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arcc design awards issue

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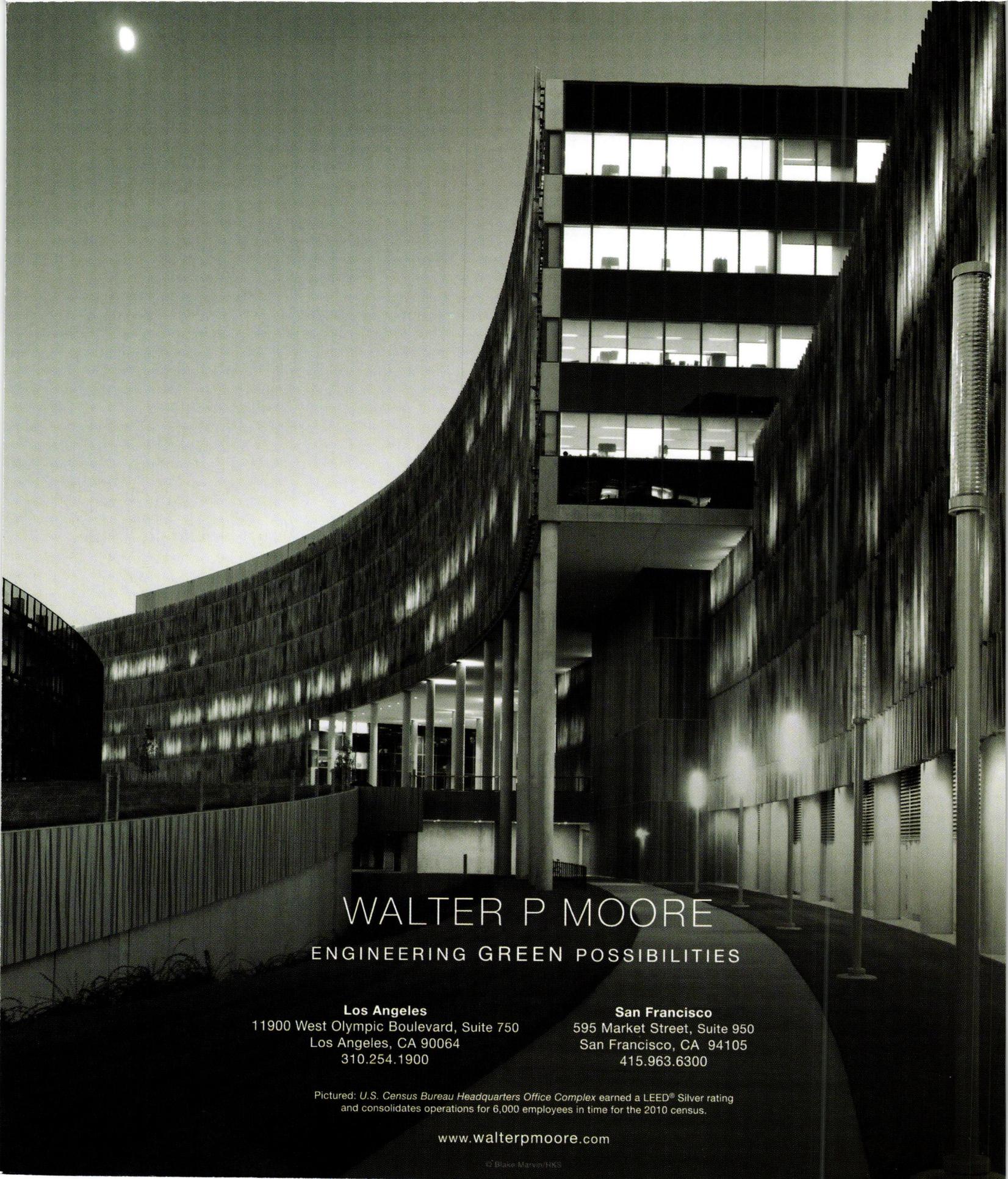
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Mad Scientists, Rabble Rousers, and Other Thoughtful People  
Real Mitigation of Climate Change: The Path to Zero Net Energy Buildings  
A Sea Level Rise Strategy for the San Francisco Bay Region  
New Metrics for a Sustainable Planet  
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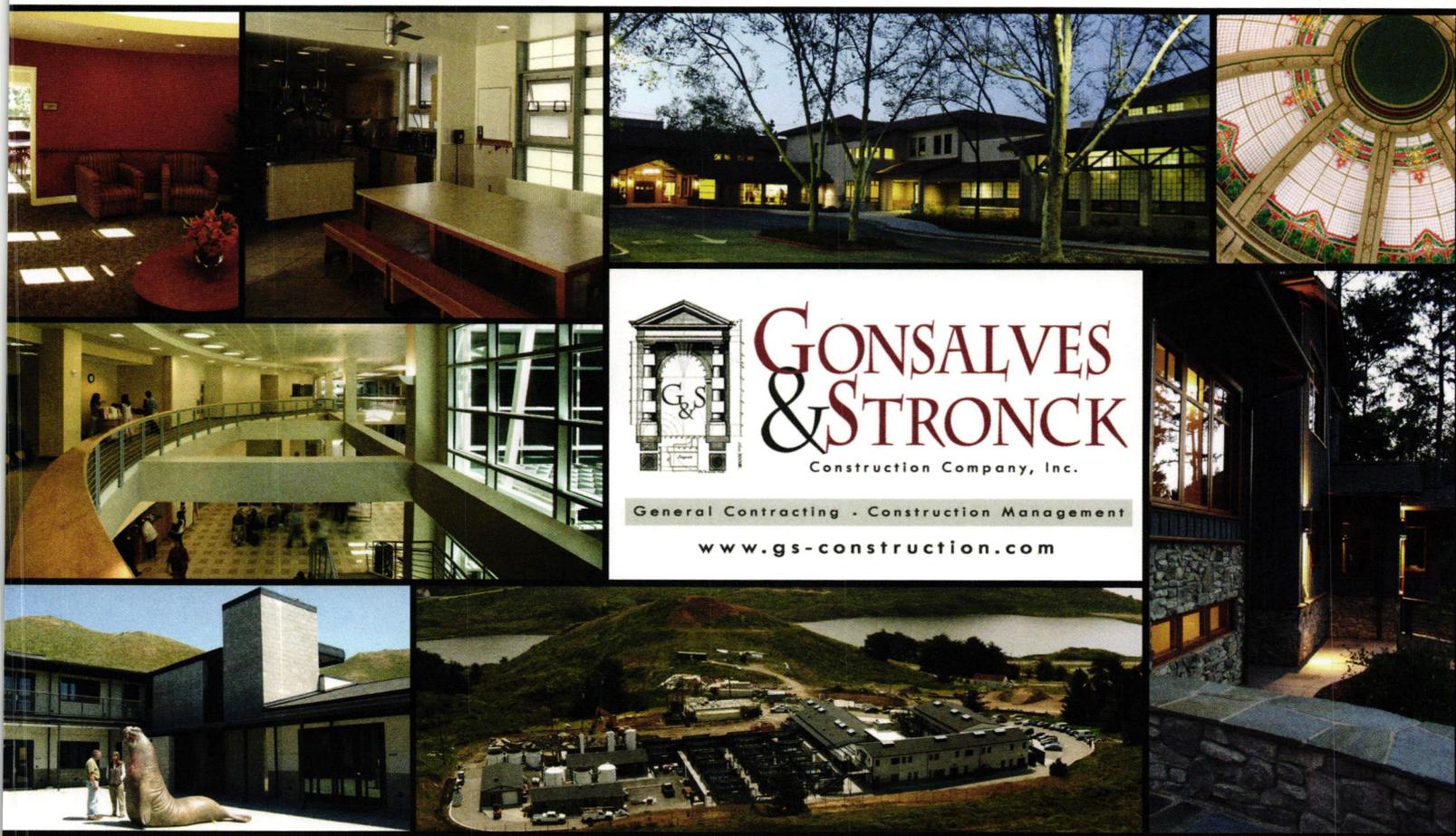
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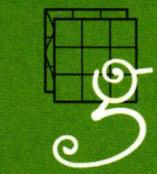
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→ David Meckel, FAIA

