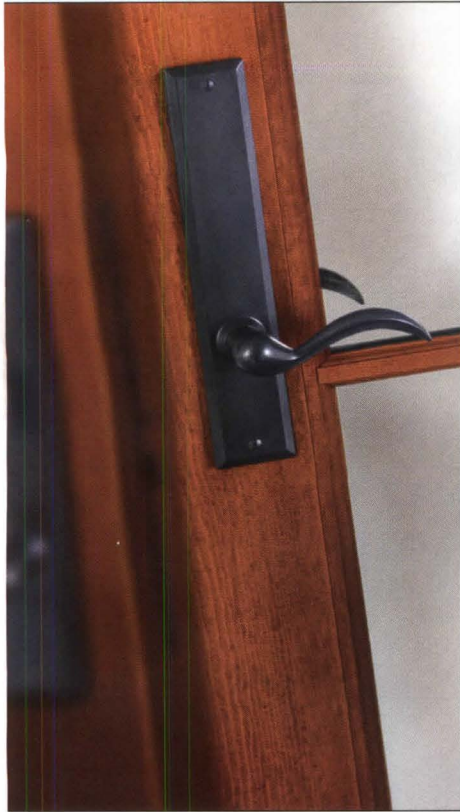
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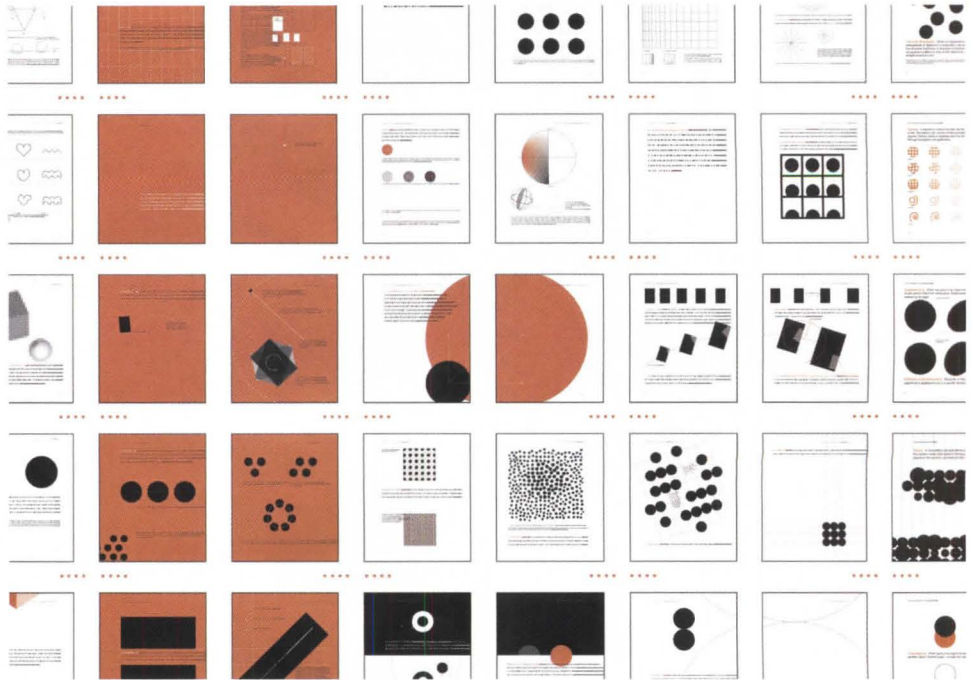


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*Princeton Architectural Press; 256 pages; \$29.95*

### FRAGMENTS: ARCHITECTURE AND THE UNFINISHED, ESSAYS PRESENTED TO ROBIN MIDDLETON

Edited by Barry Bergdoll and Werner Oechslin  
*Thames & Hudson; 392 pages; \$60*

### THE LANDSCAPE URBANISM READER

Edited by Charles Waldheim  
*Princeton Architectural Press; 296 pages; \$29.95*

### MATERIALS FOR DESIGN

By Victoria Ballard Bell with Patrick Rand  
*Princeton Architectural Press; 270 pages; \$50*

### TYPE HERESY/THE TEN COMMANDMENTS OF TYPOGRAPHY

By Paul Felton  
*Merrell Publishers; 80 pages; \$22.95; forthcoming October*

### THE UNIVERSITAS PROJECT: SOLUTIONS FOR A POST-TECHNOLOGICAL SOCIETY

Edited by Emilio Ambasz  
*Museum of Modern Art, New York City; 440 pages; \$34.95*

### VISUAL GRAMMAR

By Christian Lebourg  
*Princeton Architectural Press; 96 pages; \$19.95*





NADER KHALILI'S SUPER ADOBE, CONSTRUCTED FROM "THE MATERIALS OF WAR."

**DESIGN LIKE YOU GIVE A DAMN: ARCHITECTURAL RESPONSES TO HUMANITARIAN CRISES**

Edited by Architecture for Humanity

Distributed Art Publishers and Metropolis Books; 336 pages; \$35

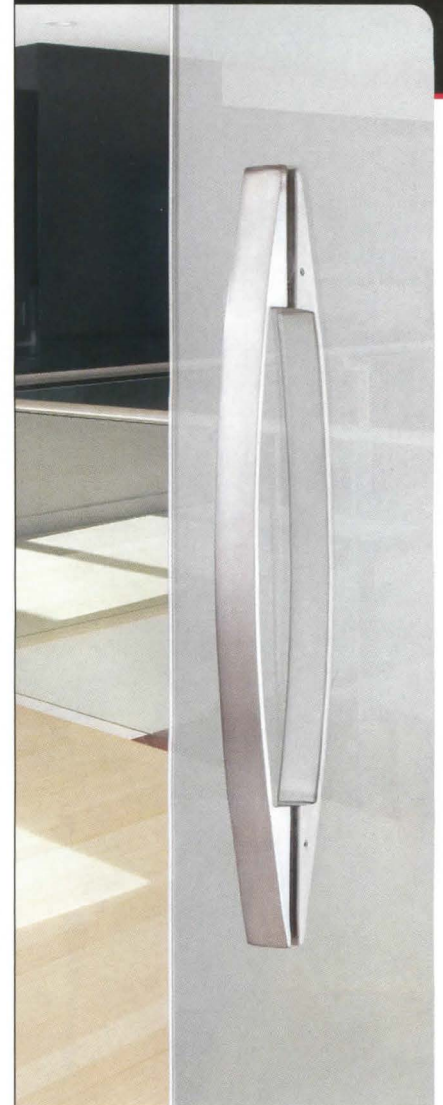
What if sustainability were a catchphrase for the treatment of the human race as well as architecture? Unlike most books about building, *Design Like You Give a Damn* is emotive. Edited by members of Architecture for Humanity, the nonprofit founded by Cameron Sinclair and Kate Stohr in 1999, the volume begins with Sinclair's personal account of how his small design group became an internationally focused organization, and Stohr's chronicle of architectural relief efforts over the past 100 years. The book's bulk, however, is devoted to an assemblage of recent humanitarian projects.

Organized according to the type of global issues they address, the featured interventions provide solutions in the face of great odds. Each series of projects is preceded by related statistics concerning the world's homeless and impoverished citizens; refugees of war, natural, and manmade disasters; the human casualties of redevelopment; AIDS sufferers; unempowered women; and people who have little access to clean water or sanitary facilities.

Relaying the perseverance of architects and community members in surmounting limited finances, bureaucratic obstacles, and site constraints, each structure illustrates innovation and determination: Super Adobe shelters by Nader Khalili were built with "materials of war"—sandbags, barbed-wire, and earth—by displaced Iraqis for the Baninajar Refugee Camp in Iran; and water-free toilets in India by Sergio Palleroni and the Global Community Studio collect solid waste for use as fertilizer and send liquid waste to gray-water systems to leech toxins.

As much as the book is a manifesto for building professionals, it also calls for such efforts to be realized through a participatory process. The inclusion of the communities addressed and the attention to local resources recalls a quote from the late Samuel Mockbee noted by Stohr in her introduction: "The professional challenge, whether one is an architect in the rural American South or elsewhere in the world, is how to avoid being so stunned by the power of modern technology and economic affluence that one does not lose sight of the fact that people and place matter." BY NATHALIE WESTERVELT

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# SPINNING YARNS

SHEILA HICKS'S STORYTELLING RELIES ON COLOR, TEXTURE, AND INTUITION.

BY JULIE SINCLAIR EAKIN PHOTOGRAPHS BY BASTIAAN VAN DEN BERG



*Sheila Hicks: Weaving as Metaphor*, on view at the Bard Graduate Center in New York City through October 15, deftly connects textiles and text, while investigating age-old ties between weaving and architecture, wherein warp and weft are equated with post-and-lintel construction. The artist, who studied painting under Josef Albers at Yale in the late 1950s, considers her hand-held loom "a page of inquiry" upon which she "writes her own invented language."

Approaching the 150 intimately scaled works (most about 6 by 9 inches, in keeping with her small instrument) feels like happening upon a stranger's extraordinary diary. Perhaps it's because her hand is so present, and we're able to view them up close, or Hicks's notation for each of where they were made; and certainly it's a function of some less conventional materials—tags from hospital pajamas belonging to her son, newspapers, shoelaces, cellophane noodles, stainless steel, and razor clamshells. More traditional fibers contributing to her abstract designs include cotton, silk, and wool.

Beyond referencing the arched doorways of Moroccan temples, or lighthouses encountered during her travels (Hicks began weaving after visiting Ecuador, Peru, Venezuela, Bolivia, and Chile on a Fulbright scholarship and keeps a studio in Paris), she also regularly displays the process of making in her work, often progressing simultaneously from top and bottom. *Constellations of Threads* is a meditation on darning, while the irregular forms of silk cocoons in another piece are evoked in alternating thin and thick weft threads.

In a thoughtful, 10-minute video accompanying the exhibition, Hicks speaks of her desire to further "intelligent play" in her art. She equates the resulting seamless integration of the utilitarian and purely expressive as an approach also undertaken by ethnologists, archaeologists, and architects. Honoring the quality and depth of Hicks's storytelling technique is an accompanying catalog, exquisitely designed by Irma Boom. It contains an essay by Columbia University professor Arthur C. Danto, who extends the metaphor of the exhibition's title to address weaving as a model for political thought, tracing the link to Plato—the kind of conflation of scale and chronology that reveals the capacity of the artist's work to resonate beyond time and place. ▢



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## OUT AND ABOUT



## EXHIBITIONS

### CHICAGO

#### SUSTAINABLE ARCHITECTURE IN CHICAGO: WORKS IN PROGRESS

Seven projects designed around eco-principles, including Studio/Gang/Architect's Ford Calumet Environmental Center (above). MUSEUM OF CONTEMPORARY ART [mcachicago.org](http://mcachicago.org) THROUGH JANUARY 6, 2007

### MIAMI

#### SHIMON ATTIE

Photographs and videos question corporate identity and national mythologies. MIAMI ART MUSEUM [miamiartmuseum.org](http://miamiartmuseum.org) THROUGH OCTOBER 8

### NEW YORK CITY

#### THE GOOD LIFE: NEW PUBLIC SPACES FOR RECREATION

Seventy projects explore current visions of leisure. VAN ALEN INSTITUTE [vanalen.org](http://vanalen.org) THROUGH OCTOBER 1

### WASHINGTON, D.C.

#### THRESHOLDS ALONG THE FRONTIER: CONTEMPORARY U.S. BORDER STATIONS

A showcase of new federal border stations. RONALD REAGAN BUILDING AND INTERNATIONAL TRADE CENTER [gsa.gov](http://gsa.gov) THROUGH OCTOBER 15

## EVENTS

### MULTIPLE LOCATIONS

#### NATIONAL DESIGN WEEK

Teaching how design thinking can be applied to public education. COOPER-HEWITT, NATIONAL DESIGN MUSEUM [ndm.si.edu](http://ndm.si.edu) OCTOBER 15-22

### PITTSBURGH, PENNSYLVANIA

#### NATIONAL PRESERVATION CONFERENCE

The National Trust for Historic Preservation's annual meeting focuses on green buildings. PITTSBURGH HILTON [nthpconference.org](http://nthpconference.org) OCTOBER 31-NOVEMBER 5

## COMPETITIONS

#### INFINITE STRIP 2006: APARTMENT BUILDING

An international competition addressing new forms of the residential unit. [arquitectum.com](http://arquitectum.com) REGISTRATION DEADLINE: SEPTEMBER 30


#### GALAPAGOS—ZERO LATITUDE: SUSTAINABLE URBANISM AND ARCHITECTURE

An international ideas competition exploring sustainable human settlements on the Galapagos Islands. [baq2006.com](http://baq2006.com) SUBMISSION DEADLINE: NOVEMBER 1

#### STUDENT DOOR DESIGN CONTEST

Students are invited to submit designs for residential front doors. [jeld-wen.com](http://jeld-wen.com) SUBMISSION DEADLINE: NOVEMBER 1





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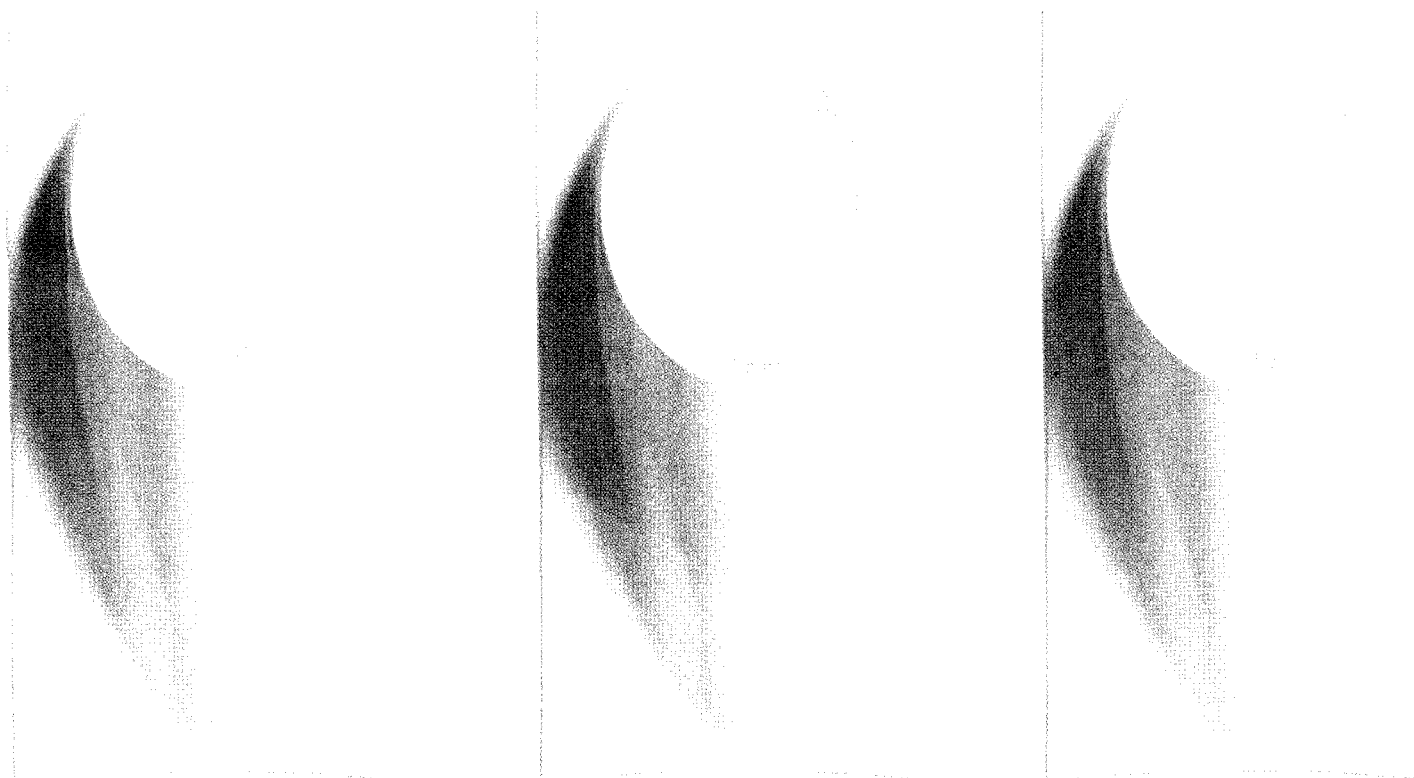
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KOHLER.COM

Not since Marcel Duchamp's *Fountain*, of 1917, forever changed our perception of the lowly urinal has the status of this iconic porcelain fixture been the focus of such debate.

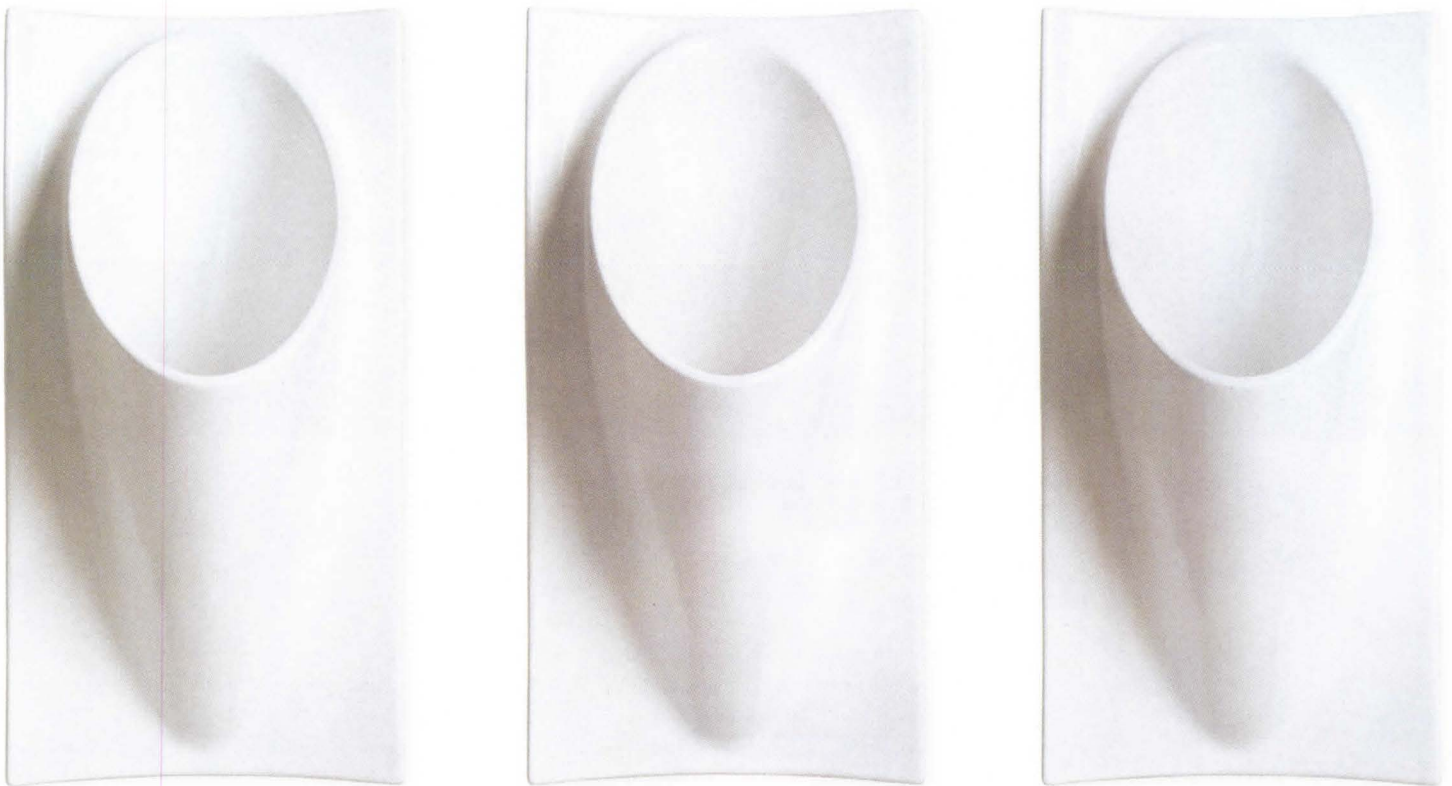
Waterless urinals are currently front and center in architecture's sustainability dialogue, garnering their adherents 3 of the 26 to 32 points required for certification as an ecologically sustainable structure by the U.S. Green Building Council. What promises to be the country's first LEED Platinum skyscraper, a regional Bank of America headquarters under construction near Times Square, is projected to save 3 million gallons of water annually (of 14 million total) by virtue of its no-flush urinals alone. Companies such as Kohler, which manufactures the pristine, sconcelike Steward (above), list sewage disposal and maintenance costs among further savings.



