

B u i l d i n g

Value

-
- * **Government Goes Green**
 - * **Preservation & Contemporary Design**
 - * **Modernism & the Model Home**

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In the first issue of **arcCA** this year, "Image Mirror," we looked at how non-architects value architects. In the second issue, "Citizen Architects," we profiled architects who bring their own values to bear in their communities, applying their architectural expertise in ways that extend beyond the bounds of typical practice. Now, in the current issue, we consider some ways in which societal values become manifest in buildings.

We have not attempted an exhaustive survey of the idea of value in architecture, an effort that would consume many volumes of our trim magazine (assuming we could even agree on what to include). For readers interested in such a survey, I can recommend volumes 10 & 11 of *Center*, the journal of the Center for American Architecture and Design at the University of Texas at Austin. These two volumes, straightforwardly entitled "Value" and "Value 2," explore "the theme of economic value, its nature and relationship to other values, to what we do, and ultimately to what and how we build." Edited by Michael Benedikt, *Center* is distributed by University of Texas Press.

Rather than a broad survey, we have chosen to take several well-defined samples from what, for us, remains a loosely defined field. The first of these samples is taken at the intersection of environmental sustainability and government leadership. It includes three reports: one on California's two newest federal buildings, for LA and San Francisco, products of the GSA's "Design Excellence" program and exemplars of sustainable design; one on a parallel sustainability effort at the state level, as realized in Sacramento's Capitol Area East End complex; and an outline of the state's own design excellence agenda, presented by the State Architect.

Our second sample juxtaposes two perspectives on historic preservation and its relation to contemporary design. Photographer Mark Luthringer's images of abandonment offer a third perspective on history, memory, and the expendability of buildings.

Luthringer's photographs form a bridge to the final sample, a consideration, in two parts, of the fate of modernism in the post-war suburb. Like the articles on government-sponsored greening and historic preservation, these essays on

speculative residential development highlight ways in which values become institutionalized, here through the policies of lending institutions and homebuilders associations.

Sustainability, preservation, speculation—three ways (among many) in which we define our investment in the built environment. Each has its more or less obvious political dimension, and each is profound in its long-term implications. None, however, has the harsh immediacy of the politics of urban development in Israel and the Occupied Territories. In the July issue of *Architectural Record*, Michael Sorkin describes the situation there with characteristic clarity and insight. For anyone interested in architecture and value, Sorkin's article, "Urbanism is Politics: Lessons from a Place Where the Extremes Now Rule," is essential reading. ●

Tim Culvahouse, AIA, Editor

arcCA welcomes submissions for **Under the Radar**. To be eligible, a project or its architect must be located in California; the project must not have been published nationally or internationally (local publication is OK); and construction must have been completed within the last twelve months or, for unfinished projects, must be 60%-70% complete. Architects need not be AIA members. Submissions from widely published firms (as determined by the *arcCA* Editorial Board) may not be accepted. Please send your submissions to the editor by email at tculvahouse@ccac-art.edu, attaching three to five JPG images with a combined file size of no greater than 1.5MB. Describe the project in fewer than 200 words in the body of the email, providing a brief caption for each image, keyed to the image's file name. (If you don't have the capability to submit by email, you may send the equivalent information by regular mail to: Tim Culvahouse, AIA, Editor, *arcCA*, c/o AIACC, 1303 J Street, Suite 200, Sacramento, California, 95814, Re: "Under the Radar.")

Contributors

Stephan Castellanos, FAIA, was appointed as State Architect by Governor Gray Davis in February 2000. The State Architect acts as California's policy leader for building design and construction. The Division of the State Architect also provides design and construction oversight for K-12 schools and community colleges. Mr. Castellanos was a partner and architect at Derivi Castellanos Architects for 20 years. He has been an active member of the American Institute of Architects and has led the Institute in improving governmental relations, heightening public awareness of architectural excellence, and advocating for diversity within the profession. Mr. Castellanos serves as National Secretary on the AIA Board of Directors, and has served as the California Regional AIA Director. He has earned numerous awards of achievement including the Presidential Citation from the American Institute of Architects California Council in both 1993 and 1998.

Dana Cuff is Professor and Vice Chair of the Department of Architecture and Urban Design at UCLA. She is principal of the consulting firm Community Design Associates of Santa Monica. She is the author of *Architecture: The Story of a Practice* (1992) and *The Provisional City: Los Angeles Stories of Architecture and Urbanism* (2001), both published by MIT Press.

Stephen J. Farneth, FAIA, is a founding principal of Architectural Resources Group in San Francisco. He has over twenty years experience in historic preservation architecture as well as training and expertise in materials conservation. He serves on the executive committee of the California State Historical Building Safety Board and worked on the re-writing of the archaic materials section of the State Historical Building Code. He is a trustee of US/ICOMOS, the international preservation and cultural resource organization.

Based in Sacramento, **Lisa Kopochinski** is editor of *California Construction Link*, a publication of McGraw-Hill Construction.

Wendy Kohn founded Wendy Kohn Design in Los Angeles and has recently opened a design office in Denver, Colorado. She is co-author, with Moshe Safdie, of *The City After the Automobile*, and editor of a monograph of that architect's work. She is also an editor of two monographs of the work of Moore Ruble Yudell, *Campus and Community* and *Building in Berlin*.

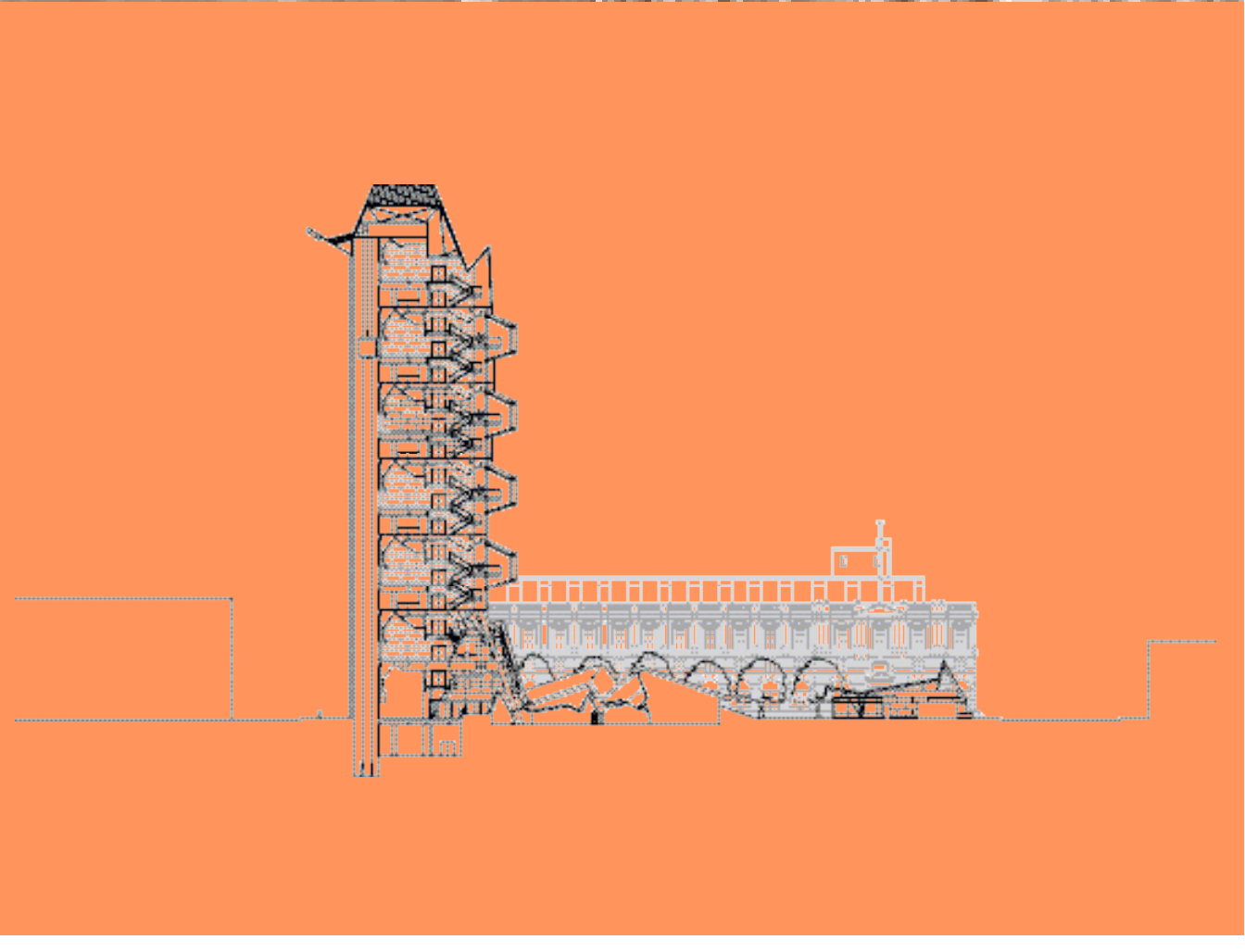
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Mark Luthringer is an Oakland, California, based architectural and fine art photographer whose work has appeared in *Architecture*, *Architectural Review*, and *Architectural Record*.

Elizabeth Martin is creative director of Alloy Design & Technology, a multi-disciplinary design firm focusing on building, new technology and craftsmanship. In addition to practice, Liz is the director of the new, Los Angeles-based A+D Architecture and Design Museum, located in the historic Bradbury Building. She is the editor of Pamphlet Architecture No. 16, *Architecture as a Translation of Music* (Princeton Architectural Press, 1995).

Lynne D. Reynolds, AIAS, is a second-year student in the architecture program at CCAC (California College of Arts and Crafts) who spent most of the previous two decades as a professional photographer of furnishings and interiors.

David Thurman is a senior associate at Barton Myers Associates in Los Angeles.