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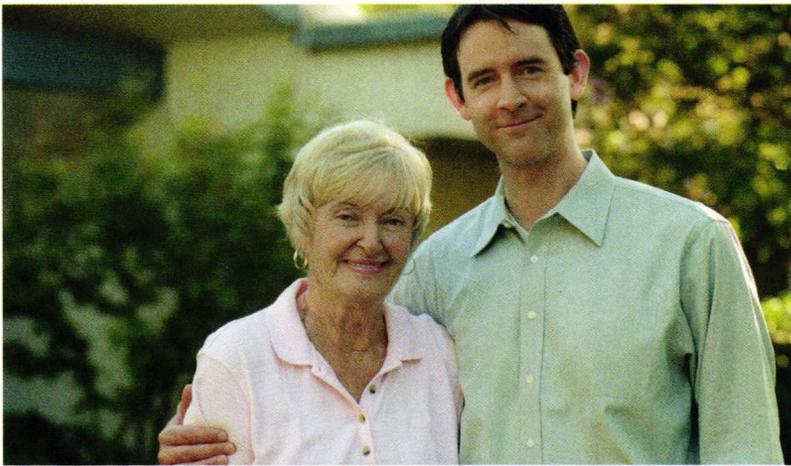
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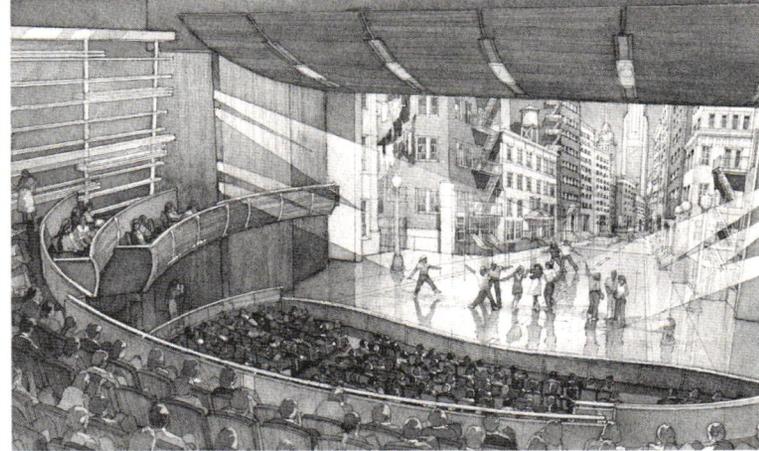
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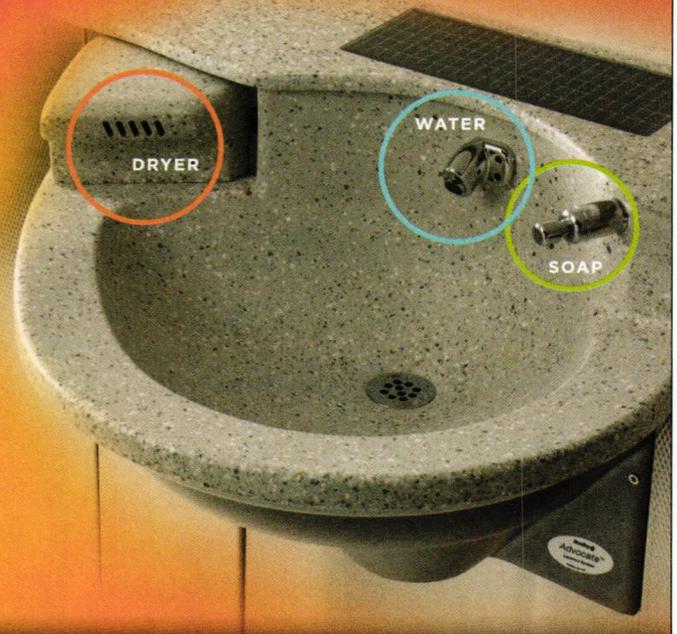


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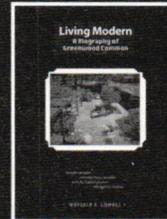
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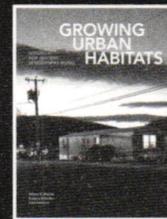
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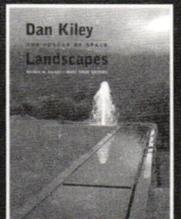


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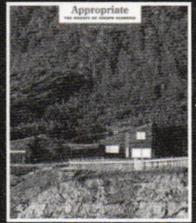


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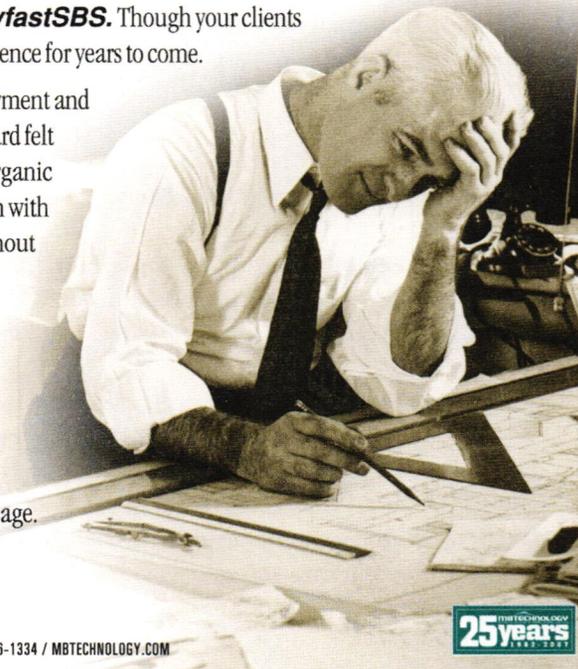
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For this, the “Beyond LEED” issue of *arcCA*, we are meeting the forest halfway, limiting the printed thematic material to the following article synopses; our multi-vocal segment, “Mad Scientists, Rabble Rousers, and Other Thoughtful People”; and David Meckel’s much-loved “. . . and Counting.” The full articles are available online at [www.aiacc.org/arcCA](http://www.aiacc.org/arcCA), which we rally you to visit. We’ve compressed the AIACC Awards section, as well, but did not consider relegating it to cyberspace altogether, valuing as we do the tangible keepsake. Overall, we’ve held the issue to its typical non-Awards-issue size, a modest experiment in semi-virtuality and resource conservation. Please let us know what you think.

—Tim Culvahouse, FAIA, editor,  
[tim@culvahouse.net](mailto:tim@culvahouse.net)



Academy of Sciences, San Francisco, Renzo Piano Building Workshop. Photo by Tom Fox, SWA Group.

The disconnect between good design and “green” design is perhaps most disturbing at the pinnacle of our profession, where only a small handful of the world’s most admired architects—Renzo Piano and Glenn Murcutt notable among them—have successfully integrated a deeply sustainable sensibility within the broader language of their architectural expression.