# STREAMS OF CONSCIENCE

THE GREENEST BUILDINGS ARE NOW FLUSH WITH WATERLESS URINALS.

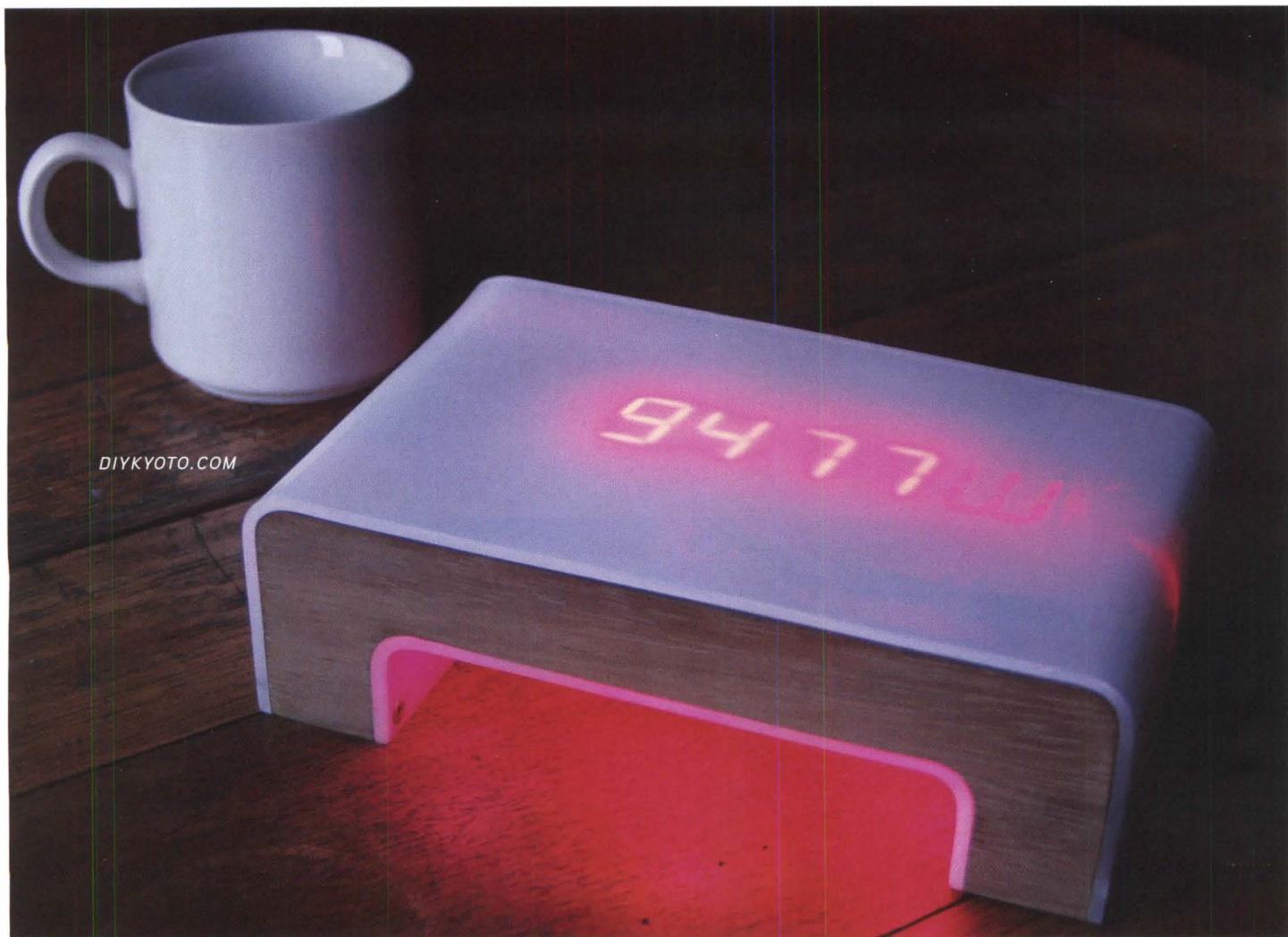
BY JULIE SINCLAIR EAKIN



But is the innovation too good to be true? In the past, the issue has been odor control. According to research developments, urine is supposed to contact a sleek, virtually splash-free surface and sink below a layer of oil designed to seal and purify the liquid, keeping unwanted fragrances at bay. A review of recent blog chatter reveals that supporters and detractors of this approach are fairly evenly divided, but manufacturers defend their wares, insisting that proper maintenance is the key. Most products are available for residential or commercial use; some come equipped with optional lids.

With a track record in some very distinguished buildings, including the men's rooms at India's Taj Mahal (which sports fixtures by Falcon), the tide is no doubt turning for waterless urinals. *FOR MORE INFORMATION, CIRCLE 121.*





## METERREADER

WATTAGE MONITORS ENCOURAGE ENERGY-EFFICIENT CHOICES.

BY KATIE GERFEN

DIY Kyoto's new wattage meter plays on the firm's namesake, the Kyoto Protocol, by challenging consumers to pick up the slack where their governments fail. With the Wattson, the London-based company encourages homeowners to take control of their energy use.

Unlike most wattage meters, which measure the power used by individual appliances, the Wattson offers a more complete picture. A sensor, placed at the home's power source, wirelessly transmits information to a paperback-sized, teak-and-acrylic unit (practicing what it preaches, the firm uses wood recycled from old school benches) with three modes of display: the total wattage being consumed (the number changes immediately when an appliance is turned on or off); the annual utility cost at the present rate of use; and a series of LEDs that pulsate in blue when energy draw is low and in red when high.

"When you discover that your television uses 10 to 20 times as much power as a radio," says Richard Woods, the DIY Kyoto cofounder on whose Royal College of Art thesis project the Wattson's circuitry is based, "it shifts your sensibilities to lower powered activities." Woods and his two partners are not alone in their thinking: Ryan Stroupe, building performance program coordinator at the tool lending library run by San Francisco's Pacific Gas & Electric reports that "without question, there are more customers borrowing power meters. I think the main driver is their utility cost. They want to know how they are using electricity and then take action."

The Wattson is currently available in Britain and is slated for manufacture in the United States next year.

FOR MORE INFORMATION, CIRCLE 122.



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Second Floor

First Floor

Ground Floor

Admission to Discharge

Current stages from admission to discharge

Proposed stages from admission to discharge

- Pink Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- Green Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- Blue Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- Yellow Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- Red Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- Orange Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- Grey Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- White Ward**  
Specialist services for patients with complex mental health needs, including forensic services.
- Black Ward**  
Specialist services for patients with complex mental health needs, including forensic services.

No Stages

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Stage One

Stage Two

Stage Three

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Length of stay for the average patient should be shortened in the proposed layout as confirmed by the clinical members of staff

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The background of the page is a complex architectural drawing. It features a prominent diagonal line that runs from the top left towards the bottom right. A series of red dots is arranged in a smooth, upward-curving arc across the upper half of the page. The drawing includes various geometric shapes, dashed lines, and a grid-like pattern, suggesting a technical or design context. The overall aesthetic is clean and modern, with a focus on geometric forms and lines.

# LESSONS

The ruler-straight line between teacher and student is often artificial. In the classroom, the hierarchical division is needed so that we stay in our seats until recess, but in the real world, the lessons that matter rarely involve a chalkboard. The complex task of thinking about and building architecture requires that we learn and teach simultaneously. In this issue we look at projects that are affiliated with education, but are also, by means of hands-on building or research, instructive processes. We begin with a transformation—painted in bright, broad strokes—of East Los Angeles' Aragon Avenue Elementary School. In our next story, a Parsons design-build studio responds to a Mississippi town's post-Katrina plight through the construction of a structure that presents much-needed information alongside another necessity, washing machines. A continent away, London architecture students traveled to Russia and methodically analyzed the frequently overlooked world of mental institutions before proposing enlightened changes to care facilities. The architects in our fourth article assembled an easily understood interface that puts a repair kit of basic needs—shelter, water, food, and sanitation—within the grasp of the world's poorest citizens. Finally, Diller Scofidio + Renfro's avant-garde oeuvre creates a foundation for the learning curve posed by the firm's first U.S. building. ▣



# paint by numbers

*An elementary school in Los Angeles provides a lesson in the economies of scale.*

by Alice Kimm *photographs by Benny Chan*

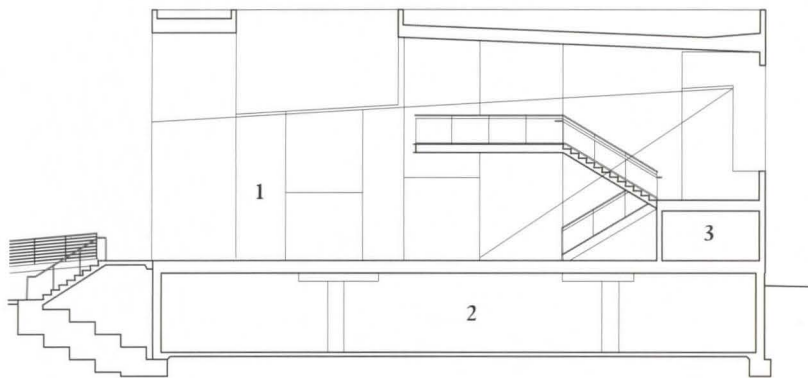
Through color and pattern our firm attempted to imbue the Aragon Avenue Elementary School expansion with a sense of play and formal dynamism. We didn't want it to be institutional or monumental; we wanted a place that's friendly, but not a cartoon. Built for \$167 per square foot, the project, part of the \$19.3 billion school-building program undertaken by the Los Angeles Unified School District in recent years, has three distinct components: a three-story, 32,800-square-foot bar-shaped building that contains parking in addition to 16 classrooms; a 1,500-square-foot freestanding kitchen; and a 3,000-square-foot open-air lunch shelter.

Early on, we realized that our exterior material palette would be cement-plaster and paint, due to budget constraints. Given these limitations, we looked to the neighborhood for inspiration. The school sits in a valley below Mount Washington in the Cypress Park neighborhood of Los Angeles; it is a beautiful setting. The immediate context is made up of small and colorful single-family bungalows that have views of mountains, palm trees, and sky. We painted the building in hues and shapes that respond to these environmental cues. This treatment not only breaks down its scale, but also makes the school cohere with its smaller neighbors. □

A DEFINING FEATURE OF THE CLASSROOM BUILDING IS ITS ENTRANCE PORTAL, WHERE THE WALLS ARE ALIGNED WITH A SLOT OF SPACE THAT SERVES AS THE MAIN APPROACH TO THE STRUCTURE. IN ADDITION TO CREATING A SENSE OF ARRIVAL, THE ENTRYWAY ALSO CONTAINS A STAIRCASE; ITS LANDING OFFERS STUDENTS A DRAMATICALLY FRAMED VIEW OF THEIR NEIGHBORHOOD.







- 1 *entrance portal*
- 2 *parking garage*
- 3 *storage*

transverse section through entry ——— 10'

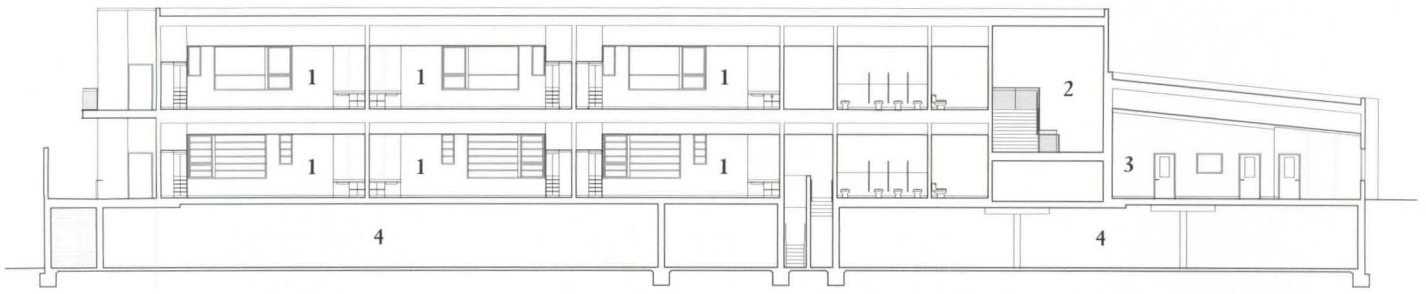
PROJECT: Aragon Avenue Elementary School Expansion, Los Angeles, California CLIENT: Los Angeles Unified School District ARCHITECT: John Friedman Alice Kimm Architects, Los Angeles—John Friedman, Alice Kimm (principals); Leigh Christy (project architect); Elif Tinaztepe, Dan Brunn, Bianca Siegl (project team) ENGINEERS: William Koh & Associates (structural); Han Engineering (M/P); Pacific Engineers Group (electrical); JMC-2 Consulting Engineers (civil) GENERAL CONTRACTOR: George C. Hopkins Construction LANDSCAPE ARCHITECT: Mia Lehrer & Associates AREA: 37,300 square feet COST: \$6.2 million SPECIFICATIONS: page 92











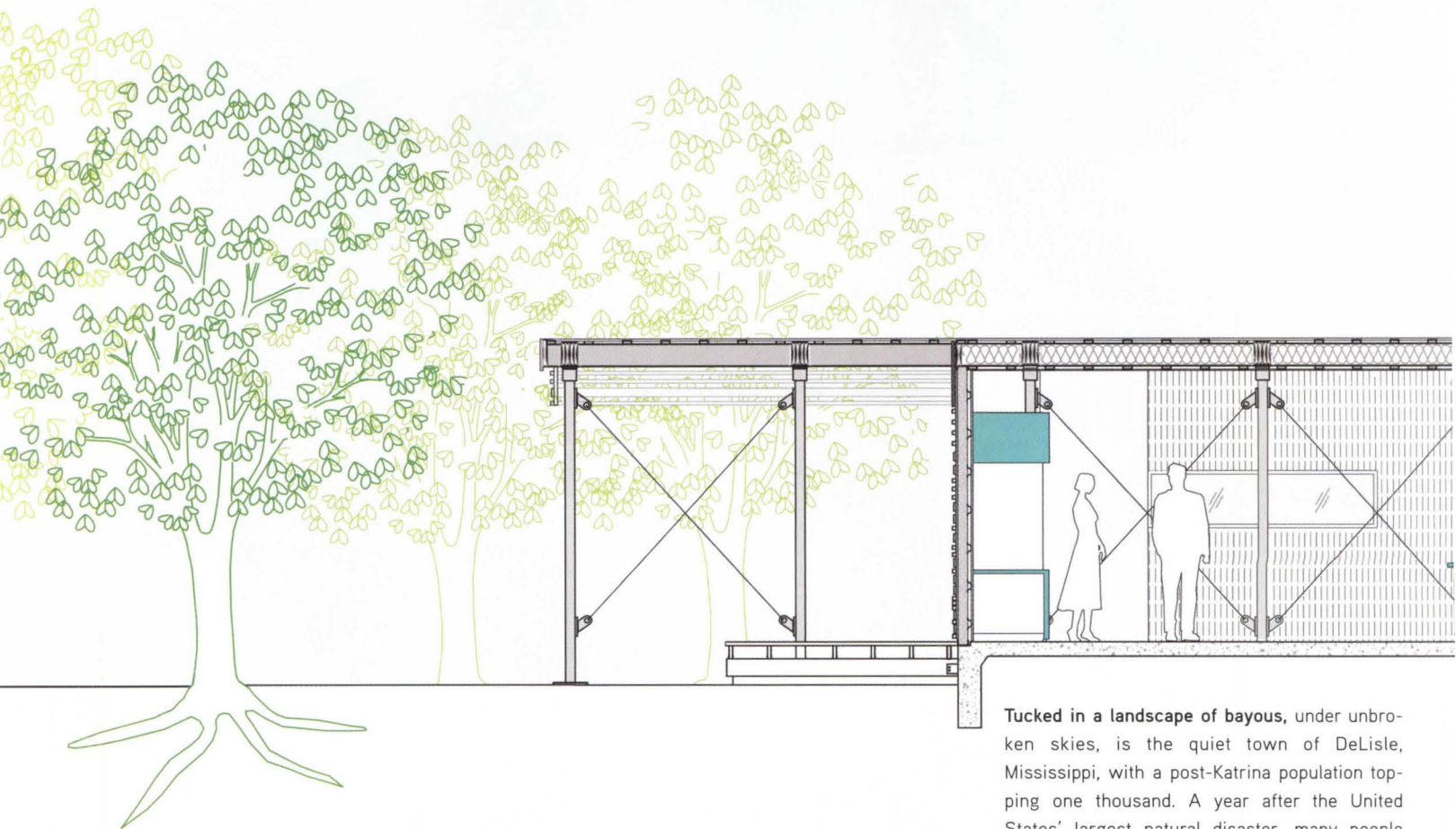
longitudinal section ——— 12.5'

- 1 *classroom (grades 1-5)*
- 2 *entrance portal*
- 3 *kindergarten classroom*
- 4 *parking garage*

THE SITING OF THE NEW STRUCTURES BRINGS COHERENCE TO A PREVIOUSLY UNDERDEVELOPED MASTER PLAN. THE SCHOOL'S EXISTING L-SHAPED BUILDING IS EXPANDED INTO A "U" WITH THE ADDITION OF THE CLASSROOM WING, WHICH GIVES NEEDED DEFINITION TO A CENTRAL UPPER COURTYARD. THE KITCHEN AND LUNCH SHELTER ARE PLACED IN RELATION TO SEVERAL SMALLER EXISTING STRUCTURES TO CREATE A SERIES OF OUTDOOR ROOMS.