Government Goes Green:

Two New Federal Buildings

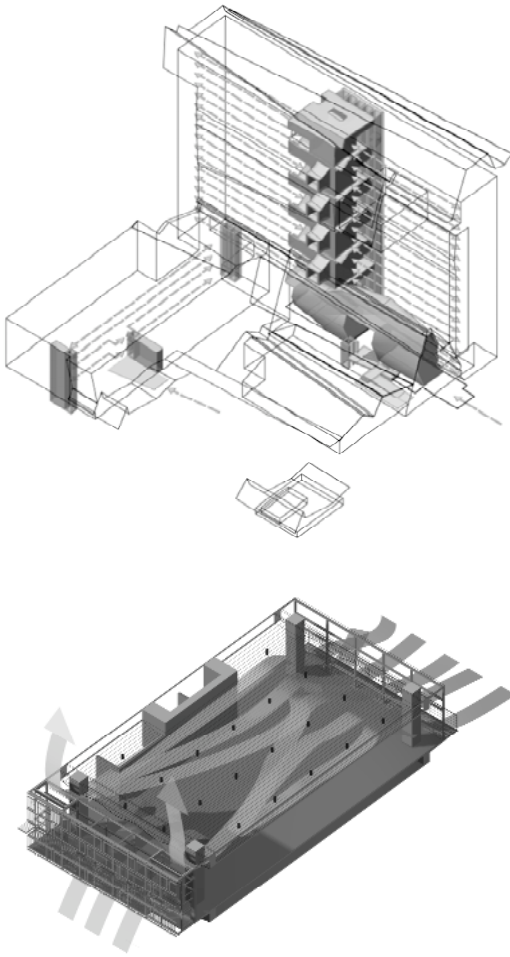
Wendy Kohn

Building
for
the public
now
means
building
green.

Sustainability has become official. The United States GSA has mandated that all its new construction after 2003 achieve Leadership in Energy and Environmental Design (LEED) certification, assuring that two upcoming California GSA projects embody the message: building for the public now means building green.

With its winning competition design for the new \$144-million San Francisco Federal Building, Morphosis will inscribe the city's skyline with a silvery slab that takes in the sweep of mostly low-rise SOMA to the east and punctuates the Beaux-Arts Civic Center to the west. Located across Market Street and just south of the open axis of the revitalized civic complex, the Federal Building tower presents a sheer, translucent, 234 ft.-high by 354 ft.-long face toward the Civic Center—obliquely enclosing the long plaza and visually reinforcing the linear flow of Market Street.

Toward SOMA, the tower's façade opens to long harbor views through a faceted filigree of computer-driven mesh panels. These panels rotate to baffle sunlight, and they fold when they descend to form both outdoor sunshading and the roof of a ground level public daycare center. Sky lobbies at every third floor of the 18-story tower pierce the



San Francisco Federal Building

Design Architect: Morphosis

Principal-in-Charge: Thom Mayne, AIA

Project Manager: Tim Christ

Project Team: Linda Chung, Simon Demeuse, Rolando Mendoza, Brandon Welling, AIA, Eui-Sung Yi

Project Assistants: Caroline Barat, Gerald Bodziak, Crister Cantrell, Delphine Clemenson, Todd Curley, Alasdair Dixon, Haseb Faqirzada, Chris Fenton, Arthur de Ganay, Dwoyne Keith, Sohith Perera, Kristine Solberg

Executive Architect: Smith Group LLP

Principal-in-Charge: Rebecca Nolan, Assoc. AIA

Project Director: Carl Christiansen, AIA

Project team: Jon Gherga, Lauryn Andreson, Nic Sibal, Belinda Wong, Assoc. AIA, Chaynut Ponglorpisita, Heidi Spaly, Ric Pulley, Yew-oe Tan, Ana Ganovic, Byron Bronston, AIA, Jack Howard, Hiroko Miyake, AIAS, Maia Rogers

layered building face with protruding, Breuer-like polygonal windows. These stone-framed portals, fitted with large, pivoting glass panels, join a three-story sky garden on the 11th floor to offer workers shared access to the outdoor air, panoramic views, and direct natural light. Eighty percent of the office space will be daylit, supplemented by direct task lighting.

With its main entrance on 7th street, facing the existing U.S. Court of Appeals building, the federal tower will set the backdrop for a permeable, south-east-facing, 37,000 square foot, landscaped public plaza along Mission Street. The plaza will be defined by the 1905 Beaux Arts stone façade of the Appeals Court and by a new, transparent, four-story annex containing the most visited functions of the federal complex. A public cafeteria, at the corner of Mission and 7th Streets, will reinforce the communal nature of the plaza.

Thom Mayne describes the tower's skin as "metabolic": prevailing northwest winds will permeate the façade through operable awnings and, with the help of an advanced monitoring and distribution system, a largely open floor plan, and a stack effect through the southeast façade, will allow natural ventilation to cool 70% of the tower's work area. Night breezes will be admitted to chill the long, narrow (65-ft. wide), concrete structure, effectively incorporating each basic building component as a functional tool in the service of a comprehensively sustainable architecture.

In downtown Los Angeles, the winning Perkins & Will competition scheme for a new federal courthouse makes abstract reference to the pillars of justice and the transparency of the legal system. Facing south toward Broadway, a monumental curvilinear "solar curtain" wall arcs and rises the full height of the 16-story tower, collecting energy and gray (rain) water while cradling an inviting civic plaza outdoors and creating a sweeping, full-height civic window from within. Kite-like sunshades alleviate heat gain, while the soaring room acts as a thermal vent to draw natural ventilation in and up through the building. Replete with evaporative, desiccant cooling and earth tubes for thermal storage, the million square foot building (with a projected construction cost of more than \$300 million) consolidates all District Court functions in a heavily-secured but highly-sustainable architecture.



Cradling the canted glass sun wall, a wing composed of five column-like fins stacks suites of judges' chambers vertically, providing each suite abundant daylighting and views towards the county courthouse and new Disney Concert Hall. At each level, daylit courtrooms are similarly stacked, interspersed with the judges' chambers for easy access, but set back to provide intimacy for the proceedings and gardens for the ground level.

A short ell holds the secured central entry point at plaza level, at the corner of Broadway and First Street, establishing a direct axis with the 1928 City Hall tower that dominates LA's civic district and, above, thrusting triple-height lobbies out toward Broadway. With views on one side across the civic center (the largest government complex outside Washington, DC), and on the other side across the curving courthouse lobby, these platforms—balanced between interior and exterior—exemplify designer Ralph Johnson's emphasis on locating each programmatic element specifically in response to the site, environmental opportunities, and the other district court functions. His "architecture of accommodation" includes a special proceedings court and garden at the roof level, where, by 2005, a polygonal cupola will beckon toward the pyramidal crown of City Hall and add a new, lit beacon to the downtown Los Angeles skyline. ●

Los Angeles Federal Building

Architect: Perkins and Will

Lead Designer: Ralph Johnson, FAIA, Design Principal

Project Team: Aki Z. Knezevic, AIA, Principal-in-Charge

Thomas Mozina, AIA, Senior Designer

Jay Lane, Director of Technology

Greg Geslicki, Architect

Khai Toh, Designer

Todd Snapp, Designer

Brantley Hightower, Designer

Rusty Walker, Designer

Consultants: Battle McCarthy, Ltd.—Sustainability



Excellence in Public Building

A Message from the State Architect



Stephan Castellanos, FAIA

“WE SHAPE OUR BUILDINGS, AND AFTERWARDS OUR BUILDINGS SHAPE US.” So spoke the British statesman Winston Churchill to the House of Commons in 1943, in hopes of convincing that body to rebuild the bomb-damaged House to its original form. While California has never been the victim of air raids on our built environment, our current forms of development are creating ecological time bombs that force us to question the values behind our growth. What kind of future are we creating when we build inefficient, unhealthy buildings with no acknowledgment of context or connection to their surroundings? Is our society so fickle that we need energy crises, regulations, and gridlock before we consider the effect of our tree on the forest? Is the poor design that we are constantly exposed to a measure of our society’s foresight or are designers continually lowering the bar?

The state is facing a number of serious issues that need to be addressed by changes in the way that we design and build our facilities. Currently, buildings consume 30% of our energy, produce 25% of our greenhouse gases, account for 30% of our waste stream, and affect the health, comfort, and productivity of building occupants, particularly when contaminants compromise indoor environmental quality. In an era of high energy prices, inevitable climate change, overused landfills, water shortages and constant headlines about “toxic

mold," it seems obvious that, if we want to leave our children a better world, we must change our development practices. What is the role of the architect in bringing about this change? When will we be able to look to designers not just for plans, but as educators, leaders, and partners in designing a future that ensures prosperity for all?

Under the current administration, the state has begun to address development issues and has emerged as a leader in the sustainable development field. Starting with the Capitol Area East End Complex project, the state has made a c o n s c i o u s decision that it will not wait for industry to change; the state itself will be a change agent.

California is the fifth-largest economy in the world, the second largest building owner in the country, and spends over \$3.2 billion annually on construction projects. Through the efforts of the multi-agency Governor's Sustainable Building Taskforce, the state is using its massive buying power to push the market in a direction that will improve building delivery, performance, and operations for all sectors of design and construction. The East End Complex is the largest construction project that the state has ever undertaken, and through the involvement of the Taskforce it will be a showcase of sustainable building design.

As a result of the success with the East End, the governor issued an executive order on August 2, 2000, that called on the state to build all future buildings using practices and technology that ensure they are models of sustainable building design and construction. The Taskforce developed a plan, *Building Better Buildings: A Blueprint for Sustainable State Facilities* (<http://www.ciwmb.ca.gov/GreenBuilding/Blueprint/>), that makes ten recommendations to the administration that would ensure that the state's construction program produces the "models" called for in the executive order. These recommendations cover everything from program planning to financing to training and are already being implemented into projects and process. Soon after the release of the *Blueprint*, the Governor issued another executive order relating to best practices in planning and community design. EO D-46-01 requires the state to site and construct buildings in ways that provide the greatest achievable benefit to the local communities that the buildings will be in. It includes planning that will take into account mass transit, historical preservation, joint-use, community input, economic revitalization, and more. It is leadership like this that will begin to turn the tide on some of the gravely serious issues that face the state. It is leadership like this that we need to see from the design community.