Police Substation, San Diego Community College District, Harley Ellis Devereaux.



#### Re-Designing Good Design

**William Leddy, FAIA**, is a founding partner of Leddy Maytum Stacy Architects. He has lectured internationally, served as a visiting professor at several universities and been honored by organizations including the AIA, the San Francisco Museum of Modern Art, the California Preservation Foundation, the U.S. Department of Energy, and the French Institute of Architecture.

Poised at the beginning of the end of the Oil Age, we are entering a new epoch of shrinking resources, climate change and increasing global peril. Our uncertain future demands a new generation of innovative, net-zero energy and carbon-neutral buildings. Yet, a quick review of the current architectural press suggests that our deepest notions of architectural beauty may still be grounded in our cheap-energy past. Much like their early Modernist predecessors, many of today’s most celebrated buildings express little more than the enormous technological power and fossil fuel resources required to design, build and sustain them. The time has come to ask the question again: How can our architectural values and aspirations adapt more fully to the challenges of our epoch? How can we move beyond superficial expressions of “green” to develop an architecture that realizes the pragmatic and poetic potential of engaging the world around us? How can we harness the transformative power of design to help lead our society to a sustainable future?



#### Real Mitigation of Climate Change: The Path to Zero Net Energy Buildings

**Edward Dean, AIA**, is an architect who heads the Berkeley office of Harley Ellis Devereaux and Greenworks Studio. Greenworks Studio is a partner company to HED that focuses on sustainability and the design of Zero Net Energy buildings.

It is little surprise that, with the emergence of the societal sensibility about *sustainability* in the early 1990s and the founding of the USGBC, a strongly prescriptive approach would be the basis for LEED certification. But the fundamental problem with the reliance on LEED is that it simply has had no effect on the actual energy use of its certified buildings and, perhaps even more fundamentally, does not address aggressively enough the most pressing environmental and political energy issues of our day: climate change and the international politics of fossil fuel resources . . .



Mixed-Used Plus-Energy-Buildings, Solar City Freiburg, Germany, Architect Rolf Disch. Photo by Thomas Spiegelhalter.



Tysons Corner, Virginia, suburban land use at 0.9 units per acre. Photo from the Lincoln Institute of Land Policy's "Visualizing Density," <http://www.lincolninst.edu/resources>.



#### Global Benchmarking? Taking a Critical Look at Sustainable Design in the U.S.

Architect, engineer and industrial designer **Thomas Spiegelhalter**, ACE, ISES, LEED AP, is principal of Architecture Office for Sustainability in Freiburg, Germany, and professor at Florida International University in Miami. He has taught previously in Kaiserslautern and Leipzig, Germany, and at Carnegie Mellon University and the University of Southern California.

The UN Intergovernmental Panel on Climate Change (IPCC) was established by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) to assess scientific, technical, and socio-economic information concerning climate change, its potential effects, and options for adaptation, mitigation, and public policy. These organizations are international clearing-houses for building energy efficiency and resource use indicators, including rating systems such as the ISO 14000 and 9000 series, UK BREEAM, DGNB in Germany, CASBEE in Japan, and LEED in the US. It is difficult, however, to get globally comparable benchmarks for US cities and buildings. Too often, they are based on theoretical models rather than energy performance auditing; or are samples from exceptional, "demo" buildings; or compare only US peer groups of buildings. Comparison against systematic global best practices would allow pressing questions to emerge about why buildings in Germany or Switzerland use 50- to 70-percent less energy than their average US equivalents . . .



#### New Metrics for a Sustainable Planet

**David Thurman**, AIA, LEED AP, is a Senior Associate at Moule & Polyzoides Architects and Urbanists. His experience includes leadership on sustainable architectural and master plan designs, including master plans for the campuses of Occidental College and New College of Florida, as well as the City of Visalia's Southeast Area Specific Plan.

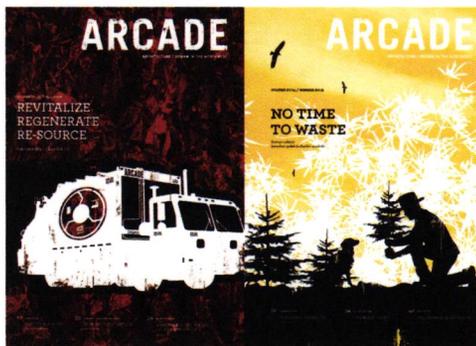
Great architecture and urbanism have never truly been defined by quantitative requirements and standards. They are about the atmosphere of places, their look, feel, and taste. Yet, as design professionals, we are required to work with standards to regulate design. Architecture and planning codes, product documentation, development standards, and client *pro formas* are examples of the metrics that bring built-in assumptions about "proper" design. These metrics in many cases dictate resource uses, through parking ratios, open space and roadway standards, and building codes. We now face a serious environmental crisis, and the design metrics we have applied to urbanism, architecture, landscape, and transportation systems are implicated as primary contributors to it. We should have been calculating greenhouse gas emissions and changes to the atmosphere, rather than parking stalls . . .



Shoreline areas vulnerable to sea level rise, San Francisco Bay Area. Image courtesy BCDC.



Berkeley Hills Home, Geoffrey Holton & Associates.  
Digital model by Gretchen Bigsby.



## A Sea Level Rise Strategy for the San Francisco Bay Region

Bay Conservation and Development Commission (BCDC) is the federally designated, state coastal management agency for the San Francisco Bay segment of the California coastal zone. arcCA's condensation of BCDC's Sea Level Rise Strategy is available at [www.aiacc.org/arcCA](http://www.aiacc.org/arcCA). The full report, along with other documentation of BCDC's ongoing response to climate change, can be found at [http://www.bcdc.ca.gov/planning/climate\\_change/climate\\_change.shtml](http://www.bcdc.ca.gov/planning/climate_change/climate_change.shtml).

One of the most publicized impacts of global warming is a predicted acceleration of sea level rise. Between 1900 and 2000, the level of San Francisco Bay increased by seven inches. Depending on which end of the range of projected temperature increases comes about, water levels in San Francisco Bay could rise an additional five inches to three feet by the end of this century. More recent analyses indicate that sea level rise from warming oceans may be 1.4 meters (about 55 inches) over the next 100 years, or even higher depending upon the rate at which glaciers and other ice sheets on land melt. A bold, new plan for the Bay is needed to meet the challenges of sea level rise head-on . . .

## Emerging Water-Smart Design



*Geoffrey Holton is principal of GHA, an architecture firm in Oakland. In addition to small residential and commercial work, the firm is currently pursuing community-based projects emphasizing sustainable urban futures.*

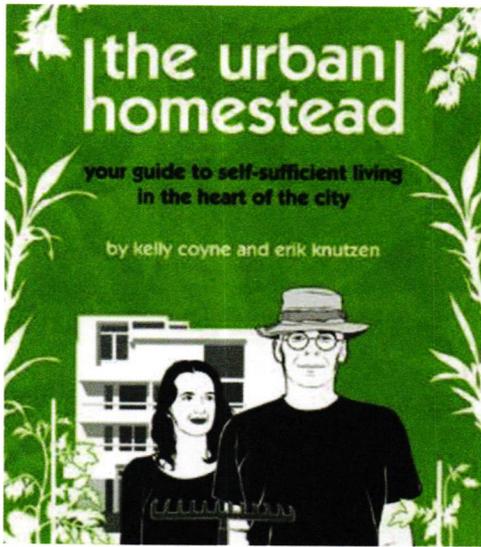
Rainwater catchment and greywater reuse are old ideas. As long ago as ancient Greece, Rome, and India, collection and storage of rainwater were important form-givers in buildings and cities. Today, water falling on a building's roof is treated very differently. From buildings and their surroundings, we typically route rainwater into underground storm drains. Meanwhile, treated potable water, often conveyed hundreds of miles at enormous cost, is used once, to flush waste or to wash, and sent immediately to overburdened sewage treatment systems. "Water smart" design is a timely idea of critical importance in California. But its regulatory terrain is not yet defined . . .