## WASH AND DRY

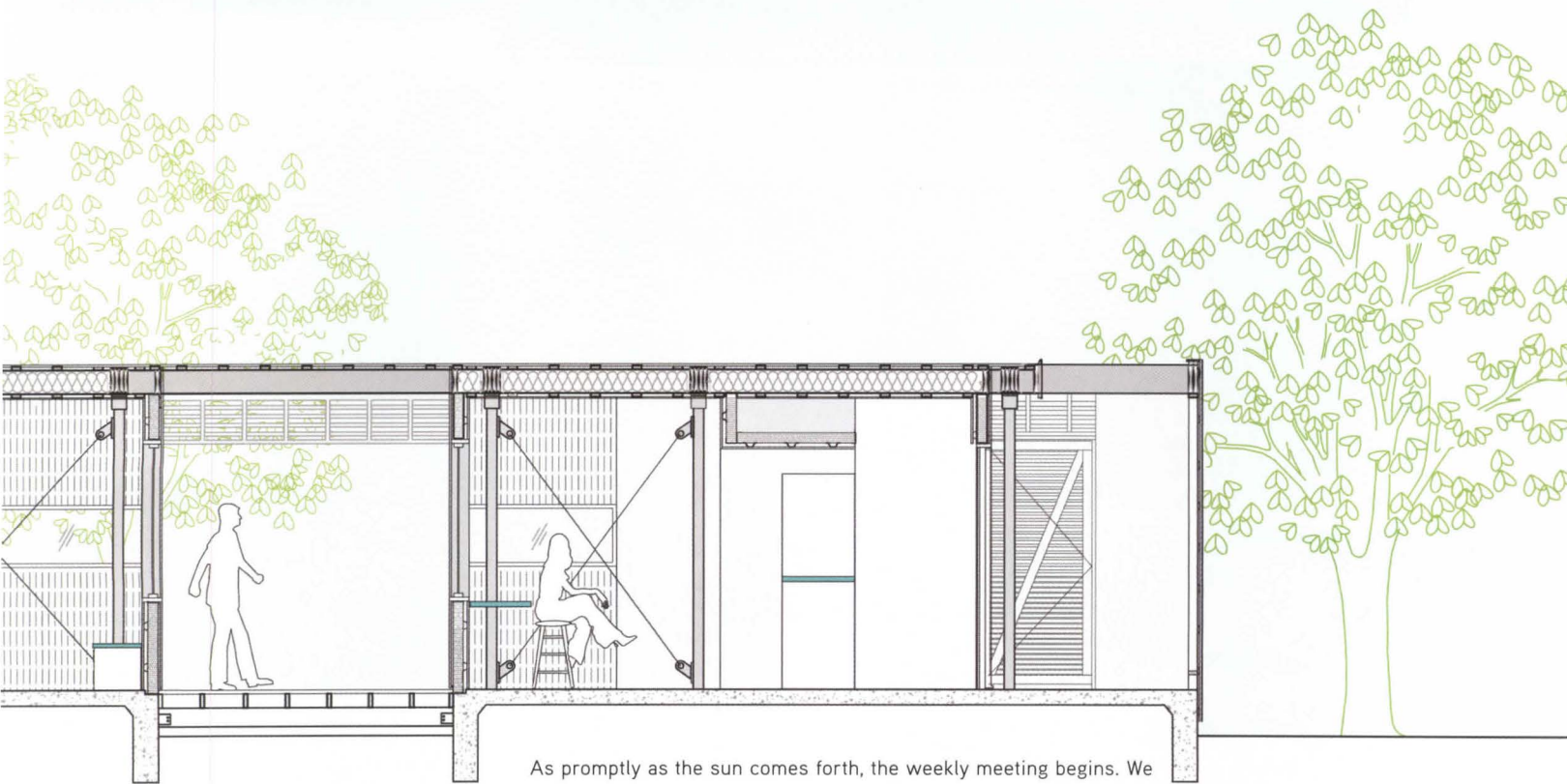
*A design-build studio from Parsons offers post-Katrina relief in Mississippi.*

by Dominique Gonfard *photographs by Laura Lyon*

Tucked in a landscape of bayous, under unbroken skies, is the quiet town of DeLisle, Mississippi, with a post-Katrina population topping one thousand. A year after the United States' largest natural disaster, many people here remain on their property, remembering homes flattened by a storm surge that brought unimaginable destruction. The stretches of lawn are now commonly scattered with narrow, sterile FEMA trailers, with regrettably few windows to properly appreciate the surroundings.

At dawn on a warm August morning, residents of DeLisle remain unseen. But myself and 12 other architecture students from New York City have already unloaded our tools and put on hardhats, as per our daily routine. Since late June, the Design Workshop, a second-year studio at Parsons The New School for Design, has been constructing 39571 *InfoWash*, a Laundromat and information center designed the previous semester. Comprised of 12 graduate students, one undergraduate, and two instructors, all stationed in donated trailer homes, only a few of the group had prior knowledge of life on a construction site. From January through August, the Design Workshop presented us with a crash course in the profession, from site analysis and design to the specification of materials and the realities of budget constraints, finally offering the ultimate reward: seeing our vision manifest, from first sketch to final fastener.





As promptly as the sun comes forth, the weekly meeting begins. We need to resolve a critical roof detail, one that would slightly alter the design but could ultimately speed up the construction process—never a bad idea for a building with a two-month timeframe. Specifically, should the final bay of sleepers be adjusted to gradually eliminate the drainage slope, and thereby avoid the slim possibility of exposing a ridge? By 7 a.m., after consideration of our technical capabilities and scheduling realities, we decide to maintain the ridge for now, but to examine a third possibility: exposing the joists in the final bay (an unconditioned space), thus adjusting the design to play off the already visible joists in the breezeway. Such a change would reinterpret the original intent in a way previously unconsidered.

Envisioned by client and DeLisle native Martha Murphy, the program of *39571 InfoWash* began with her desire to create a place that could meet both the physical and emotional needs of her community. A brief was developed to combine everyday services with more temporary, rehabilitative ones. A design-build studio program launched in the mid 1990s as part of Parsons' commitment to design as a social practice, the Design Workshop has collaborated annually with a variety of nonprofit organizations and public agencies known for engaging urban issues, from green space and education to recreational activities for children, with *39571 InfoWash* the first to occur outside of the New York City area. Design Workshop members met Murphy when a former student visited her just six days after Katrina on behalf of SHoP Architects, which constructed a temporary business incubator, *39571 Project*, that shares the site, and the zip code reference, of *39571 InfoWash*. It was immediately clear that the potential existed for a productive relationship between Murphy and the Design Workshop; the two projects now stand as proof of that collaboration.

The design development of *39571 InfoWash* began under the studio direction of David J. Lewis, a principal of New York City-based firm Lewis.Tsurumaki.Lewis and director of Parsons Graduate Program of











Architecture, and with the guidance of Peter Wheelwright, then chair of the department. Taught in conjunction with a construction technology class, we began designing individually, quickly moving into groups of two, and later four. By late March, talks with contractors and a structural engineer had begun.

A 2,000-square-foot freestanding building with 900 square feet of interior space, 39571 *InfoWash* gained its form from the program's dual role as refuge and information exchange. Beginning at the foundation and moving into the roof is a solid eastern façade of perforated aluminum edged by a fascia of sheet aluminum. Together, they form a protective layer around the cedar wall siding, horizontally encasing the Laundromat and information center. The storefront, on the south face, is left open, while a luminous north façade glows at night to face a stretch of undeveloped forest.

Nearing construction, a significant responsibility we faced was to specify materials, from the sizing and grade of lumber to the opacity level of the Polygal walls—critical in creating the “lightbox” effect desired for the building's north façade—to the choice to employ SIPs (rated for winds up to 150 miles per hour). Post-Katrina, this was more than a question of design value and cost; availability and accessibility were more critical than ever. Local distribution from the south, usually easier on shipping costs yet riskier time wise, had to be avoided when possible. Ultimately, shipments were broken up, with some materials sent directly to Mississippi and others to Parsons in Manhattan, in order to minimize scheduling difficulties.

On-site construction began with the erection of 18 four-inch-square steel columns set onto a recently poured concrete slab, with each column positioned by eight or ten students. From sawhorses, they were raised manually, and in the heat of the afternoon, as the frame of the structure began to form, the demands and rewards of two months to follow were foremost in the minds of all present.

Student involvement in every aspect of the project and its setting was critical to its success. In DeLisle, we were accepted as members of the community, a reminder of the active involvement of numerous volunteers during the year following the storm. The responsibility inherent in the Design Workshop ensures an understanding of architecture as a discipline realized through a complex, functioning structure. No longer restrained to expression through graphics and models, we understood the role of the architect to be that of a director of detailing and consistency—a participant in all aspects of the craft. □

PROJECT: 39571 *InfoWash*, DeLisle, Mississippi CLIENT: Martha Murphy, Mississippi Katrina Fund, DeLisle Corner ARCHITECT: The Design Workshop, Parsons The New School for Design, New York City—David J. Lewis (studio instructor), Terry Erickson (summer studio instructor), Joel Stoehr (summer staff), Huy Bui, Ivan Chabra, Sarah Coffin, Christian Eusubio, Dominique Gonfard, Kailin Gregga, Dominic Griffin, Parker B. Lee, Laura Lyon, Kip Katich, Nora Meehan, Shana Sandberg, Emily Wetherbee (students) ARCHITECT OF RECORD: ShoP Architects, New York City ENGINEERS: Dunne & Markis Consulting Structural Engineers (structural); Compton Engineering (structural, civil); Hargrove and Associates (M/E/P) SUBCONTRACTORS: T & K Trucking (foundation); Culbertson Contractors (windows) AREA: 2,000 square feet SPECIFICATIONS: page 92





4

2

1

3

plan ——— 3.5' ⊕

- 1 office
- 2 waiting room
- 3 laundry
- 4 future parking



# mind matters

London students analyze the architecture of mental illness.

by Mimi Zeiger

Can the collision of healthcare and architecture really be analyzed? Markus Miessen and Matthew Murphy posed this question at the start of the undergraduate course they taught at the Architectural Association (AA) in London last year. Design studio briefs often cover a range of programs—housing, libraries, train stations—yet few tackle the difficult challenges of the mental health institution. The professors' query provoked the students to go beyond a formal study and to probe all aspects of the hospital environment, including the dark, but very real, details of everyday life in a mental ward—subjects such as suicide prevention and patient restraint.

Their course of study spanned three terms and began with a trip to Russia—an immersion in the bleaker histories of mental illness. Miessen and Murphy organized an informal meeting with the nonprofit Center for Curative Pedagogics, a Moscow-based organization that provides humane treatment for children with mental and physical disorders. The group provides an alternative to the notoriously prisonlike care under the Soviet regime. Additionally, the students toured a hospital in North Moscow that was never completed and is now used as a military training ground—a structure illustrating the impoverished nadir of Russian healthcare facilities.

Once back in London, the 10-person studio spoke with a host of professionals—National Health Service psychiatrists, ward managers, and staff from the Center for Forensic Mental Health at the local Homerton Hospital, architects specializing in healthcare buildings, and potential users—in order to craft their individual research and responses. Freda Yuen's project (right), for example, is titled "Conflict Prevention in Mental Health Wards." Using the staff/patient relationship as a way to mediate potential self-harm and violent conflict in the wards, she pinpointed how not only the ward manager, but also the prevalence of *antisuicide fixtures*, can influence the architectural



**PREVENT Using Building Component as a Weapon**

**HEAVY DUTY GLASS**  
The glass could shatter, give easy access to patients / breaking as well preventing the use fragments as weapons  
For this reason, a special heavy-duty armor that gl should be used with 1 double or triple glass i



A wall personal alarm and call system installed. Reception desks and walls for the system should be discrete. In all warning and repair panels should report to building management via **PERSONAL ALARM**



**PREVENT Using Building Component as a Weapon**



**PREVENT Using Building Component as a Weapon**

**WARD MANAGERS' INPUT: CULTURAL PAINTINGS**



**INFRA-RED ALARM RECH**



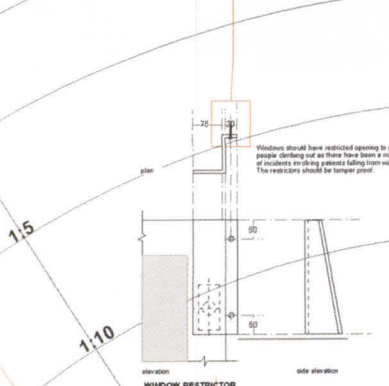
**Prevent Self Ha from Ligatur**



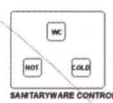
**Bianca Cheung**  
Architectural Assistant for the Mile End Hospital



ANTI-VANDAL SCREWS



Prevent Self Harm from Ligature



PREVENT TAMPERING with existing furniture



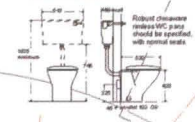
PREVENT Using Building Component as a Weapon



SHATTER PROOF MIRROR



Coffers should be removed and all access to raw and cables should be being security headed covers. Care should be taken to prevent any exposed connections of duct, materials and substances.



ANTI-LIGATURE SINK AND TAP



The window sill enables patient from the window when seated in a chair

It is also important to note that the lower edge of the window sill should be specified whether the glazing will stay in place after the glass has broken. This may be important if the window must prevent access or escape as not being broken.

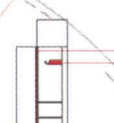
1:150

Attention should be paid to providing good quality lighting fixtures, colours, lighting and furniture



Bedroom doors should have vision panels to allow accurate observation of patients from the corridor. In particular, the patients upper body and head should be visible from outside the room through the vision panel at all times.

ANTI-LIGATURE CLOSET

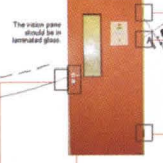
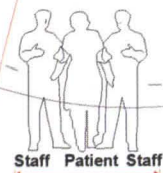
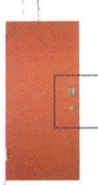
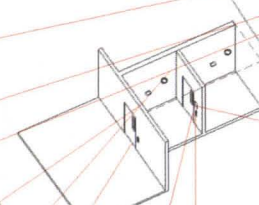


Fixtures or fittings such as curtain rails or coat hangers, which could be used for attempts at self-harm, use low-weight bearings. They also needs to be balanced against any risk arising from the breakage or collapse of the fittings rather accidentally or through deliberate action.



# Camden and Islington Mental Health and Social Care Trust Facilities Department

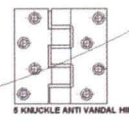
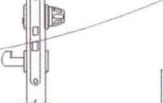
In function being to personal space from body which will not



CEILING LIGHT



If patients are allowed to lock rooms, by thumb turn operated locks for instance, designs should include clutch operation within the lock to facilitate the opening of the lock by staff with a key from the outside.

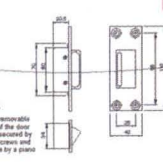


Prevent Self Harm from Ligature



REMOVABLE DOOR STOP FOR 2-WAY DOORS

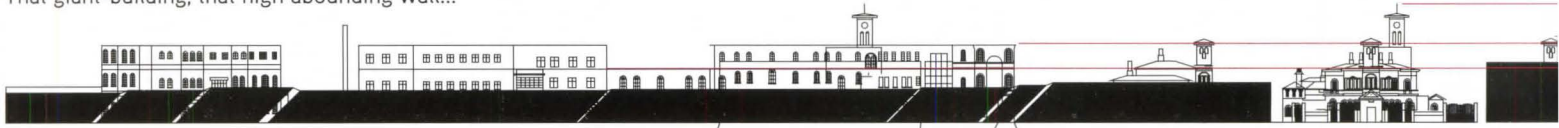
This can be achieved by using a removable door stop on the back cover side of the door frame. Such a system should be secured by staff operated allen key headed screws and remain attached to the door frame for a longer time.





"IT'S A PRISON WITH A Milder NAME..."

That giant-building, that high abounding wall...



Those gates and locks and all those signs of power



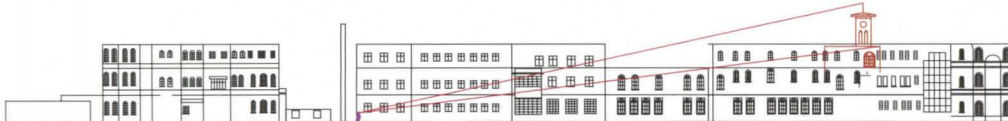
Cells barring the windows of the psychiatric intensive care unit

Padlocks placed on the patient gardens

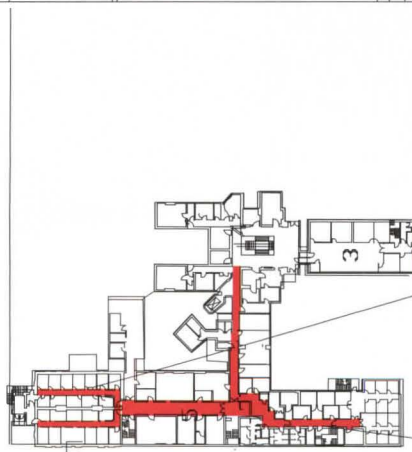


Principal Campanile Tower

That large loud clock, which tolls each dreaded hour



Those bare-worn walks, that lofty thund'ring hall!"



3 long, dark and narrow corridors located within the wards

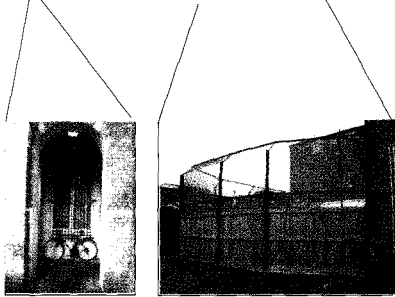


environment. Her proposal advocates both policy and spatial changes, specifically recommending a variety of modifiable public and private zones.

Stephanie Edwards's work (left) analyzes East London's St. Clements Hospital, a building that opened in 1849 as a Poor Law Union workhouse and was perceived, as Crabbe, a 1906 inmate wrote, "as a prison with a milder name." Her project looks at how the architecture, designed for one purpose, affects how the hospital operates today. She created timetables that chart when and how spaces are active—the first tracks the staff's structured agenda for the patients, another reveals the patients' actual schedule. Via small changes like the elimination of formal uniforms, Edwards's study challenges the existing staff, patient, and visitor relationships as influenced by the institutional environment.

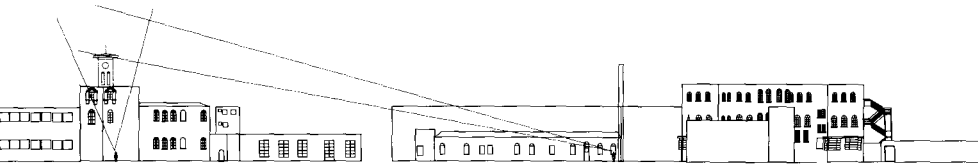
Since many of the projects defied typical architectural representation, Miessen and Murphy asked the class to produce charts and drawings in order to represent the complex, and often personal, aspects of the research. "The students were encouraged to somehow visualize their immersion in their chosen environments. We pushed Freda to investigate the mechanisms of change in a particular ward, in order to fully understand the logistics of the place and people she worked with," Miessen explains. "This, of course, requires a very particular way of drawing. If you are not talking about a drawing that reveals the structural thickness of a wall, but about a drawing that reveals the relationship of how people interact with one another or how components make up an environment, you have to invent your own visual representation."