My office acts as the design reviewer for all of California's public schools and the policy leader for the state's



real estate department. This position allows us to pursue policies and procedures for the state that are at the forefront of planning and design practices. My staff and I have been working internally and externally on a number of programs that we feel are shaping a built environment for the state that will enhance the state's already strong architectural and cultural legacy. We have developed a vision for the future of California, a vision that provides a balance of ecology, equity, and economy for all of our citizens. I see state buildings and schools lit by daylight, creating their own energy, treating their own wastewater so that it is cleaner leaving than entering, sending little to no waste to the landfill from construction through operations, sited close to affordable mixed-use housing, accessible from mass-transit, functioning as community centers that are shared with local governments, and providing an indoor environment that allows our workers and students to learn and work at the highest level possible. I believe that this vision is attainable. Designers must be an integral part of this future. It is only through our involvement in this process, our continual education of others and ourselves that we can achieve a truly sustainable society.

One of the exciting programs that we have been working on is the Excellence in Public Building Initiative. This is a comprehensive shift in the way the state plans, designs, builds and operates buildings. The goals of the Initiative are many and diverse:

1. DEMONSTRATE ARCHITECTURAL EXCELLENCE

State buildings will represent the best of design and shall be safe, healthy, and supportive environments. They will symbolize California's commitment to good government and quality education.

I see state buildings and
schools lit by daylight,
creating their own energy,
treating their own wastewater
so that it is cleaner
leaving than entering,
sending little to no waste
to the landfill.

2. INTEGRATE ART INTO PUBLIC BUILDINGS & PUBLIC SPACES

Art will be fully integrated from the beginning of each project, with at least one percent (1%) of the project's construction budget devoted to this purpose. The Department of General Services will coordinate with the California Arts Council to implement the Art in Public Buildings Program.

3. BUILD SUSTAINABLE, ENERGY EFFICIENT BUILDINGS

Performance outcomes for sustainability and energy efficiency will save taxpayers money consistently in future years.

4. ENSURE THAT BUILDINGS ARE COST-EFFECTIVE

Public buildings will be cost-effective to build and operate, recognizing that operating costs over a building's lifetime far exceed the cost of initial design and construction. Using results-focused performance standards, life cycle costing, and an integrated design approach, new buildings will deliver value exceeding their initial costs.

5. EVALUATE BUILDINGS FOR DESIGN AND PERFORMANCE

Building design and performance include structural, aesthetic, functional, and human elements. The structural elements are addressed through codes and standards. Aesthetic matters will be evaluated in public comment and professional peer review. "Human" concerns are addressed through the systematic use of post-occupancy evaluation, which assesses the first-hand experiences of the building's occupants and operators as they work in the facility and applies lessons learned to make improvements to that building and to future building designs.

6. ENSURE THE SAFETY AND SECURITY OF OCCUPANTS AND THE PUBLIC

California citizens, public employees, and students shall be served by buildings that are safe and secure from natural and man-made disasters, while respecting democratic principles in a free and open society. Building designs shall allow for control of access for security purposes, the protection of key infrastructure and systems essential for the protection of our state, and other measures to ensure public safety.

7. ENSURE ACCESSIBILITY FOR ALL THROUGH "UNIVERSAL DESIGN"

Public buildings will be designed for ease of access, regardless of the age or physical abilities of people using them. By applying "Universal Design," an approach that incorporates usability and ease of navigation into the building's inherent design, the state will eliminate the need for costly add-ons and special accommodations to make buildings fully accessible.

8. MAKE A POSITIVE CONTRIBUTION TO THE LOCAL COMMUNITY

Public buildings will be designed to enhance the local built environment, consistent with Governor Davis's Executive Order D-46-01. The state will site public buildings to strengthen and revitalize California's cities and towns, taking into account local priorities such as the need for neighborhood revitalization.

9. COLLABORATE TO ACHIEVE EXTRAORDINARY RESULTS

Excellence in public buildings requires the expertise of state employees from many disciplines and state agencies. The Departments of General Services, Finance, Education, Toxic Substances, and many others will collaborate in the design and construction of public buildings, starting from the initial stages of project definition and continuing throughout the process, including post-occupancy evaluation.

10. UTILIZE BEST PRACTICES FROM THE PUBLIC AND PRIVATE SECTOR

The state will assure excellence through the use of best practices, whether developed in the public or private sector. For example, our process will include Total Building Commissioning and Partnering, i.e., establishing sound project goals early and monitoring adherence to those goals throughout the process in a team-based approach.

11. FOCUS ON CUSTOMER NEEDS

Public buildings must support and enhance the productivity and effectiveness of state employees and provide an efficient, comfortable atmosphere for citizens using public services. These objectives will be accomplished through participation of customers—the people who will occupy and use the building being built or remodeled—in the design and art selection process. Furthermore, post-occupancy evaluation will ensure that the building meets their needs.

12. EMPHASIZE CREATIVITY AND INNOVATION IN THE SELECTION PROCESS

The state's selection process will match the right architect with the right project and encourage innovation; its selection criteria will assure that the state hires talent and creativity as well as experience. Peer review will bring both public and private sector architects and construction professionals into the state's selection process. This demonstrated commitment to excellence will help make the state the patron of choice for design professionals.

The Excellence goals will apply to all state building and remodeling projects, whether large or small. Because of the scale and visibility of the state's building program, the

Excellence principles and processes will elevate standards throughout the design and construction industries.

One of our other promising programs is our work to improve the delivery and performance of public schools in the State with the Collaborative for High Performance Schools (CHPS). CHPS began in November 1999, when the Energy Commission called together Pacific Gas and Electric Company, San Diego Gas and Electric, and Southern California Edison to discuss the best ways to improve the performance of California's schools. Out of this partnership, CHPS grew to include a diverse range of government, utility, and non-profit organizations with a unifying goal to improve the quality of education for California's children. With the successful launch of the *Best Practices Manual* in 2001, interest in high performance design grew, and CHPS expanded its focus beyond California, developing a national version of the manuals as well as other state-specific versions. In early 2002, CHPS incorporated as a non-profit organization, further solidifying its commitment to environmentally sound design that enhances the educational environment for all schoolchildren.

The goal of the CHPS is to create a new generation of high performance school facilities in California. The focus is on public schools and levels K-12, although many of the design principles apply to private schools and higher education facilities as well. High performance schools are healthy, comfortable, resource efficient, safe, secure, adaptable, and easy to operate and maintain. They help school districts achieve higher test scores, retain quality teachers and staff, reduce operating cost, increase average daily attendance (ADA), and reduce liability, while at the same time being friendly to the environment and serving as community centers. CHPS offers a broad range of services including our *Best Practices Manual*, technical support, design expertise, and our CHPS website (www.chps.net), which contains research papers, support documents, databases, and other information that support the *Best Practices Manual*.

Through leadership programs like CHPS and the Excellence Initiative, we are using the State's massive buying power and information resources to effect change in our society. It is inherent, I believe, in the social compact between government and the public for government to look after the health, safety, and welfare of society, and all actions should be derived from these core guiding values. It is this belief that shapes my office's actions; we feel that it is our duty to be leaders, to help to shape and drive the progressive agenda that will begin to turn the tide in our struggle for sustainability. I would like to count you, the designers of California, as my partners in this. In light of the problems that our state and world face, I think it is our only hope. ●



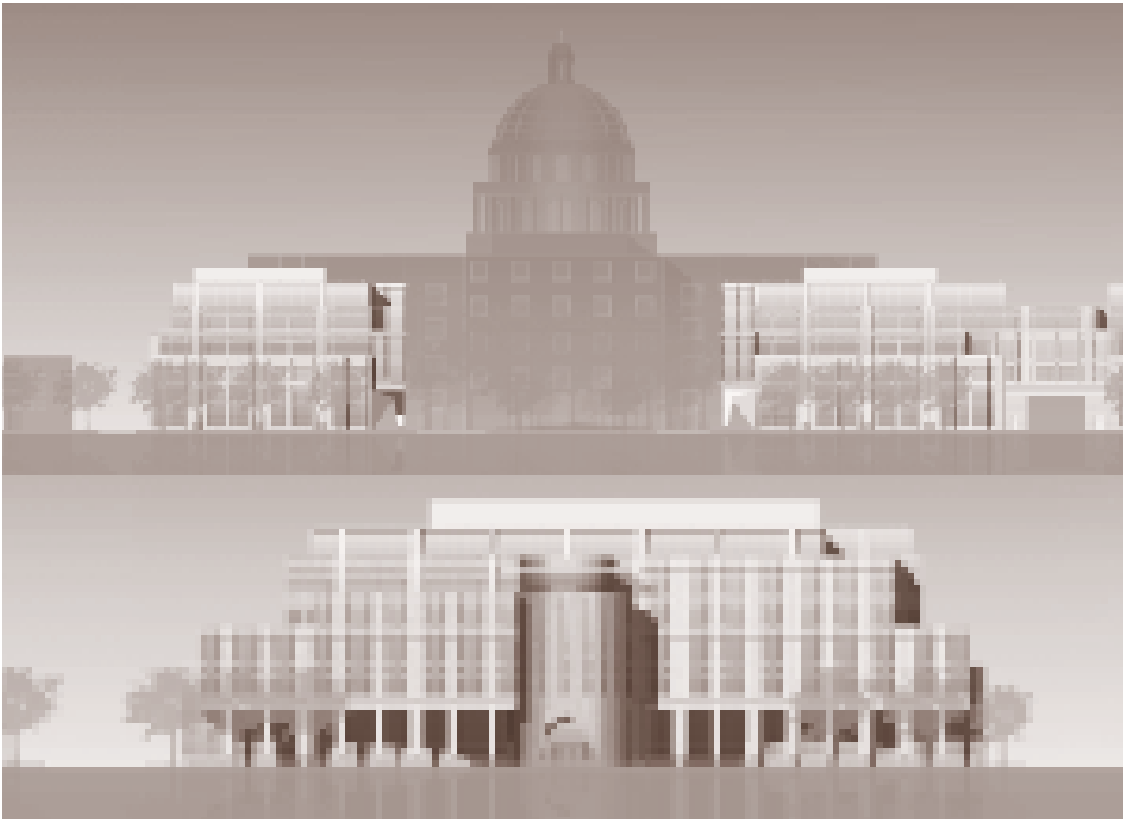
Newest State Office Building Exceeds Energy Standards

Lisa Kopochinski

Block 225, the first building in Sacramento's \$392 million Capitol Area East End complex, the largest state office project in California's history, exceeds California Title 24 energy standards by more than 30 percent. The five-block campus across from the State Capitol, master planned and designed by Johnson Fain Partners of Los Angeles, will eventually house five state office buildings and thousands of state employees.