## Getting Specific: Arcade 27.01-04

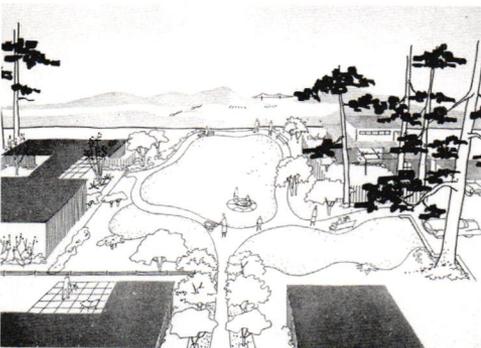


*John Parman is an editorial adviser to the California edition of The Architect's Newspaper who also writes for the web ([www.j2parman.com](http://www.j2parman.com)).*

The Seattle-based quarterly *Arcade* is that rare commodity, a critical west coast journal of ideas on architecture and design. Focused on the northwest, especially Seattle, Portland, and vicinities, *Arcade* sets a theme for each volume. Starting with its fall 2008 issue and continuing through the summer of 2009, the theme was *waste*—pragmatically, artistically, politically, polemically, and even apocalyptically considered. Volume 27 succeeds in providing in one place a helpful guide to a topic with a lot of dimensions. While it covers the overwhelming part (planetary meltdown, mountains or islands of trash), most of the attention is on the practicalities of changing how we do things from top to bottom so the consequences aren't so dire . . .



www.inhabitat.com, "Green Home 101."



Greenwood Common. Sketch by Lawrence Halprin, courtesy of Environmental Design Archives, UC Berkeley.

#### Book Review: *The Urban Homestead*, by Kelly Coyne and Erik Knutzen



*David Scott Bruce is Vice President of InnerSpace Engineering and a LEED AP working toward a green MBA from the Presidio School of Management in San Francisco, where he combines his mind for business and his love of nature.*

The victory garden may have come back into popular culture with Michelle Obama's garden on the South Lawn, but the hip urban homesteader is way ahead of her. In Kelly Coyne and Erik Knutzen's new book, *The Urban Homestead*, published by Process Media as part of their Self-Reliance Series, the urban garden is just part of a new lifestyle that harkens back to days of yore. The topic is timely, with green trends in the media and a resurgence of urban gardening from a younger generation. The zeal of the authors is tempered by the understanding that any step in the right direction is a good step and an acknowledgement that extremists won't provide the encouragement needed for a mass movement . . .

#### Blog Is In the Details



*Jimmy Stamp is a freelance writer and designer currently enrolled in the M.E.D program at the Yale School of Architecture. His work has appeared in numerous magazines and websites, and he has been publishing the architecture blog Life Without Buildings [life-withoutbuildings.net] since 2004.*

"It's not easy being green." So famously lamented (in song nonetheless) that most iconic of Muppets, Kermit the Frog. These days however, Kermit might be changing his tune. Spurred by an increasing public awareness of global warming, new government policies, and technological developments, being green is easier than ever. With topics ranging from the legal complexities of LEED certification to eco-friendly kids furniture, there are also an increasing number of online resources available to the verdant-minded architect with an Internet connection . . .

#### Coda: Greenwood Common



*Waverly B. Lowell is Curator of the Environmental Design Archives at UC Berkeley. She has also served as Director of the National Archives, Pacific Sierra Region, and Director of the California Cooperative Preservation of Architectural Records Survey. Her publications include Living Modern: A Biography of Greenwood Common; Architectural Records: Managing Design & Construction Records; and Architectural Records in the San Francisco Bay Area: A Guide to Research.*

Developed between 1952 and 1958, William Wurster envisioned Greenwood Common as a group of homes that would combine an idealistic sense of community with a modernist aesthetic and an awareness of regional traditions. It was to feel more like a small village than a large town. As a developer-neighbor, he wanted to build a social community of interesting, creative, and educated individuals. As an architect and architectural educator, he wanted this small residential community to demonstrate the highest standards of housing and garden design in California . . .

(To learn even more, read the new publication, *Living Modern: A Biography of Greenwood Common*, by Waverly B. Lowell, available from William Stout Publishing, <http://www.stoutbooks.com>.)



# Mad Scientists, Rabble Rousers, and Other Thoughtful People

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*arcCA asked a dozen and a half thought leaders to reflect on the most misunderstood notions, the most neglected problems, and the most under-appreciated opportunities in sustainable design today. These are their responses.*



**Stan Bertheaud**  
Architect, Woodbury University professor, screenwriter,  
Oceanside planning commissioner, and father  
[Stan.Bertheaud@woodbury.edu](mailto:Stan.Bertheaud@woodbury.edu)

The most misunderstood notion in sustainable design today is the idea that it's a new thing. It's not. Sustainability is very old school and grounded in common sense. Things were pretty much sustainable until our great, great, great grandparents starting making and selling each other so much stuff. Planned obsolescence sucks. eBay, craigslist and garage sales are cool. Air conditioning and fixed windows suck. Big windows with screens and fans are cool.

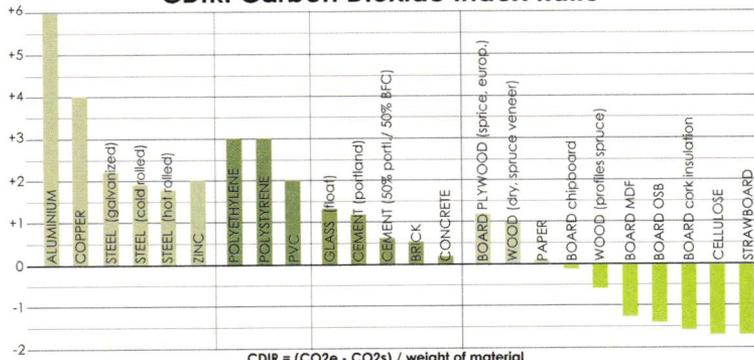
Our most neglected problem is the lack of consistent, intelligent conversation without hyperbole. I'd rather my kids' ask me "Dad, what's the meaning of life?" than "Dad, paper or plastic?" The tangled web we've woven with our global economies will freakin' make your head explode... (When my kids ask me, "Dad, what's the meaning of life?" I quickly answer, "Paper or plastic!" Then I leave the room. My wife tells me this might be child abuse.)

Not everything needs to be shiny and new. Not having to constantly upgrade (bigger, faster, stronger) would help. And old-fashioned concepts like "sharing, trading, and bartering" are underrated and underused.