The year-long studio culminated in a round-table discussion at the AA, rather than the traditional jury review. Students sat down with the professionals who were consultants during the term and were joined by artists, architects, and theorists including Serpentine Gallery co-director, Hans Ulrich Obrist. The result was a probing dialog that proposed shifts in the mental institution paradigm and opened up that insular world to architectural possibilities. □



Room 2 window on the ground floor

Psychiatric care unit surrounding psychiatric care unit



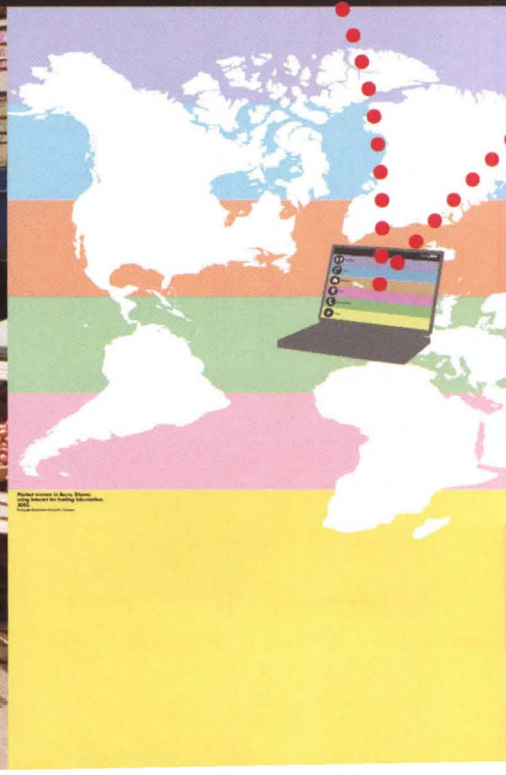


# SHARE AND SHARE ALIKE

*At the root of technological advancement lies the challenge of attending to basic needs.*

by Julie Sinclair Eakin photograph by Lyle Ashton Harris

World population: 40% lack basic sanitation, 17% lack safe drinking water, 15% lack a laptop. **LivingKit** is a knowledge-distribution system that enables poor communities around the world to share existing knowledge and provide the basis for the development of local expertise.





*Open House: Intelligent Living by Design* is on view at the Zollverein World Heritage Site in Essen, Germany, until December 2. Highlighted among recent innovations in the domestic realm are the efforts of 16 architects and designers commissioned to develop real-life technological solutions to contemporary dwelling issues. The criteria for proposals included addressing connectivity, well-being, sustainability, and flexibility.

Los Angeles-based Escher GuneWardena Architecture departed from the formal exercises exhibited by colleagues, featuring curvilinear forms and Teflon-like materials, and challenged the program altogether by applying the required standards to people for whom advanced technology is ephemeral at best: the 17 percent of the world without access to safe drinking water, 40 percent lacking sanitation, and 31 percent with no electricity. The firm's resulting *LivingKit*, an information-sharing system, provides online instructions for low-tech solutions to problems rampant within various cultures worldwide.

With the assistance of sustainability consultant John Ingersoll and sources such as UNICEF, principals Frank Escher and Ravi GuneWardena identified six basic needs requiring urgent attention: food, shelter, water, sanitation, energy, and communication. In the water category, for example, one finds a recipe, communicated in photos and diagrams, for solar purification of tainted water: Clear plastic bottles filled with water are placed on metal surfaces such as corrugated roofs and exposed to a full day's sunlight, after which the contents are potable. Affordability, availability of materials, ease of do-it-yourself production, and sustainability determined the dozens of solutions offered.

The partners view their contribution as an ongoing learning tool, one that may also benefit their typically well-heeled clients. "In an industrialized society, people are accustomed to relying on existing infrastructure to be able to simply plug-in to satisfy their basic needs. Ease of access often leads to wastefulness and apathy toward the environment. There are probably some lessons to be learned from those who truly get by with the minimum."

*Open House* was organized by the Vitra Design Museum in Weil am Rhein, Germany, and the Art Center College of Design in Pasadena, California. *LivingKit* is expected to be in service by the end of the year. To view the project online, see [egarch.net](http://egarch.net)

er, 36% lack safe fuel for cooking, 65% lack telecommunications, 31% lack electric power  
to access the myriad available solutions for these shortages. It would organize and  
mentation. Its purpose is to help people with harsh living conditions improve their situation.

*LivingKit* brings together simple technological advancements from around the world. A sampling:

Through exchange posts at aid organizations, schools, and community centers, a digital network would connect people and their solutions in one place to others in need throughout the world. Increasingly affordable cell phones, computers, and hand-held communication devices can ease the dissemination of information even to the most remote rural areas.

A user would recognize a need, identify the locally available materials, and arrive at a solution from the *LivingKit* catalog in the network. Many solutions employ "low technology" materials and "do-it-yourself" methods of production.

The current norm for distributing technology expends a great deal of energy on the transportation of centrally-produced goods: a heavy system. *LivingKit* is a light system, providing digital blueprints for local production, with a minimum of materials coming from afar.



sanitation

composting  
improved pit latrine  
sewage treatment



water

harvesting  
transporting  
processing  
storing



shelter

earth  
plant  
fabric  
paper  
composites



food

preparing  
processing  
storing



communication

telephone  
radio  
computer  
television



energy

solar  
hydro  
wind  
biogas



Most of the solutions in *LivingKit* do not rely on infrastructure, which is usually lacking in rural and urban poor communities. Services such as water access, sanitation, and energy can be managed individually or by small communal groups less dependent on government aid.

Once introduced to a community these solutions are mostly self-seeding, providing prototypes easily replicated by those who come into contact with them.

We have the knowledge to enable a better future for more people. Our aim is to share that knowledge.



# NOW ON VIEW

by Mimi Zeiger  
photographs by Flavio Stigliano

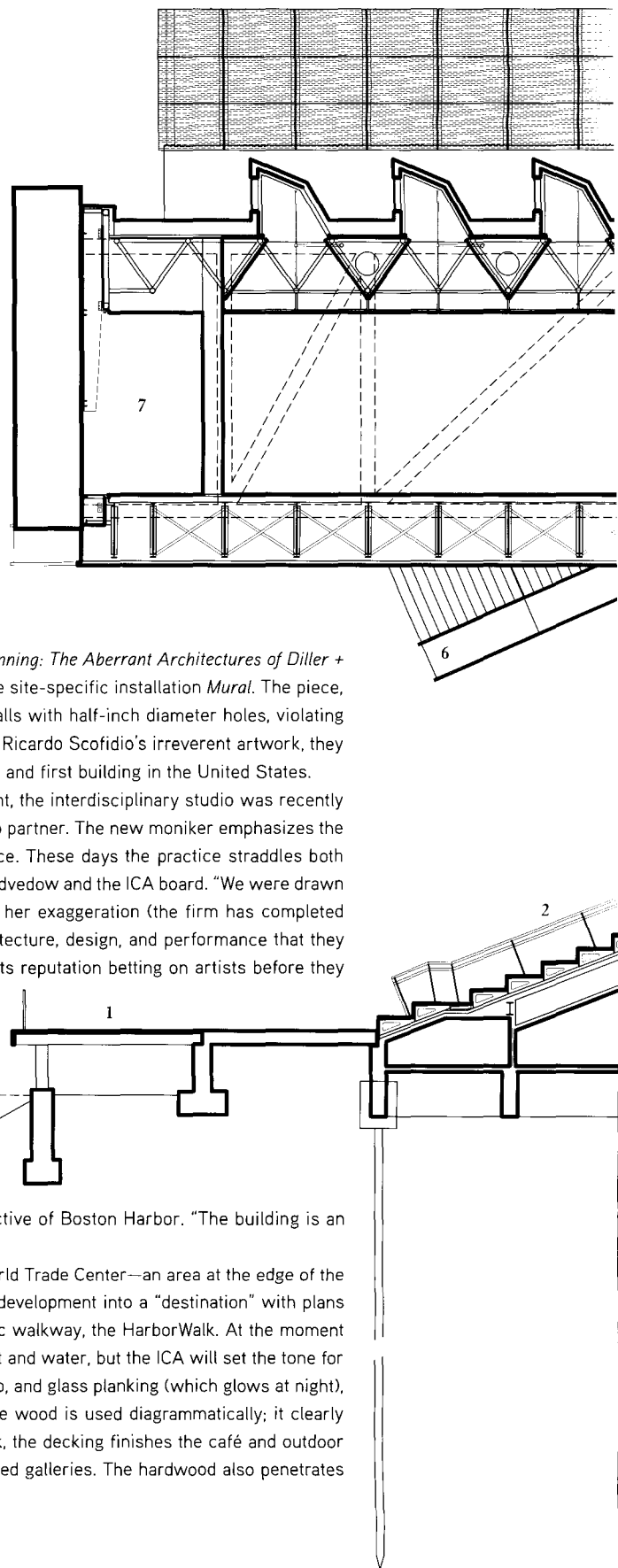
*Diller Scofidio + Renfro's first U.S. building reframes the contemporary art museum.*

In 2003, when the Whitney Museum of American Art in New York City exhibited *Scanning: The Aberrant Architectures of Diller + Scofidio*, the firm responded to the institutional constraints of the retrospective with the site-specific installation *Mural*. The piece, a robotic drill rigged to a track, was programmed to randomly puncture the gallery walls with half-inch diameter holes, violating the sanctity of that classic white backdrop. A year and a half after Elizabeth Diller and Ricardo Scofidio's irreverent artwork, they broke ground on Boston's Institute of Contemporary Art (ICA), the firm's first museum and first building in the United States.

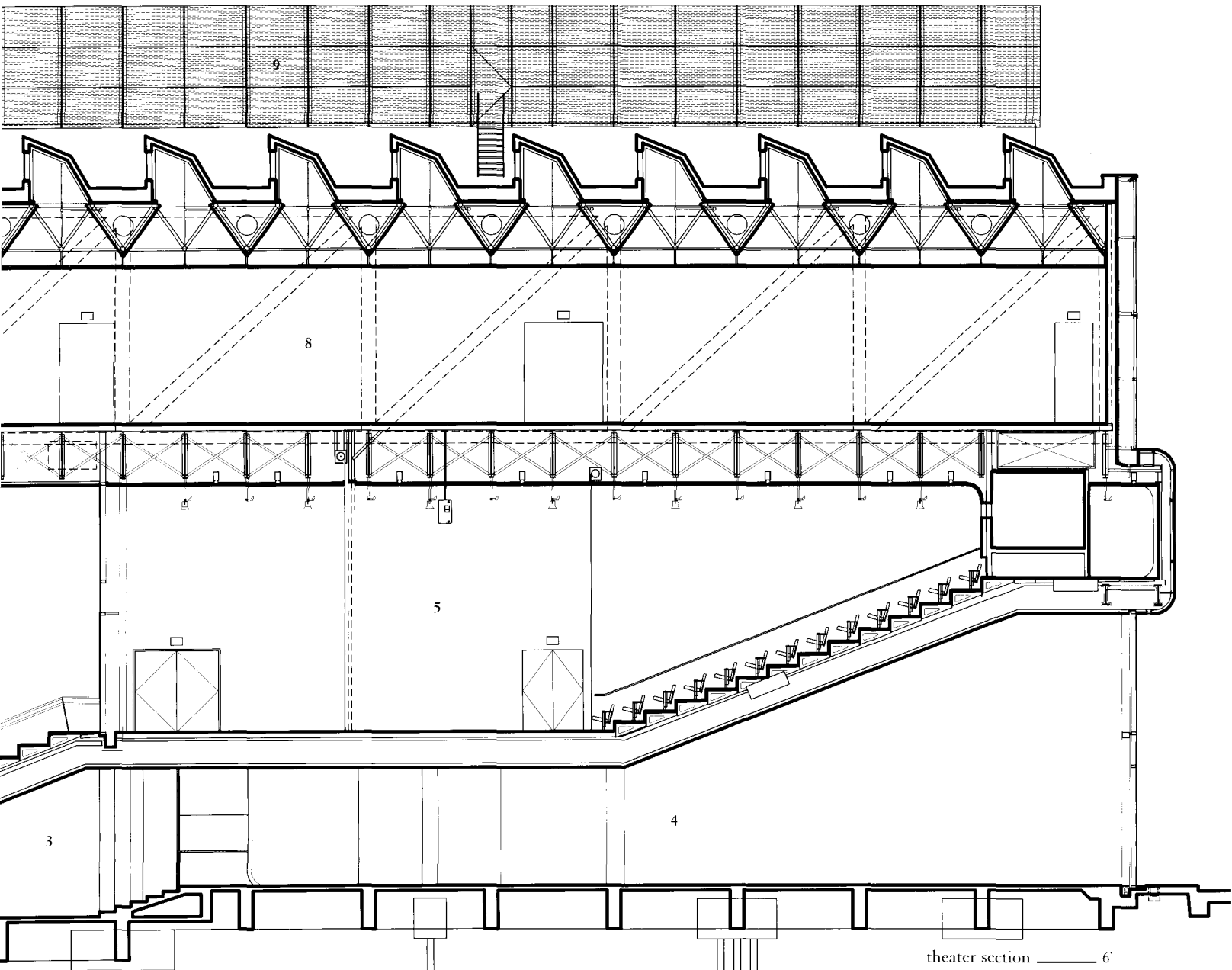
Long-regarded as artist/architects or architect/artists, depending on your viewpoint, the interdisciplinary studio was recently renamed Diller Scofidio + Renfro to reflect the promotion of architect Charles Renfro to partner. The new moniker emphasizes the firm's ongoing transformation from a dynamic duo to a more open, collaborative office. These days the practice straddles both sides of the professional aisle and it is precisely this duality that enticed director Jill Medvedow and the ICA board. "We were drawn to them because they seemed brilliant, deserving, and *unbuilt*," she said, laughing at her exaggeration (the firm has completed structures in Switzerland and Japan). "They had so many ideas in the areas of architecture, design, and performance that they were an apt fit to the ICA. We have a long history of being an institution that makes its reputation betting on artists before they enter the canon. We felt comfortable taking a risk."

Hiring a firm with a limited construction track record and one that critiques the art world would seem chancy if it weren't for the clarity of Diller Scofidio + Renfro's scheme. The act of seeing—be it a theatrical performance, through a camera lens, or a prying surveillance video—is the major "preoccupation," to cite Diller, that traces through the office's diverse work. Powerfully expressed at the ICA, the structure serves as a viewing mechanism for both art and the environment, mediating a sweeping perspective of Boston Harbor. "The building is an extension of the eyes. It is sight specific," quipped Renfro.

The museum is sited on South Boston's Fan Pier, one parking lot away from the World Trade Center—an area at the edge of the city's financial district that is prime for tourism. The waterfront is slated for massive development into a "destination" with plans for the requisite coterie of retail and entertainment outlets threaded together by a civic walkway, the HarborWalk. At the moment the building seems like a boxy sculpture sandwiched on a bit of landfill between asphalt and water, but the ICA will set the tone for the neighborhood's evolution. The façades are primarily clad in aluminum panels, stucco, and glass planking (which glows at night), while Santa Maria, a South American hardwood, wraps many horizontal surfaces. The wood is used diagrammatically; it clearly demarcates spaces that are linked to the public realm. An extension of the HarborWalk, the decking finishes the café and outdoor grandstand, an informal gathering and performance space located under the cantilevered galleries. The hardwood also penetrates







theater section — 6'

- 1 HarborWalk
- 2 grandstand
- 3 bookstore
- 4 lobby
- 5 theater
- 6 Mediatheque
- 7 Founders' Gallery
- 8 gallery
- 9 mechanical equipment





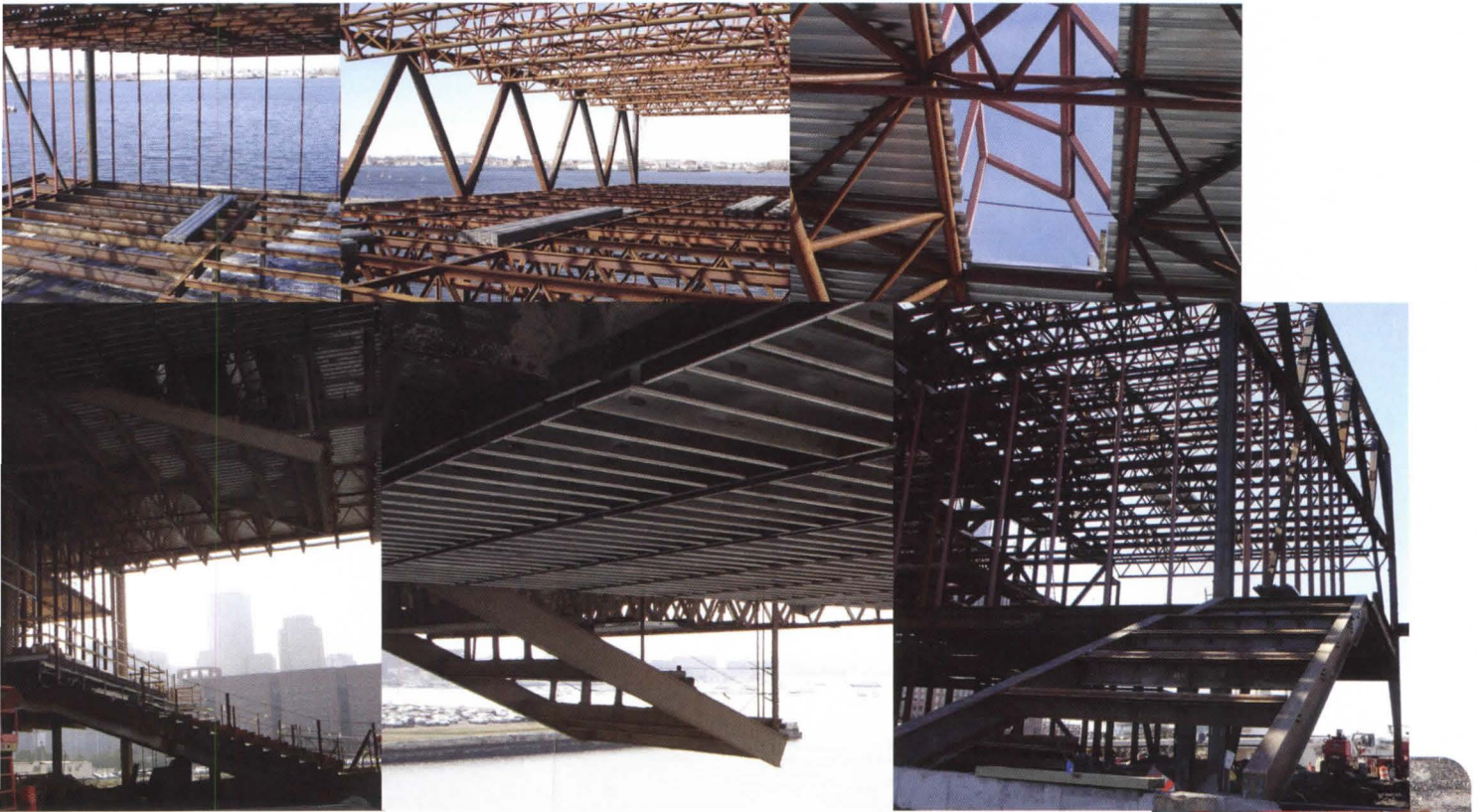
into the second-floor, glass-enclosed theater to skin the stage before looping back to line the auditorium ceiling and outdoor canopy.