The \$68.6 million project is the first state office building to implement sustainable goals at the onset of design and the first to utilize an under-floor distribution system and building-integrated photovoltaics. According to Mike Meredith, the Department of General Services' project director for the Capitol Area East End project, high-performance window glazing, super-efficient "smart" lighting, a cool-roof system, and 5,000 solar electric panels, will save taxpayers more than \$400,000 a year in energy costs. He adds, "It makes use of abundant natural lighting and even allows employees to control their own environment by adjusting a unique under-floor air distribution system."

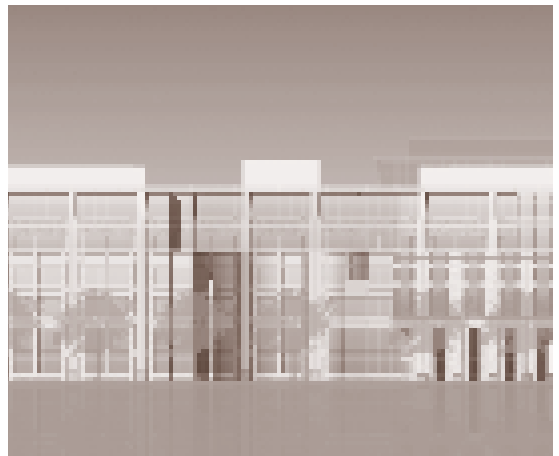
Greg Gidez, project manager for Denver, Colorado, based Fentress Bradburn Architects, architect of record, said, "Block 225 raised the bar on sustainable-design standards and the quality of the indoor environment. (It) provides a perfect opportunity to evaluate the benefits of a more environmentally friendly building system." Anthony Bernheim, FAIA, principal in



charge for SMWM, the project's green architect, worked with research architect Hal Levin of Building Ecology Research Group to develop state-of-the-art indoor air quality standards for the building. Dreyfuss & Blackford Architects of Sacramento was associate architect for the project.

The Center for the Built Environment at UC Berkeley is conducting a study of the project's building systems with the intent of quantifying their benefits and impacts. "This study will provide the industry and state of California with a benchmark from which to judge future designs and performance criteria," said Curtis Fentress, principal-in-charge at Fentress Bradburn.

The six-story building will house offices for the Department of Education, retail space, a childcare center and parking for more than 230 vehicles. Ron Mitchell, project superintendent for general contractor Hensel Phelps, said the project embodies "the dignity of the state government, while avoiding a monumentality which might compete with the Capitol. Highly articulated building forms [make a] transition from a mid-rise civic context to low-rise commercial and residential neighborhood surroundings."



"Our mission," said Scott Johnson, FAIA, design partner at Johnson Fain, "was to design a complex in classical rhythm with the State Capitol, one that fulfills its civic obligations as an anchor of the 100-year-old historic state capitol plan while setting a new bar for sustainable building and creating efficient, modern office facilities." ●



Some Thoughts on Preservation & Contemporary Design

Stephen J. Farneth, FAIA

Is historic preservation a reactionary movement undertaken by people who fear the future, preferring to hide in a false nostalgia for the past? While such may be true of some people, I believe the preservation of older buildings is an optimistic activity, one that assumes that our society will extend many generations into the future and that, in order for the future to have meaning, there must be continuity with the past.

Preservation takes a long view, believing that each generation will produce its own crop of well-designed new structures, which subsequent generations will also consider worthy of preservation. Historic preservation and new architectural design are not in opposition to each other, but are in fact very much related, connected by society's interest in architecture, history, and the future.

We began our architectural practice in 1980 with great enthusiasm and some core beliefs in the importance of reusing existing older buildings. Twenty-two years later, the youthful enthusiasm has gone a bit gray, but the core beliefs continue to form a basis for our practice. Over that time, the field of historic preservation has grown and matured, now recognized as a basic element of good urban planning

and respected as a component of professional architectural practice.

We have considered historic preservation from two sides, as advocates for buildings and as practitioners designing projects for clients. This process has certainly informed and perhaps broadened our philosophy of design and preservation.

Through working on the rehabilitation of many 19th-century and 20th-century buildings, we've also been able to observe the practices of earlier generations of architects. A few of them were great designers. Many others were perhaps less bold or talented, yet they still left a legacy of carefully designed, well-built structures, worthy of preservation.

Many contemporary buildings will someday be considered historic—not only the monuments produced by high-profile designers, but also the much greater number of structures produced by the majority of architects.

There are as many valid opinions about what makes good contemporary design in historic environments as there are architectural critics. The lessons of historic preservation suggest, however, one way to evaluate the quality of a contemporary

design: ask whether it is good enough that someone may actually want to preserve it 50 years from now. This is a difficult question to answer without the perspective of time, but it is a reasonable question to ask.

Our own design philosophy has developed largely from lessons learned through our preservation practice. The following are some thoughts for evaluating contemporary design in historic environments, and a few examples.

☀ First, do no harm. New buildings should not be built at the expense of important existing buildings. A well-known architectural critic once said that he would advocate demolition of the Parthenon if he thought it could be replaced with something better. This remark seems a bit extreme, but in fact it is not unusual thinking for some architects. The new Asian Art Museum in San Francisco, designed by Gae Aulenti, may well turn out to be a spectacular new building. It is, however, being created through extensive interior demolition of the old Main Library, which was important not just for its architecture but also for the meaning it had for many generations of users.

The converse to this idea also applies: not all change to a building is harmful. The proposed new Jewish Museum, designed by Daniel Libeskind, will completely transform the interior space of Willis Polk's Jessie Street Substation. The original, open, industrial character of the space will, however, still be readable, and it will offer a contrast to the new elements inserted into the building. Certainly, the design will cause great change to the interior of the building, but the interior was never intended for the public and has no real history of shared use and memory, as the Main Library does. The changes proposed to the building, while dramatic, may be worth the loss if a great new building is the result.

☀ Design for a long life. Just as art conservators must think about how future conservators will view their work in 50 years, architects must plan to design buildings that will still be useful in the future, in order to be deemed worthy of preservation. Buildings should be constructed with substantial materials, time-tested technologies, careful detailing, and a recognition that they will change and adapt over their lifetimes.

The Monterey Bay Aquarium, by EHDD, constructed in 1984, is a great example of these ideas. This large building was carefully fitted into a historic industrial neighborhood. It has stood the test



The Monterey Bay Aquarium, EHDD



The Cantor Center for the Arts, The Polshek Partnership Architects



Goldman School of Public Policy, Architectural Resources Group

of crowds, the marine environment, and the need to expand, and it has done so gracefully. Although less than 25 years old, it will soon be discussed as though it were a historic building.

There are also exceptions to this idea, the most notable being Bernard Maybeck's Palace of Fine Arts, designed for the 1915 Panama Pacific International Exposition. Originally intended to have

a short life, the building has remained a perennial favorite of the city's citizens. It was reconstructed in the 1960s, and efforts are currently underway to restore it again. (Editor's note: for more information, visit www.maybeck.org and select "Palace Restoration.")

☀ Context is still important. Although "contextualism" seems to be out of favor, the importance of designing with a consideration for the authentic context has not changed. Whether the best response to a historic context is to be contrasting or to be carefully understated depends on what is appropriate in each specific situation. In either case, a careful judgment based on the significance of the context must be made.

The new addition to the historic Stanford Art Museum (now the Cantor Center for the Arts), by the Polshek Partnership, was designed with a respectful eye to the context of the original museum. The new addition is physically independent of the old building yet links to the existing circulation pattern and maintains the original main entrance. In materials and details, it also is both distinct from and compatible with the original. This building relates, in a contemporary way, to the specific historic building as well as to the fabric of the Stanford campus.

☀ Style is not enough. Architectural style, like fashion, is temporary. Each generation of architects seems to reject the styles of the preceding generation, while simultaneously rehabilitating the sullied reputation of an earlier generation (proving the adage that it's always easier to love your grandparents than your parents). Witness the current rediscovery of "Midcentury Design." In fact, every generation creates good buildings; the best have more going for them than just their appearance. At their roots, modernism and post-modernism were both more about ideas than style.

Much has been said about the design for the new Prada Building in San Francisco. It seems that the best things that have been said about it are that it doesn't require demolishing a significant building and that it is a refreshing counterpoint to the existing historic context. While the district can surely handle contemporary and contrasting infill buildings, the Prada Building seems to be a fashion statement about screen walls that will probably look dated in ten years. The question is, will future generations rehabilitate it? We hope it will not spawn too many children.

☀ Modesty can be a good thing. There is certainly a place for bold, center-of-attention buildings, but not every building should be designed in that way. Restraint and modesty of design, especially in sensitive environments, are great virtues. The urban fabric of some of our favorite cities is largely created by modest buildings.

The recently completed Goldman School of Public Policy at UC Berkeley, designed by our firm, needed to provide for an ambitious client program, coexist with an adjacent Ernest Coxhead building and other less sensitive university structures, and provide a transition to the residential neighborhood to the north of campus. In addition, the proposal of a structure on this site resulted in threats of litigation from that neighborhood. Working with the university—while also keeping neighborhood concerns in mind—has resulted in a structure that has received highly positive comments from both the school and the neighborhood, an unusual development in Berkeley. The building owes its success to its modest intentions.