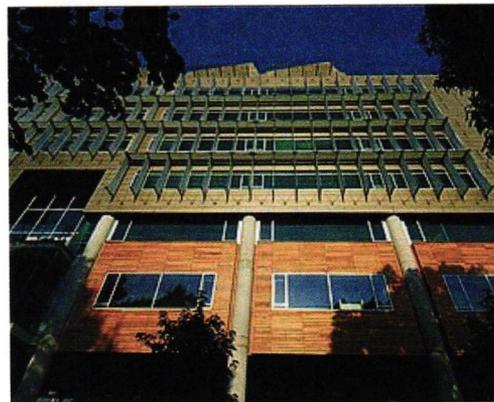
I often think about my drive out to California from New Orleans twenty-plus years ago. Me, my girlfriend, and all our stuff in a Volkswagen Rabbit convertible. *All* our stuff. I doubt I'll ever get back to that light a footprint, but I am trying to downsize and work with what I've got. I'm not living the monastic, anti-materialistic life (ask my wife about my guitar collection). But I am asking myself more often, "Do I really need this, or do I just want it?" And I'm allowing myself time to think before answering, "Hell yes, I need it." "Keep it simple, stupid" is my new mantra.

opposite: The Advanced Green Builder Demonstration Home serves as the office and studio of the Center for Maximum Potential Building Systems. It links building design and construction to the central Texas region, integrating the supply and use of water, food, energy, waste, and material resources with local and regional businesses and utilities. Design by Pliny Fisk III. Photos by Paul Bardagjy.

## CDIR: Carbon Dioxide Index Ratio



CDIR =  $(CO2e - CO2s) / \text{weight of material}$   
 CO2e = weight of upstream CO2 emissions; CO2s = equivalent weight of CO2 stored as carbon in material.  
 Positive ratios indicate net carbon dioxide sources; negative ratios indicate net carbon dioxide sinks



UT School of Nursing, Houston by Lake Flato Architects



**Pliny Fisk III**  
 Co-Director, Center for Maximum  
 Potential Building Systems,  
 Austin, Texas  
 pfisk@cmpbs.org

Life Cycle Design / Biophilic Design /  
 Carbon Balance

The life cycle can be designed and planned—and it does not require some linear check list (LEED, SmartCode, BREEAM, . . . ), nor some abstraction that you only hope to understand (Integrative Design, Living Building Challenge), nor even some rigorous LCA (life cycle analysis) that becomes difficult as a design tool. The key to life cycle is that it is a cycle, in fact a cycle within cycles, and can become a web of life regenerating the original resources—as in re-sourcing—and to a certain degree at any scale building to city to country. We can no longer do one half without the other—“solar” driven water harvesting without solar driven treatment, solar created, rapidly renewable building materials without flexible, reusable, open buildings using localized mega flora, which is waste water regenerated. Food production can no longer occur without bio-intensified rebuilding of the growing medium. If you have the unfortunate education that says, “I cannot do this without a checklist,” then make sure that all the ingredients within the list have the potential to be a cycle. Sustainability no longer fits into the conservation paradigm; it is a process of sustaining for further information at the building scale, community scale,

or national scale. (Please contact us concerning EcoBalance Planning and Design, or our national material flow model with 12.5 million businesses and all their green house gases, criteria air pollutants, and toxic release.)

Biophilia need not be limited to looking out the window to a forested meadow or a picture on the wall or the rhythms of light affecting your psychological well-being. Biophilia needs to once again become part of the brain, but this time—since we have evolved over the last 10,000 years past the primitive brain—we now have to work on the advanced neocortex part of the brain. Which means respect for a whole new set of rhythms. According to neuroscience, the neocortex is also responsible for interval pattern recognition—the understanding of the durations between repeating events—responding to activity sequences and controlling our ability to adapt when confronted with new ones. New information, new patterns, crowd sourcing: the stuff that the neocortex loves. This is in contrast to the part of the brain associated with the circadian clock, the daily and seasonal rhythms overly focused on in biophilic design.

The spaces we design need to be creating a forest of opportunities (air, water, food, energy, materials cycles) that re-sink us into the life events that enable survival—simulating, extrapolating, comparing—all part of a new level of design science that is more critical than ever. Encapsulating macro-level natural processes on a micro scale will increase our ability to synchronize the brain with nature. Everyday processes designed as events so that

occupants witness more thoroughly their interaction with the life cycle that creates them. Perhaps the reason we are quickening and reducing in scale all our life support cycles in the buildings that we call sustainable is the fact that the brain needs it.

Carbon balanced design: this over-concentrated effort misses the vote in two ways:

a) Before we think in terms of operational, mechanical balancing, we can balance the embodied carbon in our building by balancing the net life cycle problem materials (i.e., the metals) with the net life cycle sequesterers (i.e., woody materials) and appropriately mixing the two ( see the Carbon Dioxide Intensity ratio on our web site). It produces a beautiful regional design motif: metals need wood, and wood comes from place.

b) Carbon balancing (or neutrality) really needs to be referred to as climate neutrality; after all, methane, carbon monoxide, and nitrous oxide are all as or more serious problems than carbon, and the fact is that some of these are easier to deal with and more understandable. Carbon is the by-product of nearly every industrial process known. Methane is more a point source, from discarded woody-based building materials (instead, we can develop building systems for reuse) and sewage treatment (we can use the methane as fuel); even the cow can be controlled, as demonstrated in the Netherlands, via its feed. Pretty important stuff, since we can make major inroads in five years instead of one hundred years, by which time it could be irreversible. Please, Ed Mazria, the big picture is even bigger.

opposite: Center for Maximum Potential Building Systems, Carbon Dioxide Intensity Ratio (CDIR), defined as the ratio between the net upstream CO2 impact (emissions minus storage) of a material and the weight of the material. A material with a positive CDIR is a net CO2 source and one with a negative CDIR is a net CO2 sink. In Lake Flato's UT School of Nursing, cypress siding is a net CO2 sink, offsetting the use of cement and steel fasteners, which are net CO2 sources.  
right: Advanced Green Builder Demonstration Home.



Of course, all of this is just another piecemeal effort unless we get to water, material, energy, and food neutrality within regional contexts.



**Peter C. Griffith, PhD**  
Founding Director, NASA Carbon Cycle & Ecosystems Office  
Goddard Space Flight Center

“On what planet do you spend most of your time?”

Agriculture and civilization have developed during the relatively stable and benign phase of climate conditions that have persisted over the past 10,000 years. Humanity is currently engaged in a planetary-scale experiment in which this climate is being modified on time scales perceptible within a single human lifetime. The climate you grew up with is not the climate you'll enjoy during your end days, much less that which your grandchildren will experience.

My house was built in 1913 to shield its inhabitants from external forces of rain, snow, wind, and temperature, according to assumptions of interior comfort, lighting, and ventilation, and costs of heating and cooling, all of which are substantially out of step with the external environment and the inhabitants' expectations of 2009.

Perhaps the most neglected problem or issue in sustainable design and construction today is that the environmental parameters to which designers respond are changing, and quickly enough so that the operational enve-

lope of the built environment is certain to change during the lifetime of the structures that inhabit it. In what ways must designers contribute to adaptation and mitigation of climate change? On what planet will their buildings spend most of their time?



**Paul Hawken**  
Excerpts from Commencement Address to UC Berkeley College of Natural Resources, June, 2009  
[www.paulhawken.com](http://www.paulhawken.com)

Forget that this task of planet saving is not possible in the time required. Don't be put off by people who know what is not possible. Do what needs to be done, and check to see if it was impossible only after you are done.

When asked if I am pessimistic or optimistic about the future, my answer is always the same: If you look at the science about what is happening on earth and aren't pessimistic, you don't understand the data. But if you meet the people who are working to restore this earth and the lives of the poor, and you aren't optimistic, you haven't got a pulse.

The living world is not “out there” somewhere, but in your heart. What do we know about life? In the words of biologist Janine Benyus, life creates the conditions that are conducive to life. I can think of no better motto for a future economy.