If one idea behind the ICA's exterior was about developing a material vocabulary to indicate public areas, the interior creates a language related to how and what we see. For instance, when a visitor enters the lobby under the theater's rake, the sequence is awkwardly set at an angle to the façade, resulting in a narrowed focus. Glimpses of the harbor are caught obliquely and the perfect, picture-postcard views are left outside. "We were concerned about the harbor as a visual site and visual draw in relationship to the internal nature of the museum. It is that play between external and internal forces that the building has to reconcile," explained Diller.

A 140-square-foot elevator connects the lobby to the theater and administration on the second and third levels and to the galleries on the fourth floor. It is also conceived as a type of a lens—through its clear panes the view changes with each level. "It is not the gaudy glass elevator of a high-rise hotel," offered Renfro. "The elevator is intended as a piece of the building sheered off of the top floor and it drops down to meet you. Operating in





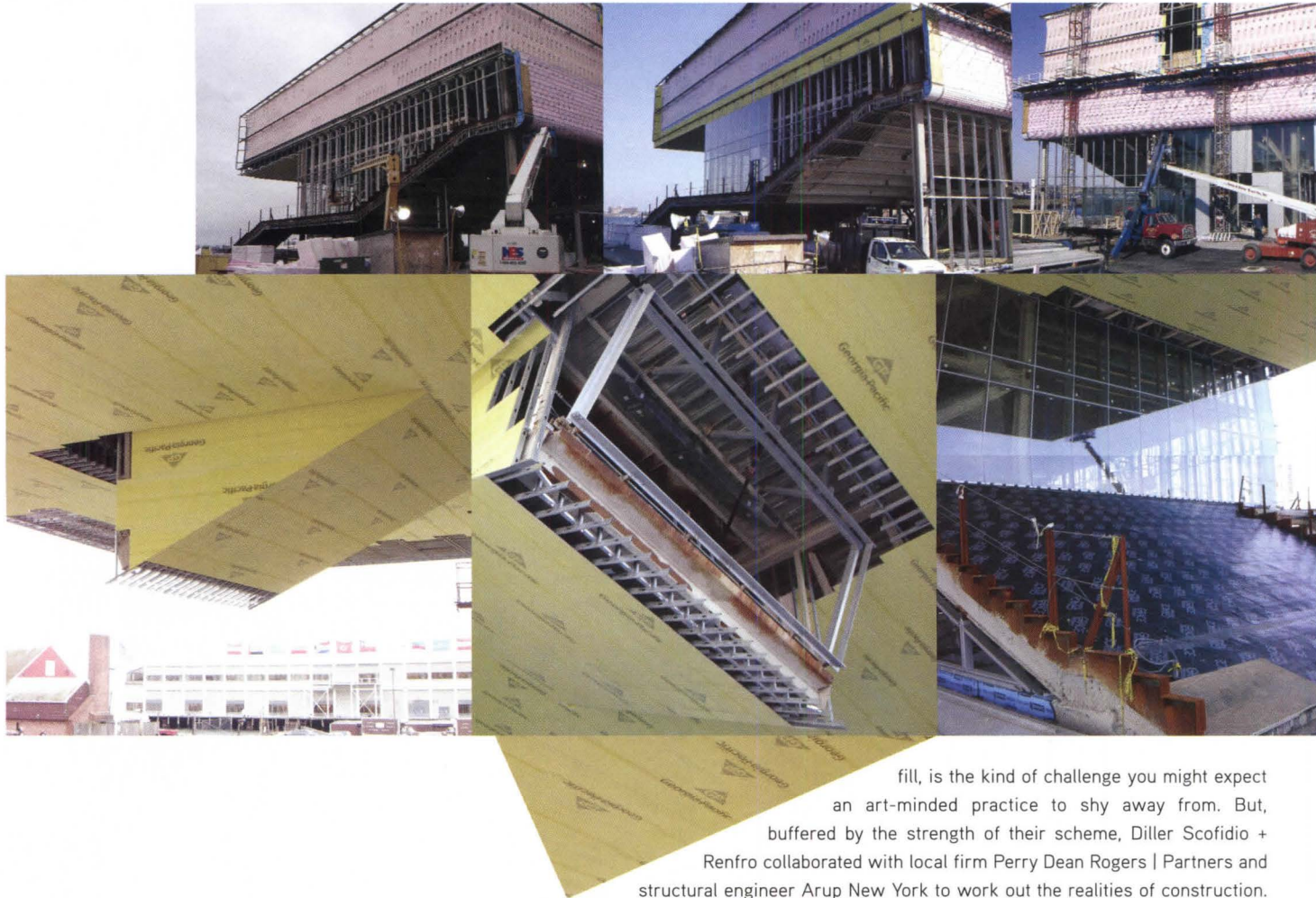


the world of transformation, it offers a gauzy filtration of the site." Flexible, neutral galleries crown the museum and expand the ICA's current display space threefold for temporary exhibitions as well as the newly established permanent collection. The large, open-span spaces are turned completely inward, illuminated by an array of north-facing skylights; a scrim panel system controls the glare. Connecting the two largest spaces is the Founders' Gallery, a long, narrow hall that faces the harbor with floor-to-ceiling glass panes. The original design called for reticulated film to cover the breathtaking view, offering limited, personal vistas. "It is kind of pornographic to reveal it all," said Diller. Yet, when board members and other bigwigs recently toured the unfinished building they were awed by the panorama and lobbied the obscuring film out of the design—a political lesson that, for the architects, still smarts.

Although the design offers contemplative spaces for experiencing art, it is also a structural feat. The ICA wanted the galleries on one floor, but site restrictions couldn't accommodate the 17,000 square feet required at ground level, so the architects decided to raise them roughly 25 feet over the HarborWalk, and supported them by four mega-trusses and eight columns. A complex, cantilevered structure, especially one built on land-







fill, is the kind of challenge you might expect an art-minded practice to shy away from. But, buffered by the strength of their scheme, Diller Scofidio + Renfro collaborated with local firm Perry Dean Rogers | Partners and structural engineer Arup New York to work out the realities of construction. “Our firm was prepared theoretically to tackle the issues—we try to sync-up the technical and programmatic requirements with the idea,” said Renfro. “The concept and the response are laminated together. Even so, there were tremendous learning curves. We found out in the process, for instance, how a tiny little word in the specification gets magnified into confusion on the construction site.”

Located on the fourth floor is the vertiginous Mediatheque, the most experimental of the museum’s three education spaces. (The ICA also boasts a lobby-level, hands-on family education room as well as a computer lab loaded with digital art-making equipment.) Programmatically, the Mediatheque is a darkened room with auditorium-type seating equipped with computers so visitors can access the museum’s extensive digital art archive and exhibition-specific media. But the space is far from simple. Seen from the exterior

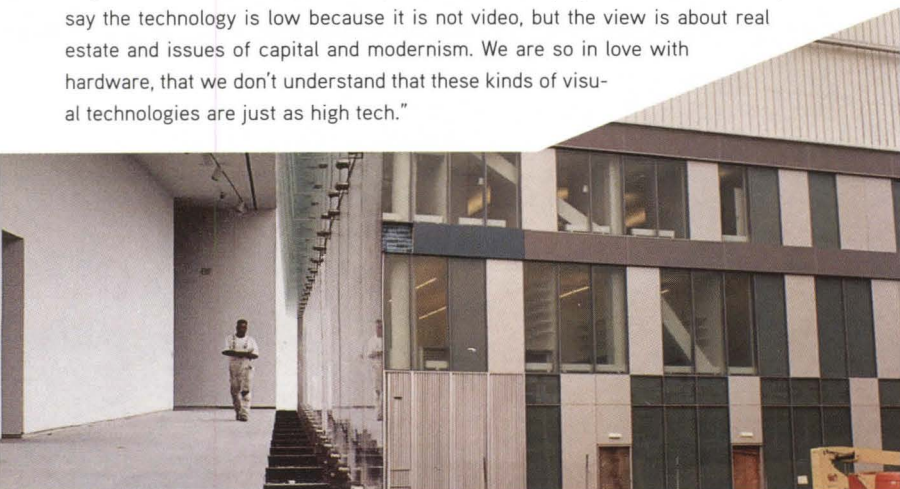




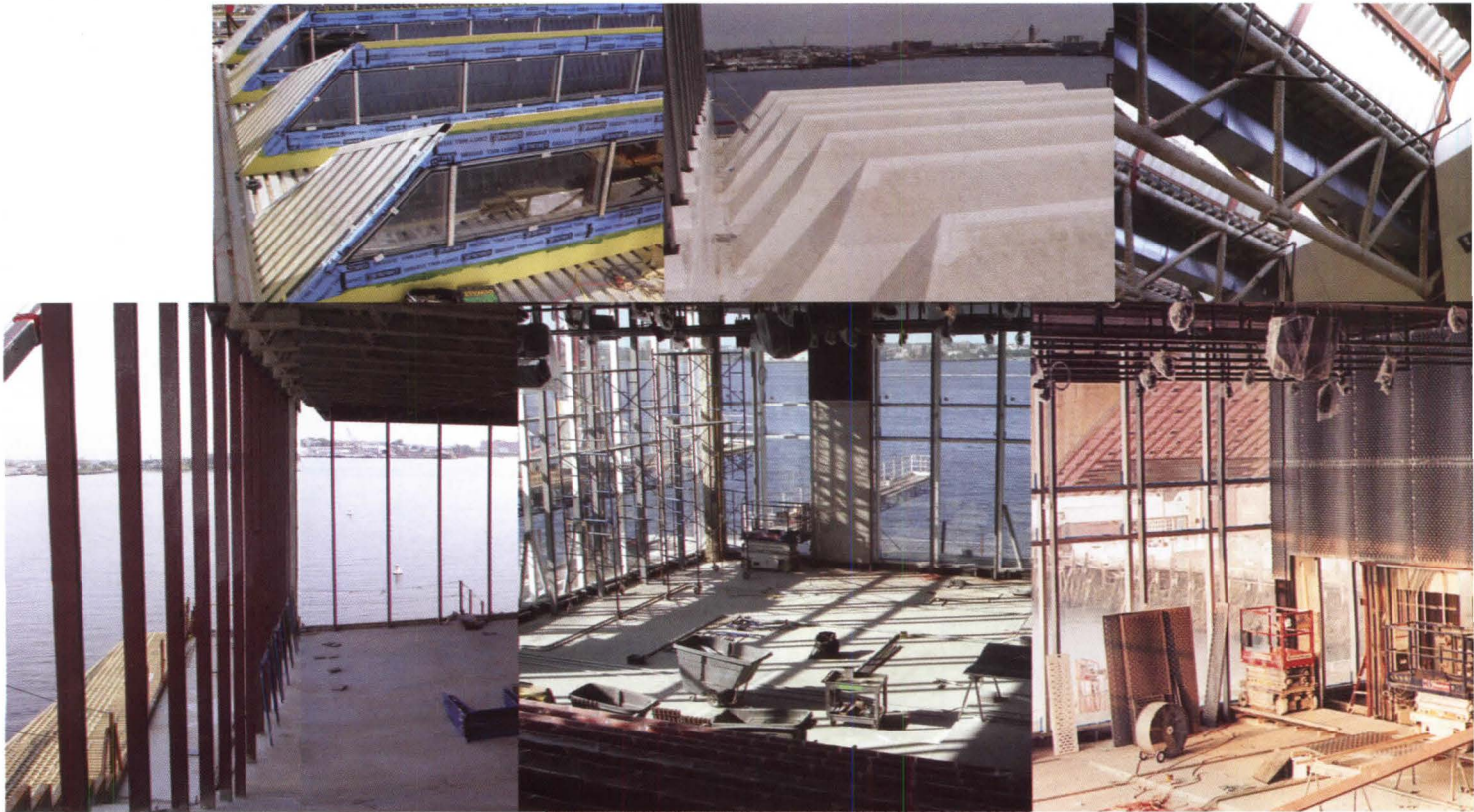


it appears to un hinge from the underside of the cantilevered galleries and hangs at an angle perilously above the outdoor grandstand. The inside is dizzying: A stepped floor is matched with a steeply sloped ceiling that directs the view to a large window framing the harbor. With no horizon or sky for reference, the watery surface behind the glass resembles a giant screen filled with static, echoing the computer monitors in the foreground.

It is through two spaces—the Mediatheque and the performing arts theater—where the development of Diller Scofidio + Renfro’s conceptual obsessions truly can be traced. For Scofidio, the digital center has origins in the firm’s 1991 unbuilt project, *Slow House*. Planned for a site along the Long Island coast, the house is about the temptations of the view: The slow curve of the floor plan culminates in a picture window framing the horizon interrupted only by a video monitor displaying a live feed of the same vista. “The picture window is only an effect,” he said, commenting on both the older project and the Mediatheque. “We say the technology is low because it is not video, but the view is about real estate and issues of capital and modernism. We are so in love with hardware, that we don’t understand that these kinds of visual technologies are just as high tech.”

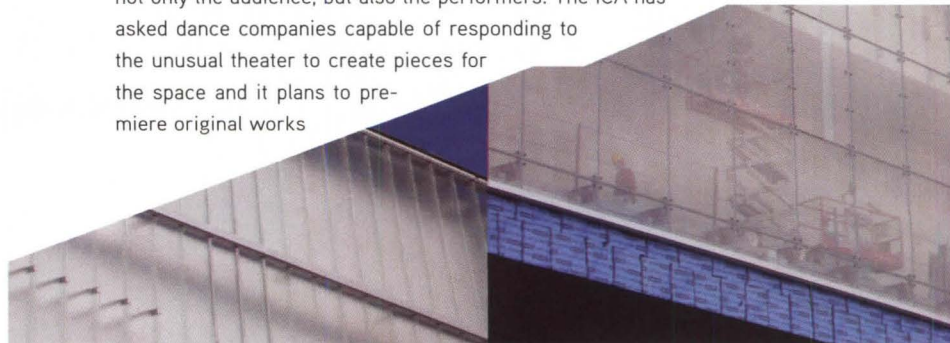




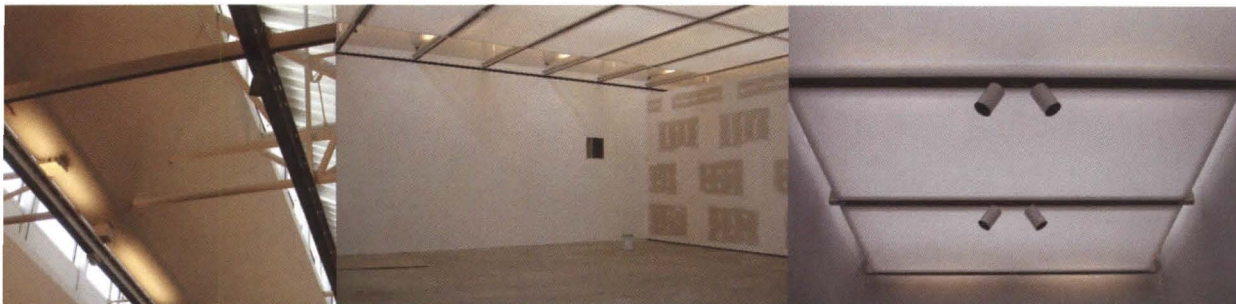


Specific older projects can be cited as precedents to individual spaces in the ICA, but it is the 5,200-square-foot theater that is the most retrospective component of the project. What is striking about the performance space is that it takes the conceptual ideas the firm had investigated for years through set design and other temporary structures—preoccupations with display, vision, and the performer/audience relationship as seen in works like the 1987 multimedia set design for Susan Mosakowski's play, *The Rotary Notary and His Hot Plate (Delay in Glass)*—and makes them solid. In an eccentric inversion typical of the architects, both the west and the north walls surrounding the 51-foot-wide stage are glazed.

Here, electronic blinds allow for both total blackout or filtered light. When the shades are up there is a full view over the exterior grandstand and the harbor—a conflation of the unscripted "urban theater" outside and the choreography inside. By abandoning the conventionally prescribed black-box theater, the space will challenge not only the audience, but also the performers. The ICA has asked dance companies capable of responding to the unusual theater to create pieces for the space and it plans to premiere original works



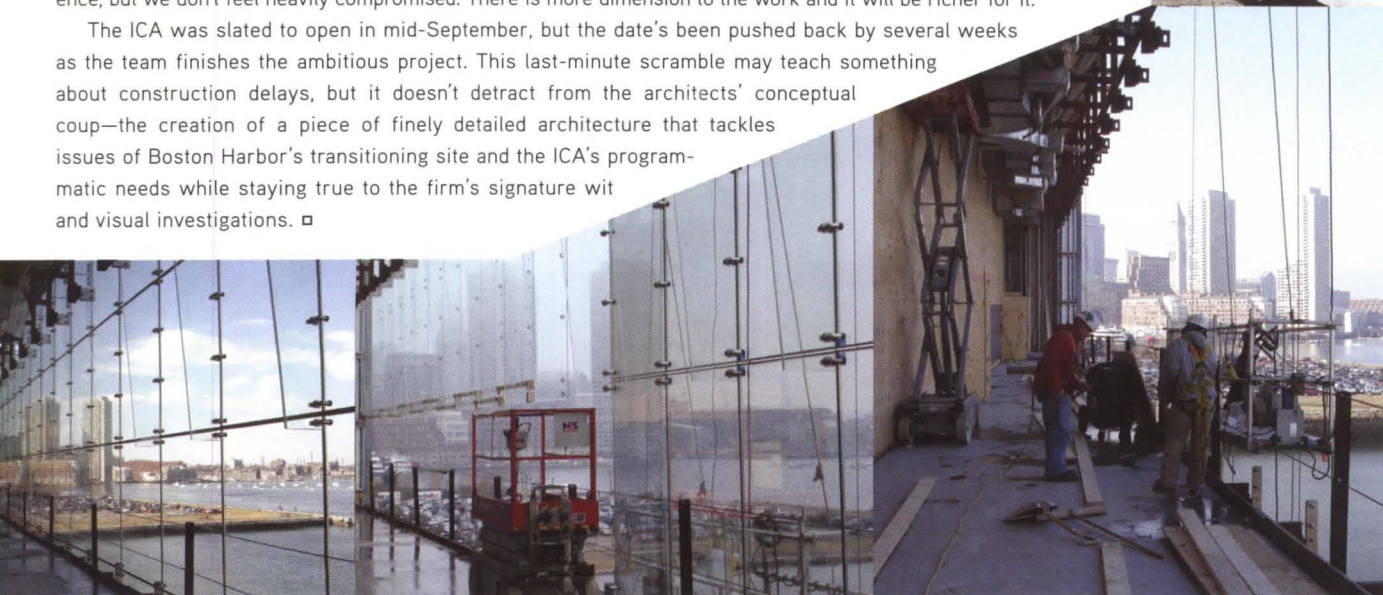




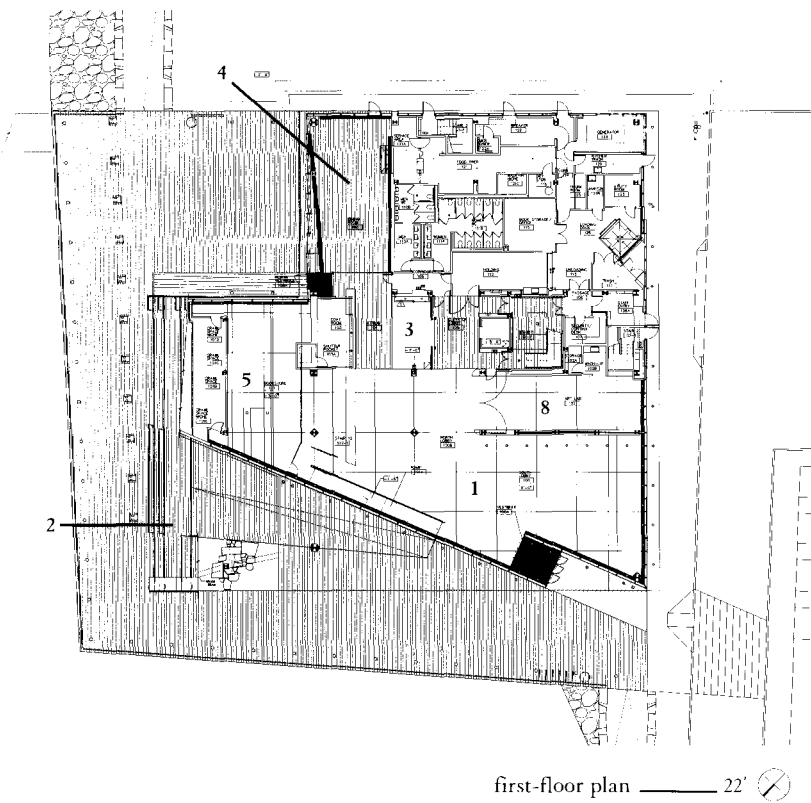
by Streb Extreme Action and Mark Morris Dance Group.