The relationship between the objectives of historic preservation and contemporary building should not be one of opposition but of shared goals—creating varied and vibrant environments that allow for growth and change, yet still respect the achievements of previous generations. The questions of how much change to historic environments is acceptable and how strongly to embrace contemporary elements will always be hotly debated. The lessons of the 1950s and 1960s taught us not to embrace change uncritically, with total disrespect for past generations. The more recent experiences of the 1980s–1990s have perhaps shown that a review process that strongly restricts change and development has the potential to reduce the interest and life of historic environments and to limit our current generation's ability to produce contemporary buildings of lasting value. The unfettered arrogance of the 1950s–1960s is unlikely to return, but it does appear that attitudes are changing to recognize the importance of contemporary design. Evaluating the quality of contemporary design in historic environments will continue to generate a healthy dialogue among architects, review boards, critics, and the general public. Asking how our grandchildren will look at it may be one way to add some perspective to the evaluation. ●



Is Preservation Creating a False History?

Making an Architecture of Our Own Time

William Leddy, AIA

History is more or less bunk. It's tradition. We don't want tradition. We want to live in the present and the only history that is worth a tinker's damn is the history we make today. —Henry Ford, 1916

Ford's famous commentary on history and progress could just as easily have expressed his era's prevailing attitude toward history in the built environment. In the ongoing debate about the role of history and preservation in architecture and urban design, Ford's words represent one extreme viewpoint—an unquestioned faith in technology, progress, and the sanctity of the "new" that has led to the destruction of many historically significant buildings and neighborhoods.

In reaction to this loss, the pendulum of public opinion has gradually swung in the opposite direction with the growth of the historic preservation movement. Since the 1960's, when committed preservationists chained themselves to bulldozers, the movement has saved many landmark structures and championed the rebirth of historic urban contexts across the country. But its most extreme advocates share an equally unquestioned faith in the sanctity of the "old." They would have us freeze time in a fictional past—one that leaves little room for architectural innovation or urban evolution.

In a time of accelerating technology and relentless societal change, both positions have some validity. The Henry

Fords of the world rightly understand that history doesn't exist in a candy-coated past—it is being made every day in vital response to changing needs, aspirations, resources, and technologies. On the other hand, the enormous cultural value of our architectural heritage cannot be denied. The apparently conflicting needs of the past and the present force us to ask increasingly difficult questions about the future of our built environment: What should be saved? What can be lost? How can the trace of authentic history be retained within the walls of our evolving world?

THE FEAR OF LOSING HISTORY

We have so little history in the United States that it is extremely precious. The fear of losing it, and to some extent the fear of replacing historic places with modern architecture, have been institutionalized in the creation of landmark preservation boards, design review committees, and restrictive design guidelines in communities across the nation. And with justification; the massive redevelopment and heroic mid-century modernism of the postwar period replaced many exceptional buildings and neighborhoods of earlier eras with monolithic, impersonal design. Ironically, modern architecture itself is now an increasing target of insensitive development, as the destruction of buildings by Richard Neutra and other modern masters sadly illustrates. (Another ironic twist is that the recent demolition of Neutra's Maslon House in Rancho Mirage, California, was allowed because no historic preservation ordinance currently exists in that community.)

But institutionalizing the preservation movement has come at a price. The original objective of preserving excellent old buildings has broadened in many communities to an overarching fear of change in general. In an attempt to limit change, historic landmark status is granted to an ever-broader range of architectural character, often with little qualitative distinction made between buildings of different types and eras. Despite the existence of landmark rating systems in many cities, an ordinary, utilitarian warehouse from the 1940's, for example, can be given historic stature equal to that of a carefully designed and lovingly crafted civic building from the 1890's. Both are treated as treasures despite vast differences in architectural quality and cultural significance.

When change is allowed, it is often restricted to narrow, historically literal expression. Old construction is restored to a predetermined "significant" period, disregarding other moments in the life of the place. When additions are made to historic and other existing buildings, local jurisdictions routinely require the change to be disguised by mimicking the original design. Similarly, new construction in historic districts

A strict historicist agenda is not sustainable in cultural, economic, or environmental terms.

(as well as ordinary neighborhoods) is often required to be in an "historically appropriate style" to match the existing buildings and create a "harmonious" urban experience. By attempting to restrict and disguise change, these historicist constraints mire our cities in a synthetic, dishonest past that undermines the primary role of historic preservation: to bring the past and present together in daily life and create a living, vibrant history of place.

HISTORICISM IS NOT SUSTAINABLE

A strict historicist agenda is not sustainable in cultural, economic, or environmental terms. It denies the reality, so well understood in other parts of the world, that healthy buildings and cities embody complex, constantly evolving layers of time. In many European cities, for example, the past is made vital through adaptation to contemporary needs and juxtaposition with new construction that boldly expresses the modern condition. In the U.S., by contrast, many preservationists and planners seek to create a false homogeneity within the urban fabric, as if cities were themed environments where everything should look like everything else. This strategy results in culturally barren places where real history is hidden amidst fakery and little trace is left of our own time. By rigidly honoring the past, we fail to make our own, contemporary contributions to a rich and evolving architectural heritage—we relinquish our cultural responsibility to build the historic landmarks of the future.

The historicist objective of replicating old architectural styles cannot be easily achieved within current economic models and construction capabilities. The ornate Victorian architecture valued so highly by San Franciscans, for example, relied upon low-cost, highly skilled craftsmen and cheap, old-growth redwood. These conditions are, of course, a distant memory. Current conditions are more notable for the fading of fine craftsmanship and the limitations of economic and natural resources. As a result, today's construction industry is normally hard-pressed to replicate Victorian and other historic styles without creating a flimsy, cardboard facsimile. When elaborate,

historically accurate recreations of past construction are achieved, the extraordinary cost may be hard to justify as a reasonable allocation of society's strained resources.

In environmental terms, the doctrinaire approach to historic preservation is potentially even more damaging. One of the most environmentally sustainable acts is the adaptive reuse of existing and historic structures—a strategy that recycles existing built resources, substantially reduces the impact of demolition on our landfills, and limits the contribution of natural resources to new construction. By obstructing change or insisting on strict historic renderings, some preservationists severely limit the ability of old buildings to adapt to changing needs, thus increasing the likelihood that these buildings will be abandoned to decay and eventual destruction.

MAKING AN ARCHITECTURE OF OUR OWN TIME

An alternative approach to engaging history in the built environment is the creation of a contemporary architecture that establishes authentic connections to time and place. This approach acknowledges the evolutionary nature of buildings and cities, embracing the notion that history is happening now. It responds to contemporary conditions with modern technology while simultaneously honoring the essential qualities of historic architectural fabric. History in the built environment is engaged through a combination of techniques appropriate to each circumstance, from meticulous, historically accurate restoration and reconstruction, to the careful integration of contemporary forms and materials within historic structures and neighborhoods. Through this layering of technique and time—through the resonance and/or dissonance developed between the historic and the modern—an architecture of our time can be developed that simultaneously connects us to the past and the present.

In our practice, we have promoted this connection between past and present in three main areas: through the integration of contemporary architecture within existing and historic structures; through the environmentally sustainable adaptive reuse of historic structures; and through the construction of new buildings within historic and existing neighborhoods.

MARTIN RESIDENCE, KENNETT SQUARE, PENNSYLVANIA

At the Martin Residence, a modern dwelling was inserted within an 1820 stone barn. Inspired by the desire to create a powerful dialogue between the past and present of the site, the new structure sits as a smooth cherry box within the rough, original stone shell. A 42-inch-wide space between the outer stone wall and new inner wood wall serves as a circulation zone, allowing the residents to brush against history on a daily basis. To further



Martin Residence



Martin Residence



Thoreau Center For Sustainability

the past/present dialogue, contemporary elements are contrasted with old throughout the project. New steel columns reach up to support old, hand-hewn oak timbers; new, metal-clad elements containing entry vestibules, mud rooms, and the like arrange themselves against the exterior stone walls; original floor timbers are revealed to let new light filter into the space. Through these elements, modern expression and historic fabric are woven together to create a rich experience of time.

THOREAU CENTER FOR SUSTAINABILITY, THE PRESIDIO, SAN FRANCISCO

The Thoreau Center for Sustainability is the adaptive reuse of the historic Letterman Hospital complex at the Presidio. The nationally registered, landmark ward wings were converted into 250,000 square feet of sustainably designed offices for a consortium of non-profit environmental foundations. Designed in conformance with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* as well as the National Park Service's *Guiding Principles of Sustainable Design*, the Thoreau Center makes a strong case for sustainable adaptive reuse. By adapting an obsolete structure to a new use, this project simultaneously preserves the past of the built world and protects the future of the natural world.

BAKER & HAMILTON COMPLEX, SAN FRANCISCO

The Baker & Hamilton Complex comprises the conversion of a landmark brick warehouse structure built in 1905 into a 280,000 square foot office building and the construction of a new 50,000 square foot office building next door. This project explores the creation of a dialogue with history at an urban scale by juxtaposing a clearly contemporary structure with the historic brick warehouse. Several methods were employed to promote this dialogue, addressing both the essential characteristics of the original structure and the nature of our modern condition. A clay tile rain-screen system was used on the exterior of the new concrete structure to visually connect it to the brick warehouse, while clearly expressing the spirit of its own time. The proportions and placement of openings in the new building echo those on the original structure. The façade of the new building projects beyond the line of the existing brick façade to mark the original loading dock and railroad bed. Through abstract strategies such as these, modern architecture honors the past by providing a contemporary link to the historic context.