We have tens of thousands of abandoned homes without people and tens of thousands of abandoned people without homes. We have

failed bankers advising failed regulators on how to save failed assets. We are the only species on the planet without full employment. Brilliant. We have an economy that tells us that it is cheaper to destroy earth in real time rather than renew, restore, and sustain it. You can print money to bail out a bank but you can't print life to bail out a planet.

At present we are stealing the future, selling it in the present, and calling it gross domestic product. We can just as easily have an economy that is based on healing the future instead of stealing it. We can either create assets for the future or take the assets of the future. One is called restoration and the other exploitation. And whenever we exploit the earth we exploit people and cause untold suffering. Working for the earth is not a way to get rich, it is a way to be rich.



**Steven J. Isaacs, PE,**  
Associate AIA,  
Managing Director,  
and Cheryl May, Director  
of Strategic Leadership

Development, Advanced Management Institute for Architecture and Engineering, a business unit of FMI Corporation, [sisaacs@ami-institute.com](mailto:sisaacs@ami-institute.com), [cmay@ami-institute.com](mailto:cmay@ami-institute.com)

We all know that sustainable design has been a major trend in recent years and continues to grow. The next phase of that trend goes beyond “sustainable” to “actively beneficial,” and this is a worldwide trend. Due to the pressures of

energy use and economic necessity, it will no longer be possible to simply create a sustainable building—facilities of all kinds will be expected to generate some or all of their own power, use less energy, purify their own wastewater, offer wildlife habitats, and restore local ecosystems. People will also expect these places to provide healthy, functional, and attractive places to work, shop, gather, and be pleasing to look at and experience.

Successful prototype projects have already been constructed, most famously the Adam Joseph Lewis Center at Oberlin College.

As competition heats up for talented individuals, the proverbial “war for talent” will go on worldwide for those with “green” abilities, experience, and solid credentials. Already, the pressure is on for firms to do more than simply be LEED certified; clients are seeking firms experienced in innovative solutions. Both our greater national interest and our local communities will demand that every project do much more to benefit the community than simply be a functional piece of infrastructure.

*[excerpted from “Predictions fall flat, but future trends are a useful tool,” the whole of which is available at [www.aiacc.org/arcCA](http://www.aiacc.org/arcCA)]*



**Clark Kellogg**  
Partner, Collective Invention, Inc.  
[clark@collectiveinvention.com](mailto:clark@collectiveinvention.com)

It’s hard to find a person who is against sustainability. I can think of only two people I know. Sustainability is in the same league as motherhood and apple pie. But in most conversations, sustainability’s approval rating nosedives somewhere between 14 and 31 seconds in. That’s usually the time when the gauzy notion of sustainability inevitably gives way to defining what it is (30 point drop) or doing something about it (free fall).

What’s going on here? For one, humans are good at using our big brains to know a lot. But it doesn’t always translate into doing a lot. Second, we are on sustainability overwhelm.

Staying current is like drinking from a fire hose—everyday. And that’s hard to swallow. Third, amid this explosive growth in knowledge and information, the very meaning of sustainability has been diluted to the point of meaning just about anything, and thus meaning nothing.

We all support motherhood, apple pie, and sustainability. We know what the first two mean, and we know how to create them. Not so sustainability. Even the Brundtland Commission’s definition—development that meets the needs of the present without compromising the ability of future generations to meet their own needs—is difficult to apply to the here-and-now of one’s own life. Paper or plastic?

Without an explicit, shared agreement about the meaning of sustainability, even the well-informed and well meaning among us cannot make much progress. Indeed, this lack of clarity enables avoiding the most neglected problem in sustainable design today: time. There are many projections about when catastrophic environmental events will take place. It’s hard to know how accurate they are, and it doesn’t matter. The plain fact is that we don’t have time to wait and find out if the projections are correct. What matters is taking smart, bold steps now, because here’s what we do know: the longer it takes to start meaningful healing of the earth, the less likely we are to have a viable future. In short, we don’t have time to waste.

Is there any hope? Yes, and it’s not false hope. Design—and design thinking—as a set of solution-seeking tools, is spreading to every corner of the world. Indeed, we are all designers now, and optimism is an onboard skill of designers (sustainable or otherwise). More importantly, healing the earth is igniting the largest movement of human energy in the history of the planet. It is a movement without precedent, amorphous, unorganized, instinctive, and blessedly uncontrollable. Literally billions of people are on the job. It is already the single largest public works project ever.

If we can get as good at making sustain-

ability as we are at making motherhood and making apple pie, we could be very happy, be well-fed, and live long, balanced lives. Cloth or disposable?



**Marianna Leuschel**  
Principal, I Studio  
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While LEED has been phenomenal in elevating the awareness and standard for resource efficiency in buildings, it has done a disservice to the industry by confusing the real goal of sustainability. Of course we have to get the building envelope and systems right, but that is the low hanging fruit. Where we build, what we build, why we build and, in many cases, even *if* we build are as important as how we build. And a whole lot more complex.

A “green” Wal-Mart in a suburb of Chicago that takes a half hour to drive to in order to fill up oversized cars with stuff people don’t really need (much of it made of plastics and shipped here from China) is not sustainable. A “green,” 10,000 square foot, third home in Hawaii used a month a year is not sustainable, even if the owners share a private jet with their wealthy neighbors.

The sustainability challenge is not about building what we’ve always built more efficiently. It will take a whole new mindset and map. And climate change accelerates our need to think in the big picture and puts issues of land use right up there with fuel efficiency and clean energy technologies. Once again, California has taken a leadership role with AB32, legislating an 80% reduction of GHG emissions by 2050. Cities and counties are following with individual Climate Action Plans. Designers now need to take up the challenge.

Back in the early ‘80s, when Title 24 was first adopted in California, it raised the building efficiency standards in the state well above the national average and has since saved Californians \$56 billion in energy costs. We need to legislate LEED so that it becomes the new



as Docksider Green; and eco-villages around the world.



**Jason F. McLennan**  
CEO, Cascadia Region Green  
Building Council  
jason@cascadiagbc.org

There are a lot of myths surrounding sustainable design, but probably the most pervasive has to do with cost. People want to know the “green premium” or “payback” of every single green feature, technology, or system. But they are asking the wrong question. First off, there are many shades of green. Many things cost no more than conventional construction, some things cost less, some things cost more. But even that answer isn’t nuanced enough. Buildings are systems, and trying to price an isolated component of a system is always the wrong approach. A properly designed green building might be full of technologies that have higher first costs but result in savings in other parts of the system, for a minimal net additional cost or even a reduction. There are examples of LEED Gold or Platinum projects with zero cost premiums. It all has to do with what you value, as well. People always want to know what the payback is on a solar array—but they never ask what the payback is on their stainless steel appliances or the two-car garage on their house. When it comes to cost, green design often gets asked unfair questions that are not asked relative to other values in a building.

I consider most promising the program Cascadia has launched to certify Living Buildings—to offer a vision of transformative change in the built environment following simple, pragmatic rules for design. When people read it, they think it’s too stringent—yet many are proving that it’s possible today. With over sixty projects in various stages of design and construction around North America, the Living Building Challenge offers hope for a truly sustainable built environment. We

encourage every architect, engineer, and developer to begin to use the challenge as a design tool, as a guide, as a set of aspirational tools—and ultimately as the new benchmark for true sustainability. Check it out at ILBI.org.