More cultural institutions are on the boards for Diller Scofidio + Renfro, such as the renovation and expansion of New York City's Lincoln Center for the Performing Arts in collaboration with FXFowle Architects. Moving from the gallery to the public realm poses hard questions for a practice known for being avant-garde. "Have we sold out?" Diller asked herself. "No. What we've learned is that our range has expanded. There are more factors, some that we can't control, when making more and more complex projects: clients, budgets, community, and politics. The negotiation is a growing experience, but we don't feel heavily compromised. There is more dimension to the work and it will be richer for it."

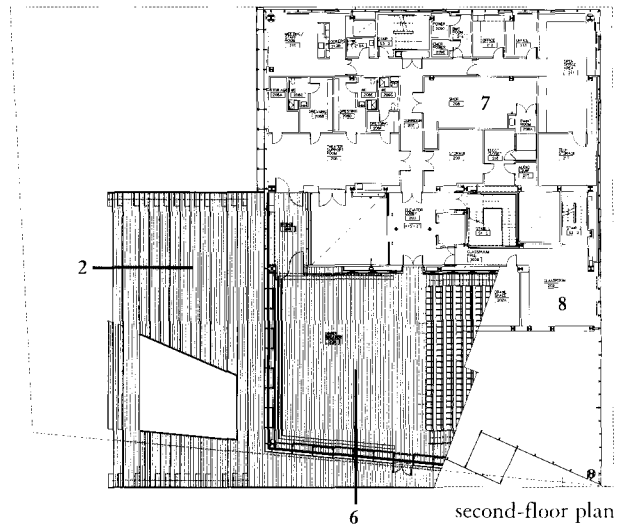
The ICA was slated to open in mid-September, but the date's been pushed back by several weeks as the team finishes the ambitious project. This last-minute scramble may teach something about construction delays, but it doesn't detract from the architects' conceptual coup—the creation of a piece of finely detailed architecture that tackles issues of Boston Harbor's transitioning site and the ICA's programmatic needs while staying true to the firm's signature wit and visual investigations. □







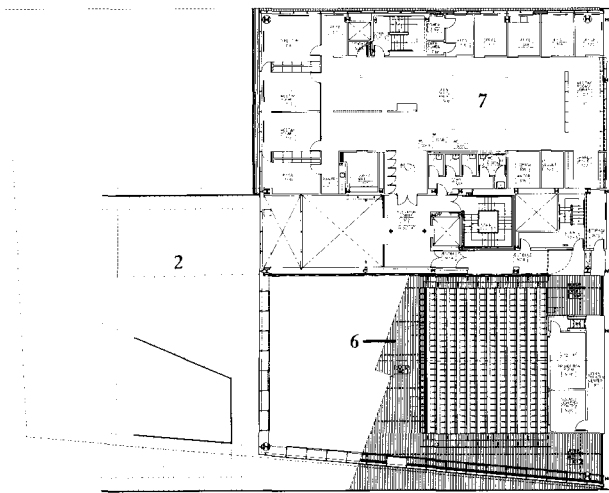
first-floor plan ——— 22' 



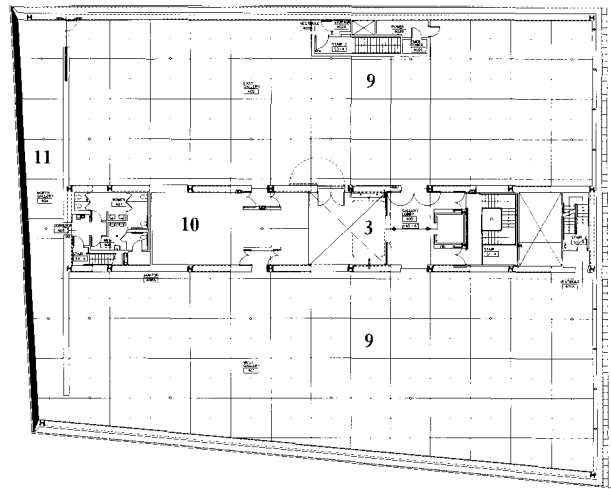
second-floor plan

PROJECT: Institute of Contemporary Art, Boston, Massachusetts CLIENT:  
 Institute of Contemporary Art, Boston ARCHITECT: Diller Scofidio + Renfro, New York  
 City—Elizabeth Diller, Ricardo Scofidio, Charles Renfro (partners in charge); Flavio Stigliano  
 (project architect); Jesse Saylor, Deane Simpson, Eric Höweler, Ben Mickus, Stefan Gruber, Krista Karklins,  
 Gaspar Lebidinsky, Josh Uhl, Shawn Mackinon, Toshikatsu Kiuchi, Gerri Davis, Philip Teichman, James Pfeiffer, Li Xu,  
 Masha Panteleyeva, (project team) ASSOCIATE ARCHITECT: Perry Dean Rogers | Partners, Boston ENGINEERS: Arup (structural, M/E/P);  
 Parsons Brinckerhoff (civil) CONSULTANTS: Fischer Dachs Associates (theater); Jaffe Holden Acoustics (A/V, acoustics); Rolf Jensen (life safety);  
 Robert Silman Associates (metals) PROJECT MANAGER: Seamus Hendry and Associates GENERAL CONTRACTOR: Macomber Builders SUBCONTRACTORS:  
 Environmental Interiors; Ryam Iron Works; Karas & Karas; Oldcastle Glass; Mass. Electric Construction Company; High Output; Boston Light and  
 Sound CONSTRUCTION MANAGER: Skanska LIGHTING DESIGNER: Arup AREA: 65,000 square feet COST: \$40 million SPECIFICATIONS: page 92

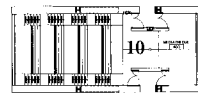




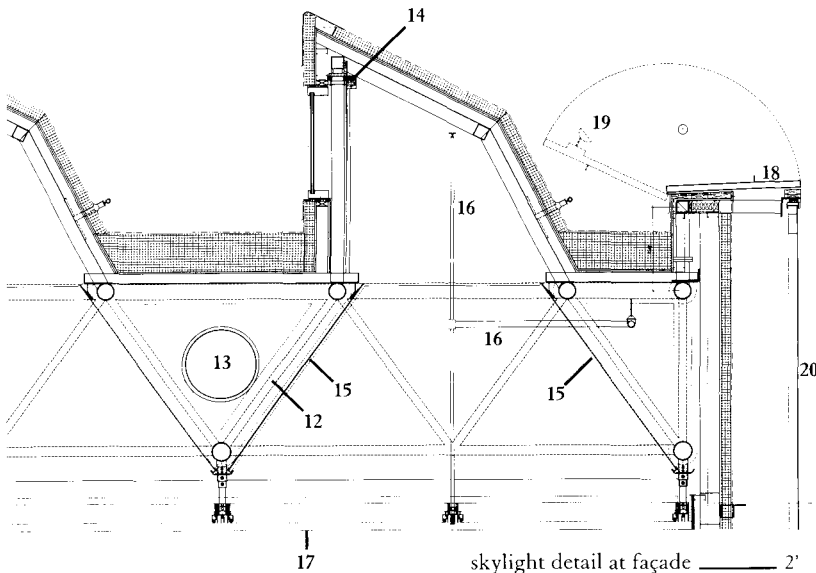
third-floor plan



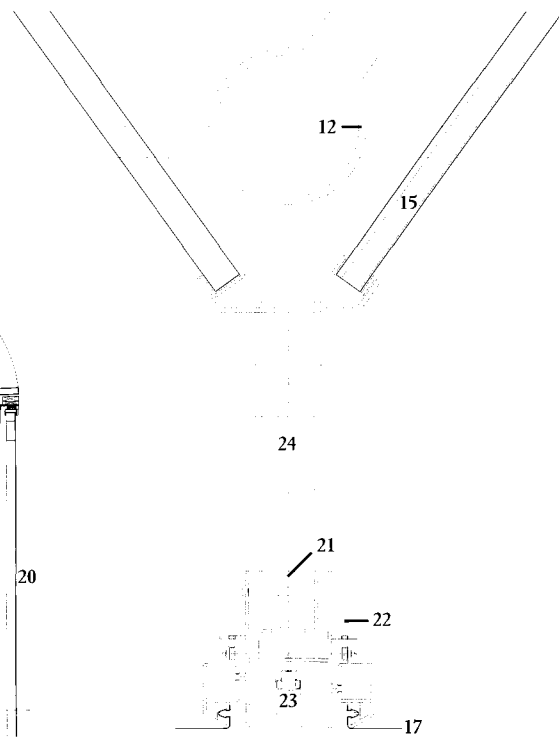
fourth-floor plan



- |                  |                           |                    |                        |
|------------------|---------------------------|--------------------|------------------------|
| 1 lobby          | 7 museum offices          | 13 supply air duct | 19 exterior lighting   |
| 2 grandstand     | 8 education lab           | 14 roll-down shade | 20 channel glass       |
| 3 glass elevator | 9 gallery                 | 15 acoustic panel  | 21 fluorescent uplight |
| 4 café           | 10 Mediatheque            | 16 sprinkler pipe  | 22 torsion spring clip |
| 5 bookstore      | 11 Founders' Gallery      | 17 fabric scrim    | 23 bus run             |
| 6 theater        | 12 roof space-frame truss | 18 access hatch    | 24 hanger rod          |



skylight detail at façade 2'



gallery ceiling system detail 3'



# HISTORY & THEORY

LOOKING BEYOND POST-CRITICALITY. BY KAZYS VARNELIS

What has become of the academy? In the pages of journals such as *Praxis*, *Log*, and *Perspecta*, as well as in a recent rash of symposia at schools around the world, criticality and theory, not long ago at the center of pedagogical thinking, have come under attack by proponents of "post-critical" thought, or as it has been more recently refigured, "projective architecture." Some colleges are cutting back on theory offerings, liberating the core requirements—and with them the faculty—for courses that seem more directly applicable to the education of an architect, such as instruction in Maya animation software or branding. Other schools are doing away with history/theory programs entirely under the guise of streamlining and efficiency, glad to put troublesome theorists more directly under the supervision of designers. Not since Walter Gropius's mythical elimination of history from the GSD curriculum has critical theory been so under attack.

Generally speaking, fans of the post-critical suggest that theory is



inhibiting, that architects need to be makers and not naval-gazers. Critical theory, so the story goes, led students down a Marxist path of inaction from which they could not recover. And indeed, the discipline did lead to excesses, to gibberish masquerading as justification, to projects represented by shallow trenches filled with burning toilet paper and by melting blocks of ice on pedestals.

But what of the alternative? In the essay that has become the main document for the post-critical movement, "Notes around the Doppler Effect and other Moods of Modernism" in *Perspecta* 33, published in May 2002, Robert Somol and Sarah Whiting, together now representing a sort of Princeton School of post-criticism, suggested "moving away from a critical architectural practice—one that is reflective, representational, and narrative—to a projective practice." For a foundational document, the terms are disconcertingly vague, but it seems safe to suggest that post-critical architecture comprises an easy, cool Supermodernism sometimes generated out of diagrams of existing conditions, sometimes shaped so as to produce affect. Politically, where critical theory called for resistance to capitalism, the projective program generally goes with the flow, agreeing with Rem Koolhaas's

demand that architects learn to surf the ubiquitous free market wave.

If post-critical theory is not yet fully formed, its product is even more elusive, and while it is early in the movement, the direction has yet to result in the sort of significant projects that might be useful to illustrate this essay. Complicating matters is post-criticism's identification with the chimerical Koolhaas as its father figure and foremost representative. For if OMA's most recent book, *Content*, published in 2003, is a key document of post-criticism, Koolhaas's noteworthy contribution to that volume, "Junkspace," is a brooding attack on the plight of urbanism today and architecture's complicity in creating that condition. The Seattle Public Library, presumably a prime example of the return of the strong figure in post-critical shaping, instead represents a thorough reconsideration of the nature of the library in the digital age.

Architecture is embattled in this country, good architecture even more so. When decent designers are employed, it is because they offer something new and unusual; sometimes, as Koolhaas did in Seattle, stunningly so. Architecture provides an alternative to the mindless construction of our day and in doing so, is critical, offering us hope that not only the built fabric, but, by implication society, can be transformed. The academy plays an invaluable role in this regard, offering a testing ground within the discipline, a place to freely explore, to transform, to indict failures and to suggest new possibilities.

The critical impulse—figured most broadly—is a basic dissatisfaction with the status quo. As a veteran of years of admissions committees, I've observed that if anything unites prospective architecture students it is that same restlessness and desire to change the world. It may be naive to encourage such students, but it would be a crime not to let them try. And here is my beef with post-criticism: It comes perilously close, in some cases too close, to suggesting that architecture should just affirm the status quo.

Thankfully, an alternative is emerging in the academy—curiously sometimes even within post-critical projects—in the form of the research studio. These labs value the keen analytic skills that architects develop in the course of their education and urge designers to bring them to bear on complex situations, be they urban, architectural, ecological, geopolitical, or technological. Nor are these studios mere academic fancy. For big and small firms alike, research is increasingly a model for practice. Today's architect is a knowledge worker in an information society dealing with the rapidly changing conditions of contemporary life. Research studios acknowledge this.

So instead of doing away with history/theory departments, let's recognize that at heart the critical impulse is fundamental to architecture. Instead of marginalizing those courses, let's acknowledge that this field can provide a model for studio production that is both critical and analytic, as well as productive and projective. Architecture, in its highest ambition, can re-imagine the world. We should expect nothing less of education. □



## EDUCATION

RANKLED BY RANKINGS. BY THOMAS FISHER

When I applied to architecture schools over 35 years ago, only the most basic information existed: the degrees they offered, their tuition and fees, and so on. Nowhere could I find comparisons, based on reliable data, about what mattered most to me—which had the largest programs, offered the most electives, gave the most aid, and so on.

Amazingly, the situation has hardly changed since then. While the Internet has greatly increased the amount of information available about individual schools, all of which have websites with plenty of promotional prose, there still does not exist an easy way for prospective students to compare institutions. That has become a big problem, not just for the schools, but also for the profession. As architecture programs face increasing competition for limited university resources, the lack of comparative data puts us at a real disadvantage. And as the supply of newly licensed architects falls increasingly short of the demand, obscuring the entry point into the profession makes no sense.

Reputation-based rankings have arisen to fill the void. *Design Intelligence (DI)* runs the most visible of these, producing an annual survey of schools that reflects the experience of hiring recent graduates by over 400 firms and organizations. *DI*'s president, James Cramer, has been open to change, most recently adding deans to the list of respondents, but he acknowledges that "this survey has flaws," including a clear bias toward schools "best preparing students for the future of professional practice." Whatever the limitations of this subjective survey on graduates' performance in offices, however, it has become the primary ranking of architecture schools in the United States, eclipsing other, more objective efforts, such as Garry Stevens's ranking of English-speaking

architecture schools based on the number of journal articles written by or about their faculty.

Ironically, the inability of the architecture academy to agree on a system of its own has led to its worst fears coming true. In the mid-1990s, a group of faculty and deans under the aegis of the Association of Collegiate Schools of Architecture (ACSA) discussed the idea of starting a data-rich survey of all the institutions, in reaction to the reputation-based survey of graduate programs in architecture published by *U.S. News & World Report*. But instead of making progress on that score, the decision by the dental schools to refuse to participate in any surveys emboldened architecture schools to do the same. *U.S. News* stopped ranking the schools in our field, and the ACSA warded off attempts by architecture magazines to take up the slack in the late 1990s and early 2000s.

The correspondence among the deans 10 years ago CONTINUED ON 80

## MATERIALS

OUR NEW PLANETARY CONTEXT. BY JOHN E. FERNANDEZ



In the latter half of the 1980s, our civilization crossed an ominous threshold: We began to demand more of the earth's biocapacity annually than it could supply. In fact, since 1961 our global appetite for biologically productive land area has almost tripled, and today it stands at about one and a half times the production capacity of the earth, according to the Global Footprint Network. These ecological statistics are a useful measure of the strong increase in demand on the planet's renewable resources, despite efforts to enact production efficiencies and stabilize rapidly accelerating consumption.

Today, we have an increasingly detailed understanding of those demands. For example, we now know that during the final 25 years of the last millennium we consumed as much of the most important metals (such as zinc, tin, and copper) as were used since the beginning of human existence.

Through the quantification of our natural capital—global resources and measurements of material and energy flows (the "work" required over a product's lifetime)—we are forming a comprehensive picture of recent material consumption, present rates, and the likely trajectory for future decades. For example, in 2006 every American is on schedule to CONTINUED ON 80



**MATERIALS** CONTINUED FROM 79

require the mining of almost 48,000 pounds of nonrenewable materials, an increase of nearly half a ton over 2005. This picture of societal metabolism is making clear the need to reconsider the use of those resources in every aspect of our lives, including the built environment.

By some measures, buildings account for upwards of 40 percent of the total global material and energy flows. While the diversity of our consumption has exploded and per capita rates are enormous, we make few links between what we ask of the earth's resources and what is left. Consider that we only recently discovered that two-thirds of the planet's total copper reserve has already been mined and processed. Where is this acquired metal today? One third has been forever lost to the environment through waste, manufacturing losses, and various other deleterious costs that are paid in the form of an inevitable entropy tax. Another third remains in the ground as low-grade ore, and the remaining third is in circulation in man-made things, including electronics, a variety of tools, and in our built environment.