Only by making a meaningful architecture of our own time that simultaneously embraces the past and the present can we retain an authentic history within the walls of our evolving world. ●



Thoreau Center For Sustainability



Baker & Hamilton Complex



Baker & Hamilton Complex

Hancock Fabrics Has Moved to the Target Center

Mark Luthringer



Blue Light Special, 2000



Carlin, NV, 2001

_With these images, my aim is not architectural preservation. I am trying to preserve—in photographs—the sweet melancholy of these places brought out by neglect, decay, obsolescence, and unintended results. At the same time, I intend to dissect the notion of nostalgia, which is another way of describing this 'sweet melancholy.' While nostalgia may be a simple amelioration of the past as we look back, it is also a morbid fascination with aging, death, and the insignificance of our lives in geologic time. We seem to take a strange comfort in thoughts of our own mortality.



1st Baptist Church of Rosedale, 2000

The modernist (and by extension, utopian) overtones of some of this architecture make its decay and abandonment even more poignant to me. Utopianism can function as a reverse nostalgia, and to look back at these sites with nostalgia completes a circle: We are living the future that some of this architecture alludes to and tried to embrace.



Fine Men's Wear, 2000



Cawelo, CA (#2), 2001

_Making these pictures has connected me with history in a more localized way and helped me see that the history of a building is also the history of the ground where it stands, its neighborhood, its city, etc., as well as that of its builders, designers, owners, tenants, residents, . . .



Cine 3, 2000

_Like a time capsule left out in the open, a building can channel the period when it was born. Perhaps, through aging, all that a building witnesses is recorded, treated, and later transmitted when the building is observed, contemplated, or photographed.



Our Motel is Open, 2001



Locked Out:

Architects in the Suburbs

Dana Cuff

“Our dangers, as it seems to me, are not from the outrageous but from the conforming; not from those who rarely and under the lurid glare of obloquy upset our moral complaisance, or shock us with unaccustomed conduct, but from those, the mass of us, who take their virtues and their tastes, like their shirts and their furniture, from the limited patterns which the market offers.”-Judge Learned Hand¹

The popular residential landscape in any American suburb is a disturbing sight for most architects. Whether one sees “little boxes made of ticky-tacky,” environmentally unsustainable sprawl, or a world without architects, our professional values are offended. How did this happen? Popular American taste is the canonical explanation given for residential modernism being overtaken by the conservative postwar house and subdivision. Conservative taste *en masse*, this explanation goes, turned the postwar home into nothing more than a traditional cabinet for a wide collection of modern wonders, from dishwashers to TVs to air conditioners to wall-to-wall carpet.² If we challenge this canon, however, we will see other reasons why the suburbs evolved basically without benefit of architects.

The idea of some homogeneous “popular American taste,” in fact runs counter to the increasing heterogeneity of the postwar middle class, the clearly more progressive taste for other domestic products, and the logic of the media and postwar consumption, which suggests that desire is not only reflected in, but actually constructed by, the products themselves. Moreover, what evidence do we have that these postwar homebuyers had exercised their values or their taste preferences? It is hard to see that they had much choice, given the limited housing stock provided.

In the early stages of suburbanization, from the interwar years to the postwar period, architects designed prototypes that represented real options to the Levittown model that eventually overtook suburban development.³ From the twenties through the years immediately following the Second World War, architects were poised to produce a new residential landscape for America. It seemed certain that new technologies bred by the war effort, particularly prefabrication, would transform the housing industry and, with it, the form, program, and technology of the single-family house. “The Postwar House” became a synonym for the house of the future that would usher in more



modern, more efficient, more spatially fluid architecture and the life-style to go with it.

The inevitability went beyond technology. Often called a “crisis,” emergency housing conditions since the Depression and throughout the war had fostered a willingness to experiment in various ways to produce homes. The hiatus in housing construction produced enormous pent-up demand. This lack of continuity and the surge in expected production were perfect conditions for a new direction set by new strategies in homebuilding. At the same time, the American family underwent change, with the increasing dominance of the nuclear family organized around childrearing as well as consumption in the privacy of its own home. Architects shifted their attention from custom homes for the wealthy to small houses for the emerging middle class, including all the men and women who would return from the war abroad or the war effort at home to live the American dream in the modern world.⁴

Numerous modern, model homes held unrealized promise, primarily because so few were actually built. Beginning in the late '20s and early '30s, we find the first examples of modern mass housing experiments. Buckminster Fuller's 1928 Dymaxion House was a radical blend of industrial materials, prefabrication, flexible adaptation to individual site conditions, and *existenz minimum*, not to mention packaging and marketing. In spite of Fuller's department store demonstrations of Dymaxion's beauty, it was Wally Byam's Airstream trailer eight years later that captured the popular imagination. Like a blend of

the Dymaxion car and home, the Airstream Clipper made mobile living a recreational pastime. Its use of aircraft aesthetics and technology points to a terrain where “American taste” about forms of domestic life was less conventional than commonly assumed. From Wright's Usonian House to Gropius and Wachsmann's Package House to Breuer's Exhibition House for MOMA, architects worked on new forms of domesticity that seemed immanent.

Yet builders across America rejected the architect's vision of the postwar house, assembling their own models instead: Levittown and all its minor variants. A traditional if stripped-down house, complete with ridge roof and mullioned windows, was multiplied acre after acre. It was built by traditional construction methods, with little or no prefabrication. The builder's house utilized principles of industrial production, not in the factory, as predicted, but in the field, with swarms of semi-specialized tradesmen moving lot by lot across immense sites. They built Cape Cod model homes by the hundreds, accompanied by the Ranch-Style, each defined by a minimal amount of trim and minor reorganization of the façade.

Modernism took up residence within the house primarily in the kitchen and the bathroom, where hygiene and morality were embodied in a smooth, white, shiny iconography. Only a few modern spatial moves were made elsewhere in the house: the removal of the wall between the dining room and the kitchen, a related informality of program accomplished by moving the kitchen to the front of the house and the living room to the rear, the displacement and extension of the picture window to the private back yard as floor-to-ceiling glass or sliding glass doors, and the continuity between the interior and exterior ground plane achieved both by glazing and slab-on-grade foundations.

While not the first American middle class subdivision nor particularly inventive, Levittown can be taken as the benchmark of postwar mass housing. It is the primary exemplar of the genre. Except for the single amenity Levitt packaged with his houses each year, starting with a Bendix washer followed by a built-in TV, it is hard to imagine construction with greater economy. Economy is the obvious starting point for a critique of the popular taste explanation: the postwar family bought what it could afford, and this was the least expensive house on the market. But economy is not the full explanation.

From a review of the Case Study House program, archival records of housing architects, and the history of American public housing, it seems evident that modernism and the architects innovatively addressing the small house were offering a viable alternative. This impression, however, stands in direct contradiction to parallel research into government documents, home builders' records, and interviews with home builders operating in the '40s and '50s. These sources offer, instead, rationales both political and pragmatic for resisting the modern house while propagating its traditional counterpart.

A number of factors pushed the postwar house toward standard building conventions and traditional formal manifestations, and these can be briefly summarized here. First, the two primary agencies regulating housing, the Federal Housing Administration (FHA) and the Home Owners Loan Corporation (HOLC), instituted highly conservative practices in order to reduce the probability of another Depression. FHA guidelines insisted upon "no flat roofs," and the HOLC issued instructions that modern homes were a lending risk. Second, prefabrication did not easily dovetail with local building regulations that governed home construction region-by-region. Moreover, for various reasons, prefabricated housing—even that with government funding—was unable to deliver its product in a cost-effective or timely manner. One reason was that defense industries received priority for a wide range of building materials, yielding a shortage of steel and aluminum as well as wild price fluctuations when those materials did become available in limited supplies. Housing that relied on anything other than wood frame construction, including most experiments in prefabrication, was jeopardized.

Third, this pressure went hand-in-hand with standard home building practices. The interwar years had witnessed the emergence of a bonafide home building industry,⁵ which resisted change in labor practices or construction methods. There were few alternatives that could compete in terms of cost with the loosely detailed system of wood frame construction that depended on trim and plaster (and, later, stucco) to cover the consequences of speedy, moderately-skilled building. Fourth, a most significant factor was the newly organized homebuilding industry, politically astute and knowledgeable about public

relations. Its representatives lobbied successfully at local and national levels to resist changes that were not in their best interest. Fifth, the postwar growth of the speculative real estate market lent strength to conservative building practices and to the creation nationwide of a relatively homogenous house marked by minor product differentiation. Lastly, in the anti-communist era of McCarthyism, modern aesthetics were dangerously associated with leftist, progressive politics.⁶ All together, these forces effectively restrained modern housing, limiting it to experiments rather than developments.

If, as I have tried to show, there was no shortage of design vision for the postwar house, and if a good many middle-class Americans held values that were consistent with more modern, more industrial, indeed more radical housing, then Levittown's explanation lies elsewhere. The innovative, modern, postwar house was rejected not by the American public, but by other forces including the conservative regulatory and lending institutions governing housing. That conservatism was reinforced by the building industry, which was already established and clearly interested in maintaining the status quo. Finally, it must be said that we architects were not prepared as professionals to step into the political fray to argue effectively for our view of the future. The suburban canon was reified without that countervailing view. Architecture for the popular American landscape is of course a matter of vision and careful design, as architects argued through their plans, but it is also entangled in webs of politics and prevailing practices. Our innovations depend not upon our designing houses and neighborhoods that fit into those patterns, but ones that recognize the real contexts within which change will take place. ●

Notes:

1 Quoted in Bernard Rudofsky, *Behind the Picture Window* (New York: Oxford University Press, 1955), p 201.

2 Thomas Hine, "The Search for the Postwar House" in *Blueprints for Modern Living* (Cambridge: MIT Press in association with the Museum of Contemporary Art, Los Angeles, 1989), pp. 167-182.

3 This article stems from research into residential modernism for my book, *The Provisional City* (Cambridge: MIT Press, 2000), and from an architecture and urban design graduate seminar I taught in Spring, 2002, at the University of California, Los Angeles. My thanks to the students in that seminar for their thoughtful discussion and research into model homes and housing.