**Tom McKeag**  
Founder and President of BioDream-  
Machine, a nonprofit educational  
institute dedicated to bringing bio-  
inspired science and design education  
to K12 schools, tmckeag@lvha.net

Nowhere have we slumbered more than in the area of water. I expect our descendants will be incredulous: “Do you know that they used to wash their cars with this stuff?!!” they will say as they sip rare “2016 Glacier National Park” cuvee. In the U.S. today, we drink only 3% of the potable water piped to our homes; the rest is put to work as a solvent, lubricant, transporter, heat conductor, and coolant, among other things. Elsewhere, 25 million people a year are displaced as refugees, not because of war, but because their water is no longer drinkable.

The good news is that we can reap great benefits from wise water use almost immediately, using common sense and simple procedures. Water is the ultimate recyclable substance, after all, and if we avoid its chemical pollution, those molecules that once rode on the backs of woolly mammoths as snow can still be used for your next pitcher of lemonade. Its wise use is also a multiplier. For example, General Electric found that using less water in its manufacturing meant using less energy to run pumps and motors and less air pollution. Finally, its almost magical property of bringing forth life is one of the greatest gifts of our natural world. It will be key to the next, regenerative phase of the green design movement. Water use is the “low-hanging fruit” of sustainable design, but, if ignored, will be the next big crisis in the developed world.



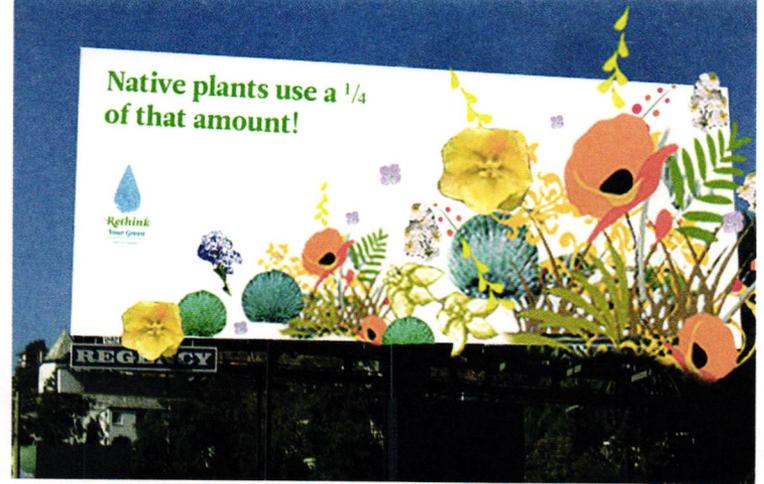
**John Peterson**  
Founder and President,  
Public Architecture  
jpeterson@publicarchitecture.org

Truly sustainable efforts depend on strategies that balance environmental and social sustainability. Environmental efforts independent of, or at odds with, basic human needs such as health, justice, and pleasure will be short-lived at best. The technical aspect of sustainability—how to lower consumption and toxic impacts—is the easy part. It will quickly become relatively dull and mundane, like the effort it takes to keep buildings from falling down. The mind-numbingly difficult and interesting part is how we can make the cultural shift to a sustainable existence. What can substitute for the joy of more? More things, more space, more innovation seem an integral part of who we are as a species. Can we keep ourselves from devouring our way into oblivion? Our greatest opportunity lies in doing less. Discovering innovation by rethinking what we have. Can we repurpose instead of rebuild, rediscover instead of reinvent?



**Louise Sandhaus**  
Principal, LSD (Louise  
Sandhaus Design)  
lu@lsd-studio.net

I’m a communications designer as well as a design educator. I’m not an architect, although I frequently partner with them. I’m interested in the things I design being part of big pictures, not isolated artifacts. The work I’m doing with my students and the projects in my studio have the goal of helping audiences imagine compelling alternatives to the unsustainable norms of the American lifestyle. An example of the process of providing new imagery also exemplifies a new way of seeing the designer’s role. My students produced Rethink Your Green as part of the Index: | AIGA Aspen



Sequential billboards, CalArts Rethink Your Green student project for the Index | AIGA Aspen Design Challenge

Design Challenge: Designing Water's Future, an international competition to address the water crisis. Understanding that in Los Angeles the largest contributor to this problem was the watering of LA's lawns, they realized their design "problem" was to change behavior. That meant first changing the ideal of a lush, green lawn deeply imbedded in the American psyche—in part driven by Hollywood—as part of what constitutes "house" and "home." They needed to design a system of communication, one that could reach different audiences with differing values about lawns and lifestyles; address different stakeholders, such as gardeners, who need to know how to maintain alternative landscapes, and retailers who would provide access to the products that contribute to change. In other words, communication or graphic designers have to move beyond thinking of what we do as designing isolated artifacts. The answer is no longer a poster; it's a communications system that recognizes that problems are not isolated from their contexts.



Lynn N. Simon, FAIA,  
LEED AP, President  
Simon & Associates, Inc.  
[www.greenbuild.com](http://www.greenbuild.com)

Buildings that have lasted over time, such as the Ferry Building in SF or Union Station in LA, are those that have created real value to the community—as gathering places, as community icons, or simply to serve a function. These types of buildings are truly sustainable.

Sustainable building is not about specifying products with green attributes, or exceeding T-24, or even being LEED certified. It is about creating places that, when their typical life span has ended, we don't demolish and rebuild new, but instead find ways to reuse, whether as originally intended or by adapting them to suit current needs. What this means, then, is that when building a new building, we think of how it will contribute to the fabric of the community in thirty years, in fifty years, and even in a hundred years. Our discussions about sustainable design need to begin not with what LEED rating we are going to achieve, but with how we build a building that creates value for future generations.



Susan Ubbelohde  
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*"Let us first worry about whether man is becoming more stupid, more credulous, more weak-minded, whether there is a crisis in comprehension or imagination."*—Paul Valery

We face a crisis of imagination in the design of sustainable architecture. Day by day, I work on the incremental act of improving the ecological impact of buildings by designing, consulting, and teaching. In practice as well as in academia we all too often focus on accounting, practicing sustainability as an additive process that begins with the status quo and improves

it move by move, spec by spec, credit by credit. Our accounting systems, whether Title 24, CHPS or LEED, have had a large impact on the industry of making buildings, and it has been a good one relative to the environment-be-damned attitude of the postmodern and deconstructivist years.

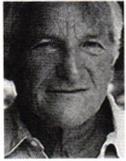
But the popularization of sustainable design has led to guidelines and baselines—achieving the minimal without really engaging the transformative possibilities of living lightly on the land, repairing the earth instead of merely degrading it less, discovering new ways of dwelling between earth and sky.

Guidelines are my personal *bête noire*. When we already know that the building must face north and south, we have lost the possibility of rising with the sun and toasting the sunset from our homes. When a low-energy house for Germany takes root in coastal California and still minimizes skin and breathes with a heat exchanger, our imagination is hibernating if not lost altogether. We have developed our competence, but possibly at the cost of our imagination.

Then there are days the question of comprehension haunts me. On those brilliant California mornings that breed optimism, I can almost believe we will save our home on this planet without civil strife and political crisis. Perhaps most especially on those optimistic days, however, I realize that we suffer from a crisis of comprehension of the challenge facing us. It is in our nature. No matter the work and exhortations of Al Gore or Ed Mazria, the dark pessimism of James Lovelock or the latest photos from the poles. Day by day we continue to

accept compromise and incremental improvements as “progress,” but towards what end?

Perhaps comprehension and imagination are not so fully separate. We need both in spades, everyday.