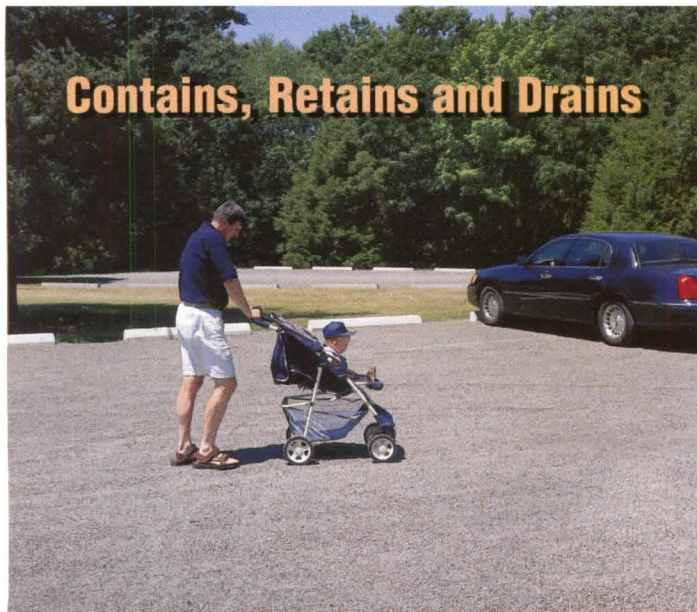
Tom Graedel of the Yale School of Forestry and Environmental Studies has led an effort to account for the actual amounts and locations of our natural capital—especially primary metals. His research team has found much of it is concentrated in our cities. That is, the architecture all around us contains a vast bulk of the mined and processed material wealth of our predecessors. Jane Jacobs once wrote that our cities are the mines of the future. From ancient Ur to modern Tokyo, the metropolis has always consumed, accumulated, and retained material stocks in huge volumes. And yet, as designers of those cities and the buildings that comprise them, we have not fully engaged this reality and responded to ease

the burdens of our demands.

The drive to produce healthy, resource-efficient buildings is only 25 to 30 years old. Since the oil crisis of the 1970s, notions of sustainable buildings have been slowly permeating the culture of contemporary design and have only lately gained extraordinary momentum to become a mainstream concern for the profession.

However, even as we adopt guidelines for green buildings, we have not fully assimilated the context of material and energy flows within which the entire anthropogenic, or human-made, world exists. Simply put, our design proposals are still not considered within the boundaries of a complex system that includes societal mechanisms such as commodification, use, and waste. This requires that the notion of architectural context be expanded far beyond the traditional concept of the site of construction to include those of extraction, processing, manufacturing, transportation, assembly, disassembly, recycling, reuse, and disposal. Physical accounting of the actual mass of materials and energy engaged in this entire lifecycle is as fundamental to our design work as the land upon which buildings are realized.

The field of industrial ecology is currently the best place to begin—and may be the ideal space in which to permanently situate a more comprehensive set of values and strategies for a green built environment. This discipline examines the relationship between production and consumption and uses the metaphor of natural ecosystems as a source of clues about the behavior of complex systems. Modeling our culture of design and construction with reference to that integrated network holds enormous promise for a radical change in our societal metabolism. □



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**EDUCATION** CONTINUED FROM 79

shows that they made the wrong decision for all of the right reasons. They were correct that a single, reputation-based ranking of schools overlooks the diversity of the various programs around the country, all of which have strengths in certain areas. And they saw that, by relying so much on people's impressions of schools, such rankings do more harm to programs than good, especially in the competition for resources inside universities.

But, refusing to participate left a vacuum now filled by a survey in which the people who know the most about the schools have not, until this year, even been polled. The Internet chatter of students and prospective students has also filled the vacuum with opinions of all sorts, but is of little value to someone seeking the facts.

To its credit, the ACSA is trying again. A task force has recommended that the organization expand its *Guide to Architecture Schools*, now in its 7th edition, to include data gathered in the process of the NAAB's accrediting of schools and to make that information available in a searchable database, along with statements by each school about what makes it distinct. This would go a long way toward providing information upon which prospective students and employers can compare schools according to a range of factors that matter to them.

Although it will cost money and take cooperation, all of the ACSA's member schools need to step forward to support the effort politically and financially. Reliable data about everything from student/teacher ratios to number of faculty and student awards to amount of financial aid would allow a diversity of comparisons that can serve all schools well, enabling them to highlight areas of real strength and to point out to provosts and presidents areas in need of further investment. And it will indicate to the profession that the schools prepare students for practice in different ways, all of which have value in an increasingly diverse profession. To get this going, a group of deans have agreed to help determine what information needs collecting and to contribute facts about their schools to a database. Watch for it in coming months, and if you're a dean, join us. □



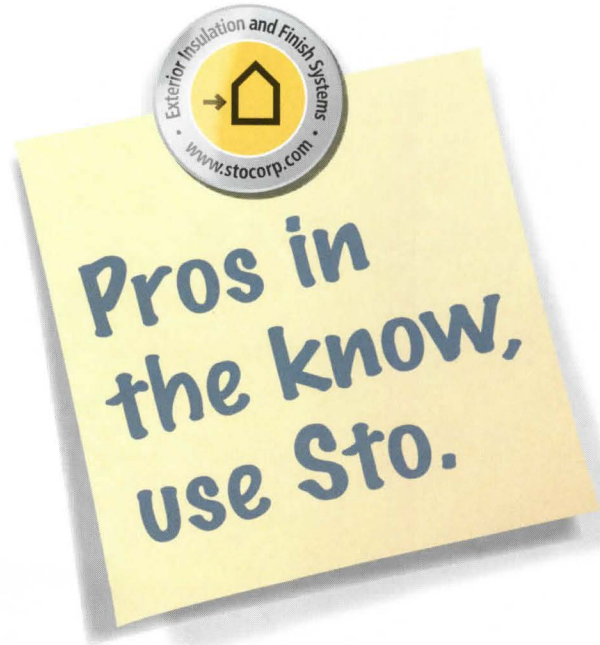
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# straight light

BY EMILIE SOMMERHOFF PHOTOGRAPH BY REIN KOTOV

It has been more than four decades since Dan Flavin began his experiment with the readymade fluorescent lamp, an exploration that occupied him until his death in 1996. Arguably the initiation of artificial light as an artistic element, Flavin's work drew on the fluorescent tube almost exclusively, finding its unique identity in the object's uniformity, anonymity, and ubiquity. Said Flavin about light, "It is . . . as plain and open and direct an art as you will ever find."

Not surprisingly, technology, in its gadgety complexity, has challenged artistic inquiry of the medium. In particular, the attributes associated with the LED—nearly infinite color and high-tech controllability—have inspired much of what passes for light art today. Contemporary gestures, as opposed to Flavin's color-filled but humble glowing lines, are often kinetic entertainment more akin to video and computer games. The tools at hand seem to condone this.

It is therefore refreshing to present on the following pages three temporary and seasonal installations that deliver their messages using the unadorned ingredient of white light. Despite various levels of technical agility—from Flavinesque T5s to individually programmable LED arrays and off-the-shelf stadium spots aimed at meteorological balloons—each project is consistent in its attempt to let the medium exist as the plain, open, and direct expression Flavin himself believed it to be. ▣



# solid state

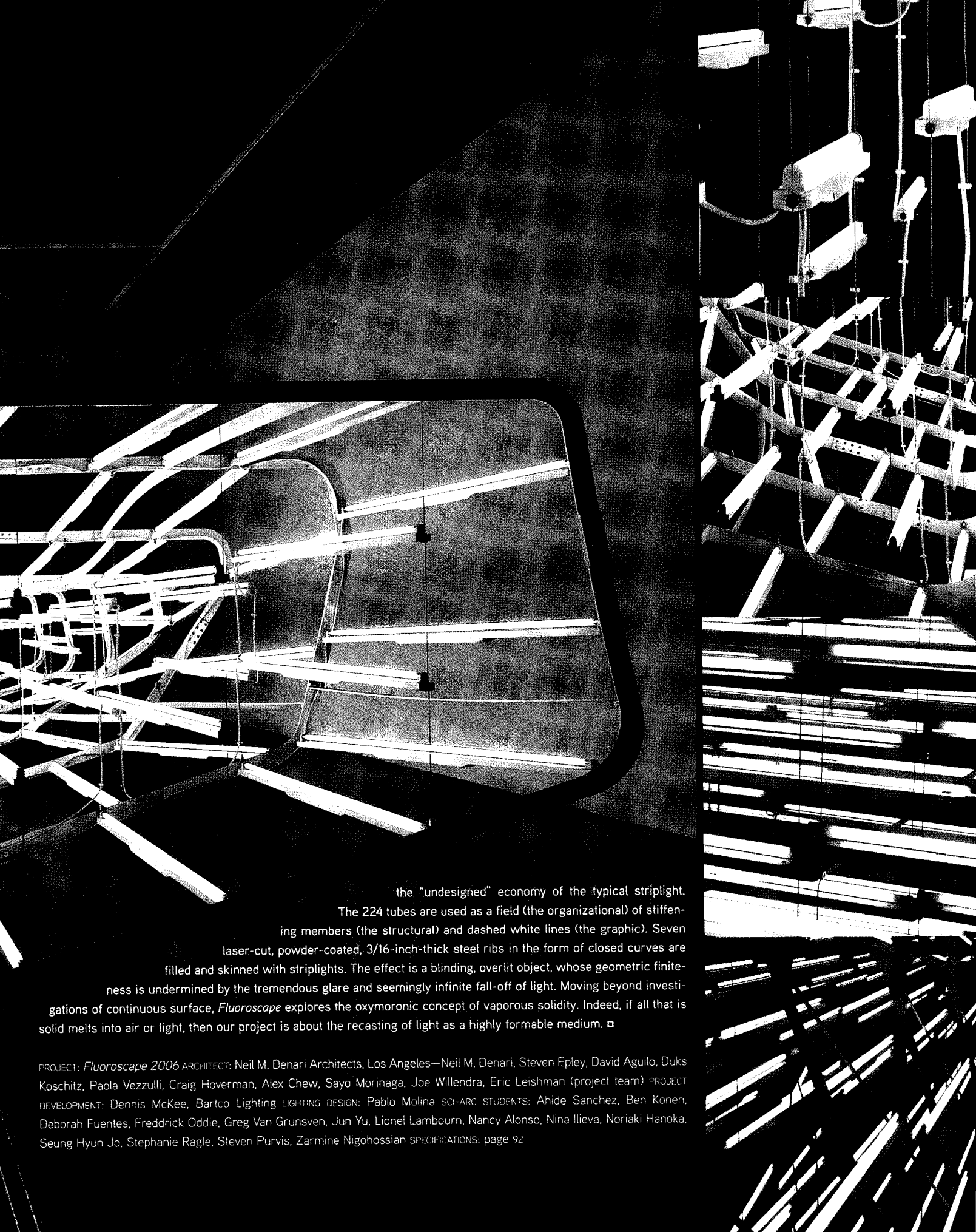
BY NEIL M. DENARI PHOTOGRAPHS BY JOSHUA WHITE

Artificial light is the constructed environment's most malleable medium, capable of being projected, deflected, colored, and animated. The economy and long life of the exposed fluorescent strip—an element used in nearly every supermarket, school cafeteria, and office—have made it ubiquitous in the environmental discourse. Like a 2x4, metal stud, or sheet of drywall, the striplight has long been part of the postwar package of expedient interior design materials. However, once unlocked from this condition, the fluorescent tube reveals its larger organizational, structural, and graphic potential.

*Fluoroscope*, a temporary installation constructed as part of the SCI-Arc Gallery program and on view at the Los Angeles-based school through mid-September, attempts to merge these possibilities into a composition that also considers the atmospheric effects created by a unique arrangement and concentration of the glowing four-foot lines. Its conceptual query: Can light be rendered dense enough to be recognized as a solid?

A collaboration between Bartco Lighting, SCI-Arc students, and my own firm, *Fluoroscope* is a precisely engineered work, the outcome of an intensive 60-day period of cooperative research and development. Fluorescent striplights are the basic building component of the installation. Providing the knowledge and facilities to turn an idea into an actual product, Bartco helped customize the powder-coated metal ballast box into a “designed” element that becomes a fluid part of the formal whole. With a slim, shaped structural profile, consisting of tightly interlocking parts, the fixture's custom appearance avoids references to





the “undesigned” economy of the typical striplight. The 224 tubes are used as a field (the organizational) of stiffening members (the structural) and dashed white lines (the graphic). Seven laser-cut, powder-coated, 3/16-inch-thick steel ribs in the form of closed curves are filled and skinned with striplights. The effect is a blinding, overlit object, whose geometric finiteness is undermined by the tremendous glare and seemingly infinite fall-off of light. Moving beyond investigations of continuous surface, *Fluoroscope* explores the oxymoronic concept of vaporous solidity. Indeed, if all that is solid melts into air or light, then our project is about the recasting of light as a highly formable medium. □

PROJECT: *Fluoroscope 2006* ARCHITECT: Neil M. Denari Architects, Los Angeles—Neil M. Denari, Steven Epley, David Aguilo, Duks Koschitz, Paola Vezzulli, Craig Hoverman, Alex Chew, Sayo Morinaga, Joe Willendra, Eric Leishman (project team) PROJECT DEVELOPMENT: Dennis McKee, Bartco Lighting LIGHTING DESIGN: Pablo Molina SCI-ARC STUDENTS: Ahide Sanchez, Ben Konen, Deborah Fuentes, Fredrick Oddie, Greg Van Grunsvan, Jun Yu, Lionel Lambourn, Nancy Alonso, Nina Ilieva, Noriaki Hanoka, Seung Hyun Jo, Stephanie Ragle, Steven Purvis, Zarmine Nigohossian SPECIFICATIONS: page 92



# clock work

BY ROGIER VAN DER HEIDE PHOTOGRAPH BY ROMAN KELLER

Zurich's Bahnhofstrasse, like New York City's Fifth Avenue, is famous for its elegant atmosphere, not in small part because of its holiday décor. In 1971, the city debuted its then-revolutionary Christmas lighting, garlands of incandescent lamps suspended above the shopping route. But after three decades of service, the cabling and fixtures were in need of repair, so a new scheme was desired. Launching a competition in 2002, local shop owners—who organized and judged the design contest, and also paid for most of the \$1.85 million installation—received 60 international submissions. Among the 11 teams commissioned to develop proposals, Zurich-based architects Fabio Gramazio and Matthias Kohler realized the winning plan, which was inaugurated last winter. Beyond its decorative appeal, their design emphasized the legendary street: a string of 275 light tubes winds its way from the train station to the shore of Lake Zurich. The project is also highly collaborative in its execution, responsible in its energy-efficient composition (reducing power consumption by 75 percent over the previous display), and graceful in its form.

The seasonal installation's title, *The World's Largest Timepiece*, references the methodology controlling the patterns of light that flit along the .7-mile stretch. Each 23-foot-tall fiberglass tube is divided into 32 individually control-

lable segments illuminated with 28 white LEDs. The sections act like pixels, dimmed and brightened according to an algorithm determined by date and time. These sequences are transposed into "shade" and "shine," with patterns forming horizontal images that weave the tubes into one entity, a unified curtain of light at once static and in motion. The beauty of the scheme is that it dares to be dark; the segmented tubes are simultaneously luminous and obscured, as they express their message about the dynamic intersection of time and place.

*Based in Amsterdam, Rogier van der Heide is the global leader of Arup Lighting.*

PROJECT: *The World's Largest Timepiece* ARCHITECT: Gramazio & Kohler, Zurich  
LIGHTING DESIGNER: Arup Lighting—Florence Lam STRUCTURAL ENGINEER: Arup INSTALLATION: Kummler+Matter SPECIFICATIONS: page 92





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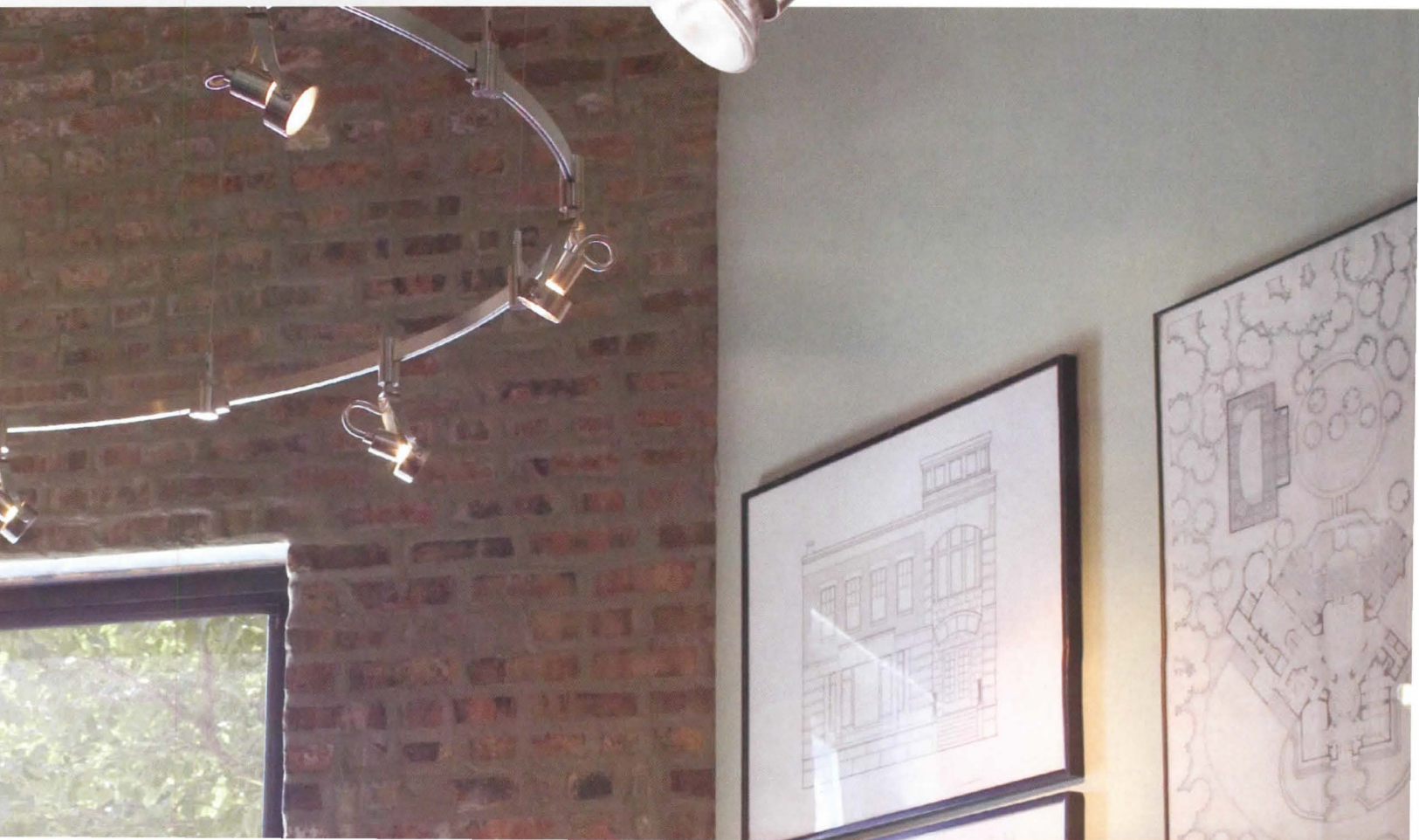


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## night light

BY ROGIER VAN DER HEIDE PHOTOGRAPH BY REIN KOTOV

Every winter, Tallinn, Estonia's medieval capital, hosts a festival of light "to bring joy to the dark Northern European winter," explained architect Veronika Valk, one of the organizers. In 2004, as part of a workshop arranged by the youth section of the Estonian Architects Association, Valk's group, during a masterclass led by Winy Maas of MVRDV, conceived of a "cloud of light" to brighten both the streets of Tallinn and the mood of its inhabitants. Together with MVRDV, Valk and her partner Yoko Alender (founders of the Tallinn-based practice ZIZi & YoYo) thought to realize the concept with fog-generated by special candles on nearby buildings—that would reflect light from fixtures installed at street level. Later, engaged to help with the lighting concept, I suggested a constellation of large, highly reflective, white meteorological balloons—floating bubbles that would also redirect illumination from below. The idea in its final form, a canopy of light created by fog and balloons combined, was implemented for several evenings in February 2005.