4 See Dolores Hayden, *Redesigning the American Dream* (New York: W.W. Norton, 1984).

5 Marc Weiss, *The Rise of the Community Builders*, (New York: Columbia University Press, 1987).

6 Harold Zellman and Roger Friedland, "Broadacre in Brentwood?: the Politics of Architectural Aesthetics," in C.G. Salas and M.S. Roth (eds.), *Looking for Los Angeles* (Los Angeles: The Getty Research Institute, 2001), pp. 167-210.

The Lustron Home

A Fascination with the Prefabricated Modern House



David Thurman

In the quest for a definitive “modern” architecture, the notion of prefabrication has been a longstanding interest, if not a preoccupation, for architects. The term “prefabrication” has meant many things and been applied to a wide variety of building types, sometimes including the single family residence. For the purposes of this discussion, one might nominally define prefabricated building as a factory production process that allows rapid site assembly of a permanent building to a fixed foundation, with little or no custom work. Generally, the objective of such building prefabrication is the creation of construction and assembly efficiencies with the implied benefit of increased affordability and/or profit. While prefabrication has been considered a kind of modern ideal in some quarters, one might also note that the single-family home’s highly personal and symbolic role suggests special challenges for those who would produce standardized buildings.

Architects have historically embraced the cause of residential prefabrication with vigor, designing a wide variety of futuristic “concept” homes intended for mass production. Among elite examples of this class are Buckminster Fuller’s “Dymaxion” house (1929-46), Albert Frey and Laurence Kocher’s “Aluminaire” house (1931), and Walter Gropius and Konrad Wachsmann’s package prototypes (1941-50).¹ All reflect the conviction that “pure” prefabrication strategies can be

fundamental to the production of single family housing, although none reached the mass-market in any significant quantities. Yet the ideal of prefabrication of single family homes—and modern architects' longstanding affair with notions of building prefabrication—serve as a useful backdrop for an interesting and mostly forgotten example, the “Lustron Home” (1947-50). This brief but significant building experiment resulted in the construction of nearly 2500 units distributed throughout the Midwest and Eastern Seaboard.

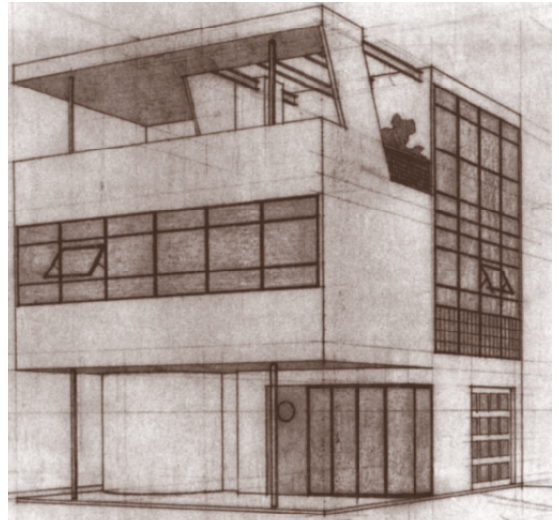
When compared to modern architecture's most visionary projects, the modest Lustron Home was an unlikely protagonist in the century-spanning exploration of the idea of prefabrication. While the Lustron was indeed a concept home, it was also a cultural by-product of innocent, “Popular Mechanics” inspired notions of the future and the enthusiasm generated by wartime mass-production successes. Promotional literature promised low maintenance costs, since all interior and exterior surfaces—including the roof—were constructed of porcelain enamel panels. The original, 31' x 35' (990 sq. ft.) two bedroom house was priced at an affordable \$7,000 and included built-in fixtures throughout. Among these fixtures were a combined clothes and dishwasher, lighting and bathroom fixtures, automatic water heater, exhaust fans, plumbing, electrical equipment, a 275 gallon water heater, and radiant ceiling heating.² The steel in each unit weighed 12.5 tons, and the enamel weighed one ton. All 3,000 parts could be shipped from the factory in Columbus, Ohio, in a single 35 foot tandem trailer and be site-assembled in 350 hours. Land costs were not included, and local dealers were set up to assist with customer orders and lot selection.

The idea of living in an all-metal house was seemingly so unconventional as to reject traditional notions a family might associate with the idea of “home.” Yet the Lustron Home's astonishingly widespread dispersion serves as evidence of its acceptance in the American heartland. By the end of the company's short existence in May, 1950, it had constructed a total of 2489 houses, with a significant number of remaining back orders. While never reaching its break-even production rate of 35 houses per day, in July, 1949, it reached a peak production rate of 15 houses. Overly ambitious initial projections had indicated that the factory would produce at a rate of 400 houses per day. Projected site assembly times were similarly aggressive and were projected at 150 hours per unit, although typically under the best conditions the time usually amounted to 350 hours. When the company repeatedly failed to reach its predictions and required significant additional loans, bankruptcy followed.³

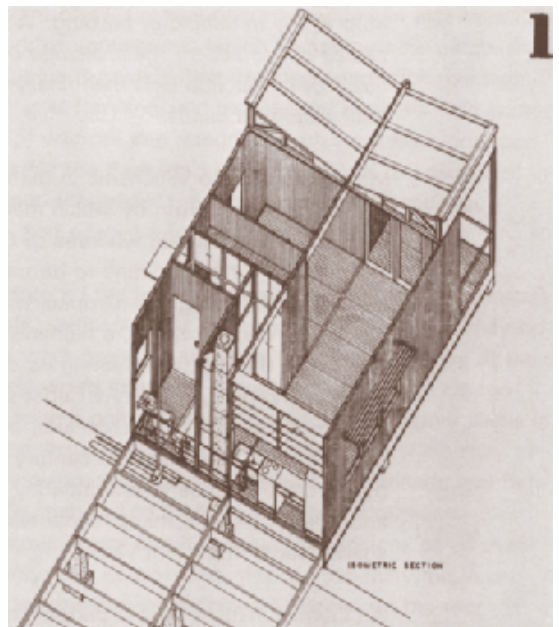
The hopes for the Lustron Home's success were fueled by a postwar political climate in which mass production



Dymaxion House, Buckminster Fuller, 1929-46



Aluminaire House, Frey and Koehler, 1931



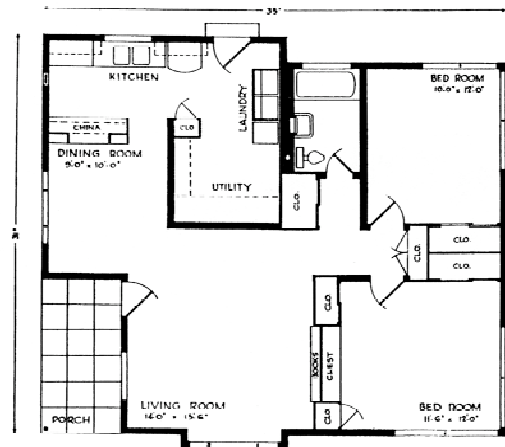
Package Prototype House A, Gropius and Wachsmann, 1941-50

Third, the company underestimated the impact of a variety of other factors, including shipping and assembly costs, variations in climate, building codes, and inconsistency of local trade skills. All of these factors caused the price of the Lustron to vary from one region to another, sometimes resulting in delays and frustrating consumers. Other factors that influenced Lustron's eventual downfall were the company's lack of capitalization, the deterioration of the economy, and pressure from the government to repay outstanding loans.⁵

Although the Lustron's populist design pedigree and strained financial history make it seem a distant cousin of more 'heroic' examples, there are significant parallels to be drawn. For instance, Frey and Kocher's Aluminaire house substantially emphasized the use of new materials, most notably the "miracle metal," aluminum. It was a sponsored exhibition pavilion intended for mass visitation, not unlike the Lustron prototypes, although mass production was never attempted. Buckminster Fuller's Dymaxion Dwelling Machine, similar to the Lustron, was to be produced in an aircraft factory by the Beechcraft Aircraft Company, with production anticipated at 200 per day or 50,000 per year. Its production fell through, however, when financing needs and Fuller's own design objectives were not met. Wachsmann and Gropius' General Panel house and early Package house also appeared to be headed for intensive mass production efforts at about the same time the Lustron experienced its best years, but the most successful General Panel house production effort only reached 150 to 200 units.⁶

Compared to such projects, the Lustron can rightfully claim a substantial success in prefabrication, albeit with substantial public investment. While it lacked the visionary pizzazz of Buckminster Fuller's prototype, the Lustron Home reached the markets in numbers that few other experiments in prefabrication ever would. Evidence that the Lustron had captured the public imagination is surprising: in one city, for instance, nearly \$200,000 remained waiting in escrow for production orders to be filled, while continued mail and telephone inquiries throughout its distribution areas overwhelmed the company. By the end of 1949, the Lustron Home's distribution network included 234 dealers in 35 states, reaching from New York to Florida and South Carolina to Texas. North Carolina received the most houses (339), while Illinois (307), Ohio (275), and Indiana (142) also were leaders. Even North Dakota (12) and Florida (16) were represented, and a few made it as far west as Kansas and Texas. Although the Lustron experiment was distinct from other, more radical experiments in prefabrication, it offered a useful case study in execution which few other similar projects ever achieved. Not surprisingly, a large number of Lustron Homes still exists, spread widely throughout the Midwest and

FLOOR PLAN OF LUSTRON MODEL HOUSE



Manufactured By
LUSTRON CORPORATION
CICERO 50, ILLINOIS

eastern seaboard. Current owners' documentation of repair strategies, original sales information, and other historical details recall the impact of the experiment.⁷ They also remind us of the Lustron's strange mix of visionary and pragmatic influences and the dream of a technologically advanced domicile for a new and better world. ●

1 H. Ward Jandl, *Yesterday's Houses of Tomorrow: Innovative American Homes, 1850 to 1950* (Washington, DC: Preservation Press, 1991). Jandl's survey of experimental housing provides a useful reference for these examples. The other natural source for a summary of 'heroic' steel houses is Niel Jackson's recent *The Modern Steel House* (New York: John Wiley & Sons, 1997).

2 Thomas Fetters, *The Lustron Home: The History of a Postwar Prefabricated Housing Experiment* (London: McFarland & Company, 2002), p. 55. Fetters provides the most complete survey of the Lustron production history, including factors that contributed to both its creation and demise.

3 Fetters, p. 7.

4 Carl Koch, *At Home with Tomorrow* (New York: Rinehart, 1958), p. 122. Koch's comments are valuable principally due to the timing of his involvement with the Lustron project. While his suggestions were apparently received too late to alter the course of the production effort, his investigation helps reveal some of the more important shortcomings at the time of a high rate of production. He questioned a number of managerial and design strategies that had been fundamental to the Lustron since its outset.

5 Fetters communicates these issues in a variety of locations, including p. 77.

6 Gilbert Herbert, *The Dream of the Factory-Made House: Walter Gropius and Konrad Wachsmann* (London: MIT Press), p. 304.

7 A variety of Lustron-related historical and photographic information resources are available on the internet, including: "Things you want to know!," the Lustron brochure provided to buyers; "Lustron Registry, A list of Houses Across America!"; "Garage and Breezeway Variations with Lustron Homes" (approximately 1950); "Answers to Questions about the Lustron Home" (Iowa Sales Brochure); "The Lustron Home—A New Standard of Living; A Camera Tour Through the New Lustron Home...The House America Has Been Waiting For" (July 1948 company brochure); "Camera Tour Through the Lustron Home, A New Standard of Living" (December 1948 company brochure); H. Walton Cloke, "Government Sponsored Housing Failure!," *Stag Magazine*, December 1949. Two such useful sites are <http://strandlund.tripod.com> (select "Pamphlets and Brochures") and <http://www.piranhagraphics.com/Lustron/> (current images are provided).

* The author thanks Edward Levin, Margaret Hannaford, Peter Robertson and Sigrid Geerlings for their assistance with the development of this topic.



Under the Radar

Point of Tension—a Case Study

Reggie Rodriguez Community Center
Sparano + Mooney Architecture

Elizabeth Martin

As Los Angeles' metro areas steadily become less racially segregated, most communities are becoming more economically segregated. Push factors—high crime rates, failing schools, falling property values, and, often, higher tax rates—drive middle class families out of declining neighborhoods in central cities. Pull factors—safer neighborhoods, better schools, rising home values, and, often, lower taxes—pull such families to developed urban or newer suburban areas. The result: high-poverty ghettos and barrios, cut off from mainstream society, where extreme poverty persists, despite the widespread prosperity and flurry of homeownership in the better neighborhoods. The solution: change the rules of the game that dictate how regional growth works.

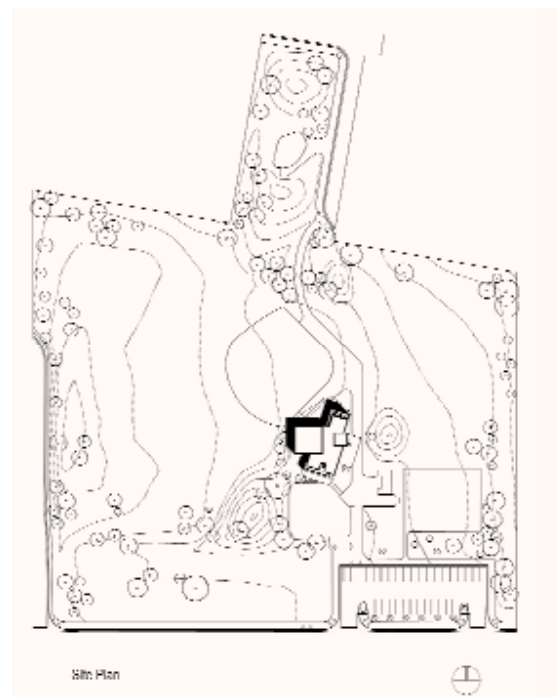
Montebello is an incorporated city within Los Angeles County. The city's planning department, along with various neighborhood groups, has developed a 5-year revitalization plan starting with a new community center. Now complete, the Reggie Rodriguez Community Center focuses on providing alternatives to drugs and gang violence, which are now prevalent throughout Montebello. The center has four non-profit organizations operating out of

the building, providing activities and services for its disadvantaged population, including mentoring opportunities for young Latinos, computer training workshops, employment counseling and job training, healthcare services, and health education programs. Two roof-top decks and a multi-purpose room provide areas for community gatherings within a park containing a baseball field.

Los Angeles based architects John Sparano, AIA, and Anne Mooney’s concept for the center grew out of an idea based on a ‘text’ developed from hearing what the community wanted and needed. The text is from Aristotle: “Wisdom is a process of experience and reflection.” To Sparano + Mooney, this text resonated with what was needed for the citizens of Montebello. Many regional community centers are all about experience—creating experiences and looking forward—but it became clear early on in the design process that it was important to combine experience with reflection: to reflect not only on your mistakes, but also the positive things, like what you are learning and how you are growing.

Sparano + Mooney’s building sets up tensions that are experienced physically and perceptually but that then act as metaphors for the perilous journey from adolescence to maturity. The architects positioned the building to welcome and encourage walk-in traffic from the baseball field and the park. Architecturally speaking, the tensions are seen in oppositions between opacity and transparency and in spaces for active and reflective activities. When the center is open, two large doors roll away, dissolving the boundary points separating the interior from the outside.

Without such revitalization, the recession we are now in will eventually bring economic collapse to many of L.A.’s poverty-burdened communities, such as Montebello. Collapse at the core will erode prosperity on the periphery, and even prosperous regions will come to resemble garrison states where, within their gated communities, the “haves” will seek to wall themselves off from war zones of the “have-nots.” Changing how regional community markets work, as the city of Montebello is attempting to do, may not end all poverty in America, but it can surely abolish the concentration of poverty and its enormous social and fiscal costs within our cities. ●



Architect: Sparano + Mooney Architecture

Design team: John Sparano, AIA, and Anne Mooney (principals);

Matt Bean, Michael Atkinson, Ludwing Juarez, Rene Berndt,

Mahnaz Zahiry, Tomohisa Miyayuchi, Daniel Huh

Civil Engineer: Civil Trans

Electrical Engineer: Silver Roth & Associates

Landscape Architect: Withers Sandgren Smith

Mechanical Engineer: Moroko & Shwe

Structural Engineer: Costa & Associates

Credits

cover: photo illustration, **Bob Aufuldish**
page 8 (top to bottom): rendering, **AMD (Advance Media Design)**; drawing, **Morphosis**
page 10: drawings, **Morphosis**
page 11: renderings, **AMD (Advance Media Design)**
page 12: photo (left), **Supreeya Pongkasem**
page 13: photo illustration, **Supreeya Pongkasem**
pages 16-17: photos, **Master Design Architect, Johnson Fain Partners**
page 18: photo, **Supreeya Pongkasem**
page 20 (top to bottom): photo, **Rick Browne**;
photo, **Degenkolb Engineers**; photo, **David Wakely**
page 22: photos, **Cesar Rubio**
page 24 (top to bottom): photos, **Paul Warchol**;
photo, **Richard Barnes**
page 25 (top to bottom): photo, **Richard Barnes**;
photos, **Cesar Rubio**
pages 26-33: photos, **Mark Luthringer**
page 34: photo, **Supreeya Pongkasem**
page 36: photo, **Joe Scherschol**
page 38 (top left): photo, **Clyde Foraker files/Dan Foraker collection**; (top left to bottom) photos, **Richard Graves**
page 39 (top to bottom): photo, **Kansas State Historical Society**;
drawing, **Colonial Williamsburg Foundation**; sketch,
©1942 Walter Gropius & Konrad Wachsmann
page 40 (top to bottom): photo, **Arnold Newman**;
photo, Advertisement for *The Newest Kind of House* originally
printed in the *Saturday Evening Post*, January 22, 1949
page 41: drawing, **from promotional brochure/Morris Beckman**
page 42: photos, **Toshi Yoshimi**
page 43: drawings, **Sparano + Mooney Architecture**
page 52: photo, **Supreeya Pongkasem**



Here Today...

The Berkeley Art Museum

Lynne D. Reynolds, AIAS

Mario J. Ciampi is a remarkably animated, knowledgeable, and energetic nonagenarian who talks enthusiastically about the things that interest him: urban planning, the Dogon people of West Africa, the great pyramid of Cheops, the state of education in the United States, and the necessity for architecture to achieve greater harmony with the laws of the universe. Unrolling the much-handled floor plans for the Berkeley Art Museum, he delights in explaining the intricacies of its design.

"The space of the museum contains pure, dynamic energy," he says. According to him, the late Pier Luigi Nervi proclaimed it "one of the most brilliant pieces of engineering he had ever seen." To Mr. Ciampi, "the character of the building transcends architecture." He feels that there is "nothing on the planet like it," and that the space has, to this date, not been fully comprehended. What he speaks very little about is the imminent danger that confronts what many consider his *magnum opus*.

The largest university art museum in the world when it was built in 1970, the cast concrete building by Mr. Ciampi, Richard Jorasch, and Ronald Wagner features ramped galleries and cantilevered balconies that overlook a soaring central atrium, forming an austere poetry of colliding geometries. It looks to be a building for the ages.

In fact, however, the museum has undergone a multi-million dollar retrofit just to upgrade it to a "poor" seismic rating from the "very poor" one attributable to damage from the Loma Prieta earthquake. The cost of further retrofitting, an increased demand for useable space, a readily available, alternative site, and willing donors may well contribute to its demise.

"In its present form, the museum has limited exhibition and education spaces and is not equipped to present some of the newest developments in multi-media art and installations," says Rod Macneil, Deputy Director of Public Relations and Marketing for the museum. "A new facility could include additional classrooms and expanded exhibition space, as well as an additional theater for the Pacific Film Archive."

A final decision is expected from the UC Regents, the Chancellor, and the Executive Campus Planning Committee sometime in the fall. Unless something truly remarkable occurs, the handwriting materializing on the wall of the Ciampi/Jorasch/Wagner building will soon be legible to all. ●