Watching the 500 balloons rise was an amazing experience for all of us. Filled with helium and zealously straining for freedom, they had to be controlled by a network of string, knots, and sandbags. As night arrived, it grew colder on the square. We turned on the lights—a podium of twenty-four 1.8-kilowatt stadium spots. The fixtures focused precisely on the balloons, their glow was reflected back into the square, the illumination animated by the activity of the floating wind-roused objects above. The team anticipated an enthusiastic public, but the square remained abuzz throughout the three-day event with inhabitants relishing in this unexpected source of energy. It's an exploration, as Valk noted, of "architectural light therapy in urban public spaces," a concept to enlighten other gloomy northern cities.

PROJECT: *Light Dome over Tallinn* ARCHITECT: ZIZi & YoYo, Tallinn, Estonia, with MVRDV LIGHTING DESIGN: Arup Lighting—Rogier van der Heide SPECIFICATIONS: page 92





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# screen play

BY EMILIE SOMMERHOFF

Lighting manufacturers have long teamed with designers and artists to develop fixtures that verge on sculpture. Zaha Hadid's Vortextx chandelier for Zumtobel ([zumtobel.com](http://zumtobel.com)) and Richard Sapper's Halley tasklight for Lucesco ([lucesco.com](http://lucesco.com)) are two recently celebrated examples. Now, light's potential as an art medium and design detail is being expanded, with adaptable offerings that are conceptually sophisticated, yet make composing illuminated installations almost as easy as connecting the dots.

Lighting and housewares product design company Mindspring ([mindspring-lighting.com](http://mindspring-lighting.com)), based in Taipei and Los Angeles, is in the prototype stage with its Marrakesh pendant (right). Due to be released in January and UL-listed soon afterward, the system is based on a kit-of-parts approach: Planned in uplight and downlight versions, an unlimited number of modular units (approximately five inches square, each consists of two solid and two open details) can be linked together to form any flat configuration. In addition to its standard patterns, Mindspring expects to be able to accommodate custom motifs in large quantities. Illuminated with light-emitting diodes (in 3000K or 4000K), the lattice design is more than a building block for creative minds. LEDs last longer when heat is properly dispersed, and the volume of surface area conferred by the pattern acts as a critical heat-management system for the source—ironically honoring the Moroccan-style design's origins as a sunscreen. **FOR MORE INFORMATION, CIRCLE 123.**



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# SPECIFICATIONS

**BOTTARI ANNEX, JOEMCHON MIDDLE SCHOOL, MOONKYONG, SOUTH KOREA (PAGE 16)**

**concrete:** cast in place **cladding:** ceramic unglazed clay brick; PTL Chemical (synthetic stone panels) **granite braille block pavers:** StoneTech

**SAM FOX SCHOOL OF DESIGN AND VISUAL ARTS, WASHINGTON UNIVERSITY, ST. LOUIS, MISSOURI (PAGE 24)**

**structural system:** steel framing **curtain wall:** Kawneer **cladding:** aluminum panels **stone:** Indiana limestone **roofing:** TPO **skylights:** Super Sky **carpet:** Karastan **ceramic tile:** Dal-Tile **flooring:** Forbo (Marmoleum); Maple **ceiling system:** USG **lighting:** Erco

**BIOSWALE AND STUDENT CENTER, TAIPEI, TAIWAN (PAGE 28)**

**river lining:** crushed concrete from demolished pedestrian sidewalks and street wall **waterproof layer:** plastic sheeting **river bed:** gravel and soil **river bank retention:** plastic landscape netting and plants **water purification:** pump, filter, and

sprayer **glass:** Gia Gia Glass **windows:** China May Aluminum

**ARAGON AVENUE ELEMENTARY SCHOOL EXPANSION, LOS ANGELES (PAGE 52)**

**structural system:** wood framing **concrete:** structural slabs **masonry:** CMU **cladding:** Angelus; cement plaster **ceiling:** Armstrong **cabinetwork:** Stolo Cabinets **paints:** Dunn Edwards **flooring:** Armstrong (VCT) **carpet:** Collins & Aikman

**39571 INFOWASH, DELISLE, MISSISSIPPI (PAGE 56)**

**foundation:** slab on grade **structural system:** steel moment frame; pressure-treated lumber joists; structural insulated panels **cladding:** cedar slats; polycarbonate panels; porcelain-laminated steel chalkboard **weatherproofing:** Thermoskin **roofing:** Peel and Seal **cabinet hardware:** Häfele; McMaster-Carr **plumbing fixtures:** McMaster-Carr

**INSTITUTE OF CONTEMPORARY ART, BOSTON, MASSACHUSETTS (PAGE 68)**

**exterior cladding:** Pilkington (glass wall); Bendheim (glass channels); Wausau (aluminum curtain wall); Sto (stucco) **roofing:** Johns Manville **glazing:** Pilkington; Viracon **metal doors:** Total Doors **interior doors:** Oldcastle Glass **ceiling system:** Tectum **flooring:** Armstrong **concrete finishing:** Retro Plate **lighting:** Litelab **elevators:** Kone, ThyssenKrupp

**FLUOROSCAPE, SOUTHERN CALIFORNIA SCHOOL OF ARCHITECTURE (SCI-ARC), LOS ANGELES, CALIFORNIA (PAGE 84)**

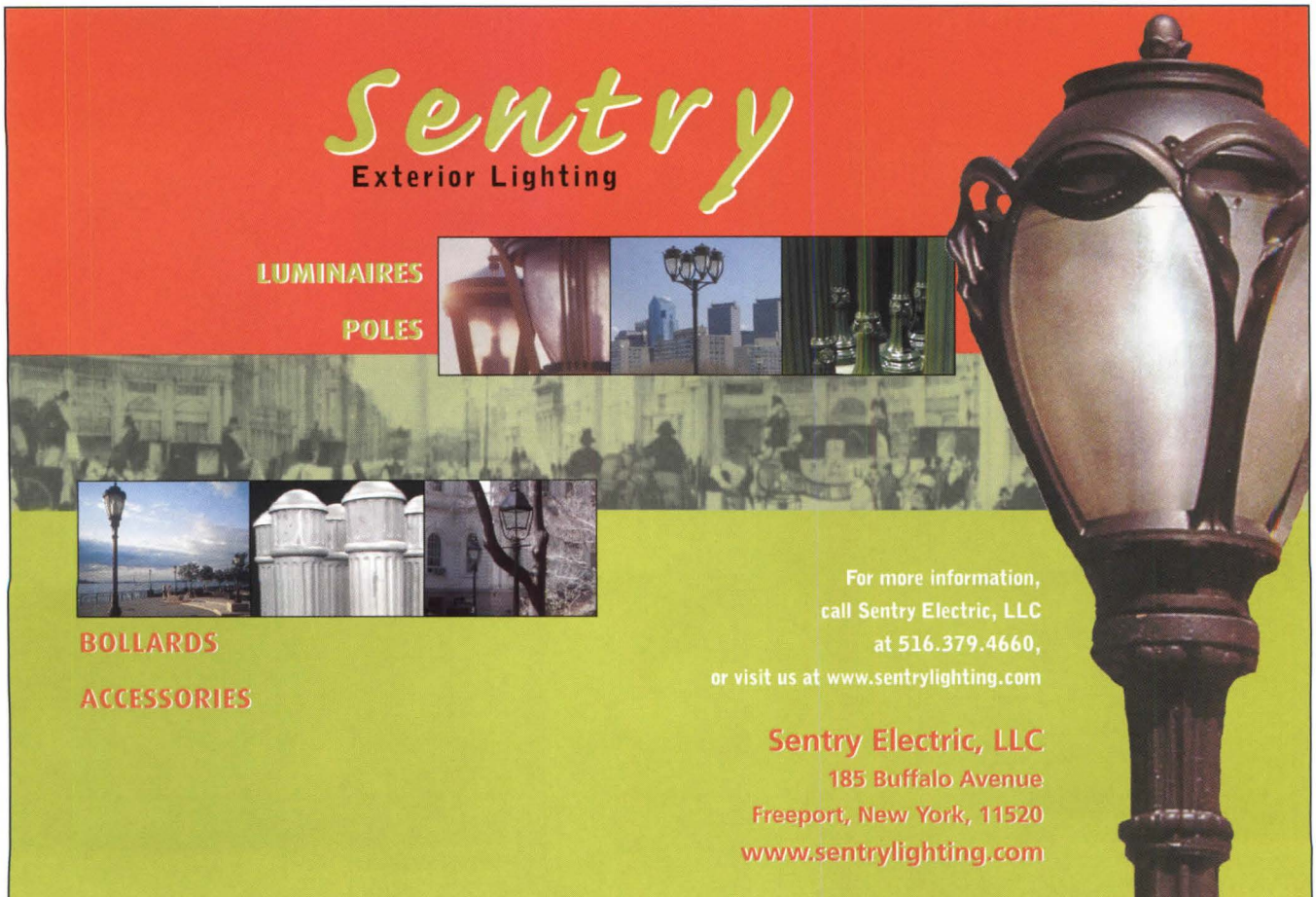
**lighting:** Bartco Lighting **powder coating:** B&B Enameling **hardware:** Gripllock Systems

**THE WORLD'S LARGEST TIMEPIECE, ZURICH, SWITZERLAND (PAGE 86)**

**lighting:** Industrial Micro Systems

**CLOUD OF LIGHT, TALLINN, ESTONIA (PAGE 88)**

**lighting:** Philips (ArenaVision MVF403 and 1.8 kilowatt double-ended metal halide)



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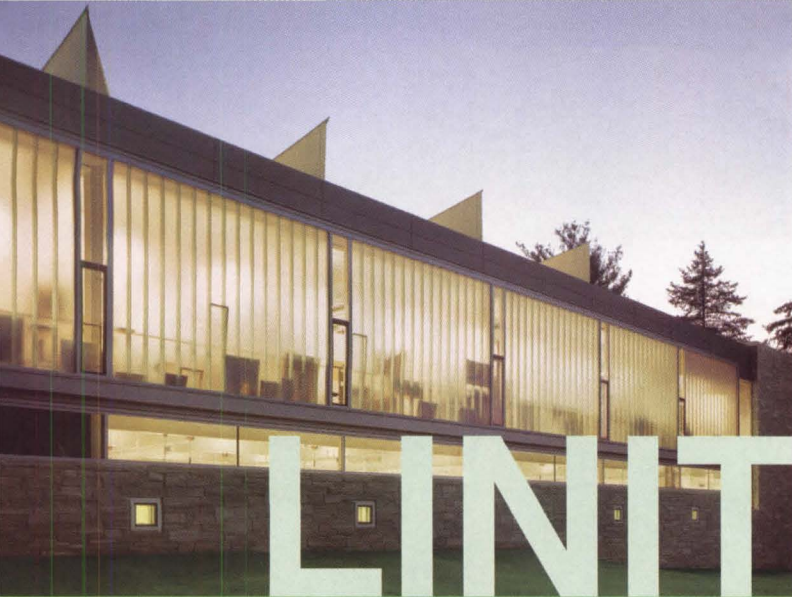
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## LETTERS

### REVISITING KATSURA

John Morris Dixon's article on the Katsura Villa [August 2006, page 38] is thoughtful and very observant. However, it still escapes me why so many leave Frank Lloyd Wright out of the picture. No Western architect of the twentieth century distilled more from the Japanese tradition than he.

It is evident from his earliest houses—and certainly in his later masterpieces—that Wright understood Japanese space as a collision of independent grids where no single alignment controlled the rest. When translated into modern materials and methods, the result is a distinctively energized and dynamic sense of space that represents a real break with the past. From this perspective, the Katsura Villa gains in relevance as a primary source for Modernism as well as modern architecture.

**TOM DOREMUS**

NEW YORK, NEW YORK

### STAIR STORIES

Just reading over your reaction letters to the new format; seems like everyone is pleased. The content is refreshing; great to see you focusing on various themes.

By the way, the design of the Richard and Dion Neutra VDL Research House II stairs [July 2006, page 64] were my contribution. One of the refinements we had to add was to glue the treads to their support structure as well as screw them. Turned out there was just enough tolerance in the screw holes that the treads rocked back and forth noticeably when you walked up! By gluing and then re-screwing them, they were locked in solid and the problem went away.

**DION NEUTRA**

LOS ANGELES, CALIFORNIA

### REDESIGN KUDOS

It's been a long time since I have seen an architectural magazine that (A) can be easily read because the text is black on white, (B) describes creative design that isn't based upon add-on crowns of curved titanium or other show-piece solutions that turn their back on their environment, and (C) has good photographs that are nicely related to the text. Congratulations on the layout, the subject matter, and the new cover format.

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PLEASE SEND YOUR LETTERS TO KATIE GERFEN, ASSOCIATE EDITOR, ARCHITECTURE, 770 BROADWAY, NEW YORK, NY 10003. OR, E-MAIL US AT [KGERFEN@ARCHITECTUREMAG.COM](mailto:KGERFEN@ARCHITECTUREMAG.COM). LETTERS MAY BE EDITED FOR CLARITY AND LENGTH.

CLARIFICATION: REGARDING THE PROJECT CREDITS FOR THE HEARST TOWER [AUGUST 2006, PAGE 44], GENSLEER WAS THE INTERIOR ARCHITECT.

### Volume 95 Number 9

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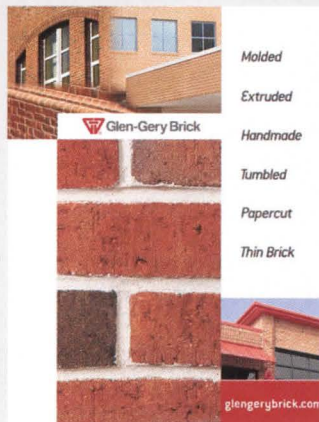
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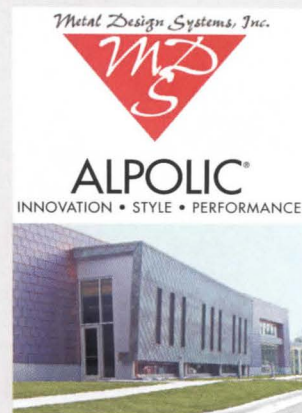
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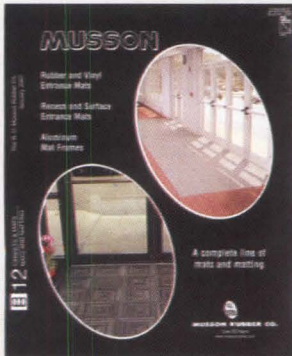
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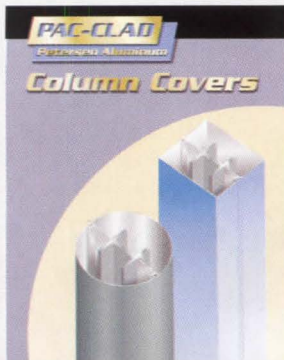
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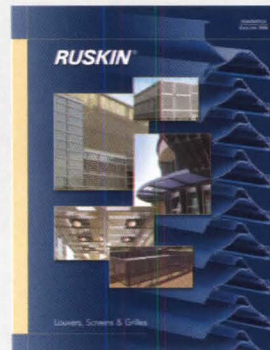
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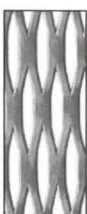


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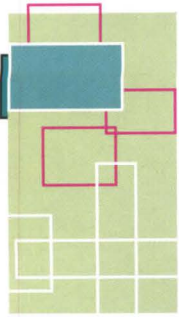


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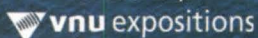
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## EDITOR'S NOTE

# LESSON NOT LEARNED

I'm hesitant to write about the World Trade Center saga yet again. There is a certain collective fatigue with the political debacle, the blatant greed, and the inexplicable lack of imagination that has dogged the site since September 12, 2001. But not to write more—to slip from fatigue into apathy—is to wave the white flag. Last month, our Public Realm columnist, Max Page, encouraged us to develop alternatives to the mega-memorials that have been built and proposed since Maya Lin's singular vision surfaced on the Mall in Washington, D.C., nearly a quarter century ago. He has a point. And it can be applied on a larger scale. Many believe that rebuilding the entire 16 acres is a memorial in itself, not to mention a defiant response to an unconscionable act. But, as Page notes, memorialization should not come in only one size—monumental—and with only one role—consolation.

Family members and friends of those killed at the World Trade Center (WTC), not to mention the rest of us, require a place on site to contemplate, remember, and acknowledge lives lived and cut short. But the remainder of the parcel ought to be a public park—a mechanism for downtown's reactivation far more equitable than private development. Building towers dedicated to commerce is a mistake, despite the talents brought to bear on some of the individual edifices. As for the Freedom Tower, has there ever been a greater farce? Beyond its patronizing moniker, it is absurd to build what will for a limited amount of time be the tallest building on earth. What does such a structure say about our society? We're a ten-gallon-hat crowd? We wear big boots so don't mess with us? Big deal. Two redesigns, one "refinement," and two groundbreakings from its conception, it remains the emptiest of gestures. The long-held desire to build sky-high has roots in dollars, not democracy. We have the freedom to express our ideas and ideals in this country, which means we also have the opportunity to think creatively, to move beyond business as usual.

Back in the early days of our post-September 11 world, the Civic Alliance to Rebuild Downtown New York organized a public forum in July 2002 to select a master plan concept for the WTC. The more than 4,000 citizens in attendance turned down all six schemes on offer because they knew that better ideas were possible. It was a pivotal moment in the city's history—or should have been. The people spoke and the powers in charge of the site—the Lower Manhattan Development Corporation (LMDC), the agency established to oversee the rebuilding process, and the Port Authority of New York and New Jersey, which owns the land—had no choice but to listen and soon after announced an international competition, the unimaginative results of which are very slowly coming to fruition downtown. In the interim, business has indeed returned to the usual. And the LMDC recently announced its own demise; apparently no longer needed, its doors are closing this fall. This is more disturbing news for downtown's future.

Who navigates the process from here on out is unclear. What is painfully obvious, however, is that the Freedom Tower, now a monument to political hubris, will likely rise on a site that should be dedicated to humility. **ABBY BUSSEL**





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