**Sim Van der Ryn**  
President, EcoDesignCollaborative  
sim@ecodesign.org

The most neglected issue in sustainable design today is that our institutions—including the design professions, lawmakers, and regulators—are not designed to collaborate toward solving the large, systemic problems that threaten human survival. Professor Harold Gilbert, a Harvard psychologist, writes, “We’re far more sensitive to changes that are instantaneous than those that are gradual. We yawn at a slow melting of the glaciers, while if they shrank overnight we might take to the streets. In short, we’re brilliantly programmed to act on the risks that confronted us in the Pleistocene Age. We’re less adept with 21st-century challenges.”

Our country has led technological progress for a long time, yet in terms of facing the challenges of peak oil and climate change, we are far behind Western Europe. Perhaps it is American exceptionalism and the human tendency to believe that we will somehow escape the unpleasant realities that will affect all species and all humankind. The use of the term “sustainability” indeed gives us a false sense of security, in that it implies that it is possible through technological change to design our way out of larger processes of ecological collapse and climate chaos. I prefer the terms “adaptive design” and “resilient design,” which suggest that the real work is our design response to certain uncertainty.

Modern materialistic culture has thrived through the development of our left-brain capacity to reduce all problems to finite, rational, solution algorithms. Yet, the design problems we face consist of multi-dimensional,

complex systems issues that cross traditional disciplines and knowledge sets. We have to develop whole new mind sets, ways of working together, communicating across mind sets and tossing away old habits, inventing new collaborative processes to overcome today’s fragmented, bunker mentality. We need to shift our focus from left brain to right brain, which is the basis for all design. Remember the old dictum, “Think outside the box”? Our problem is that thinking is the box. We need to start experiencing our small world with our whole being.

The Three R’s of design for the 21st Century are: restoration, regeneration, resiliency. This means integrating building design within a larger context of community design and the integral ecological design of food, water, energy, and recycling systems at every scale. Most of today’s middle school students know the mantra, “Materials cycle, energy flows, life webs.” Today’s designers need to imprint that in their being.



**Jennifer Wolch**  
Dean, College of Environmental  
Design, UC Berkeley  
wolch@berkeley.edu

The public as well as practitioners believe if a building attains a LEED rating, it is “sustainable.” Although LEED is getting more sophisticated, there is typically a significant gap between a rating and building performance. To fill this gap, we need to understand how our existing buildings are performing through the use of post-occupancy surveys, while simultaneously moving toward the development and implementation of ubiquitous building sensors that monitor performance on a continual basis and make adjustments or alert users to correct problems. At the College of Environmental Design, Berkeley, building science faculty at our Center for Environmental Design Research (CEDR) are working with scientists from across the university to develop automated building monitoring

systems that are linked to sophisticated simulation software, ultimately enabling us to test the energy implications of alternative design specifications.

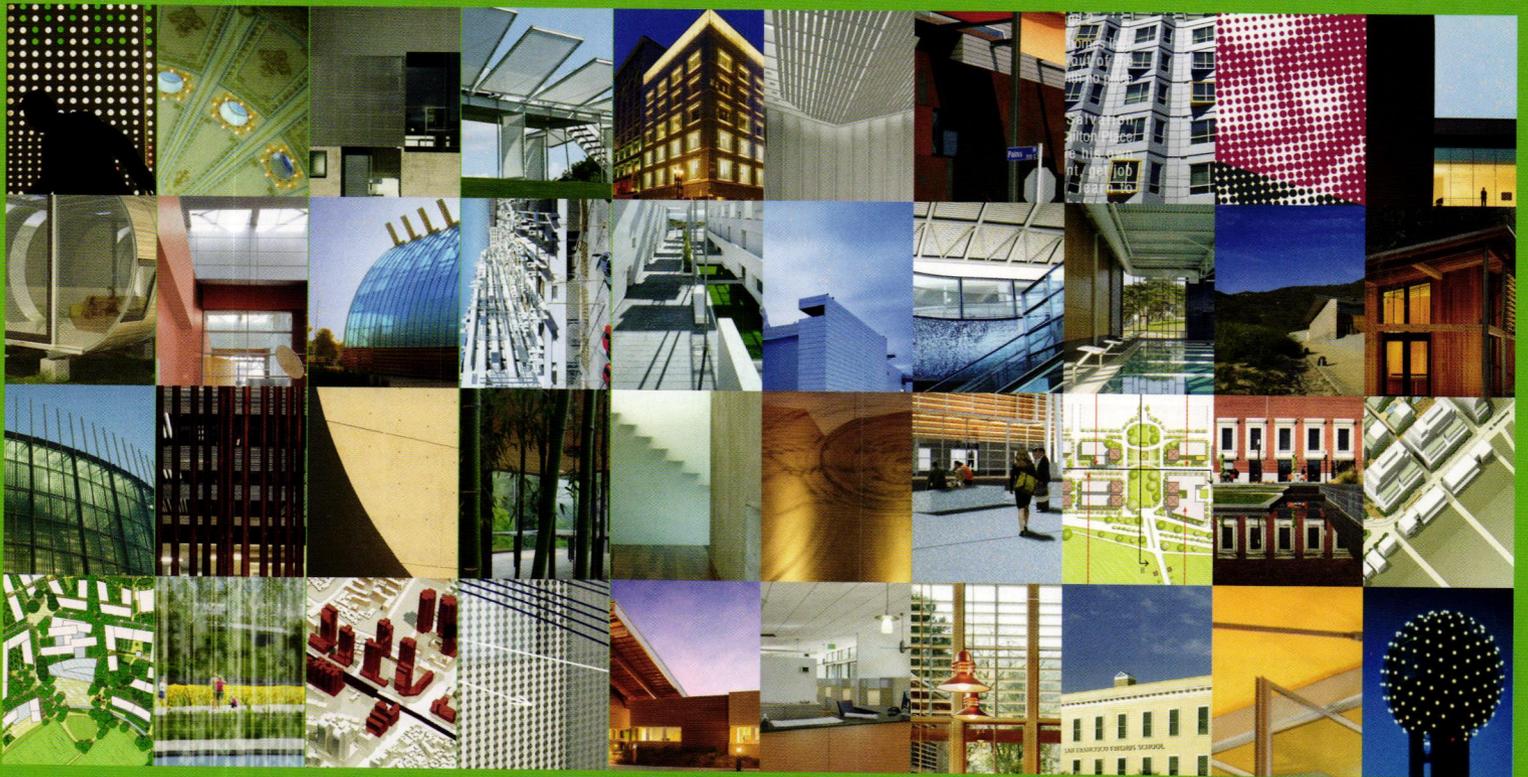
The most neglected issue today is urban metabolism. Buildings are part of a much larger system of inputs and outputs, and how they fit into this system is vital. Inputs include energy, water, raw materials, people, animals, plants; outputs are wastewater, various forms of pollution, and solid waste. Buildings should be designed on the basis of biomimicry, and once they receive an initial allocation of inputs, they should recycle and reuse those inputs on an ongoing basis. This implies building systems and urban neighborhoods that produce energy and food, recycle all water, capture and reuse waste outputs, etc. While not self-sufficient, such ultra-high performance buildings are the next move toward sustainability—the “post-green” era.

The aesthetic opportunity is that we have not figured out the answer to the question, “What does sustainability look like?” Building a “green” building used to imply trade-offs between beauty and eco-efficiency. Those days are past, but we still have a large gap between the design vocabularies of highly acclaimed object-buildings and ultra-sustainable projects. Do we need to jettison some of the older vocabulary? Invent new and widely embraced vocabularies? There are vast opportunities for inventive and persuasive designers to lead us toward a better understanding of the aesthetic possibilities of sustainable design.

The practical opportunity is the retrofit and renovation of existing buildings. Although high performance is vital for new construction, we need an army of designers and construction workers to make existing houses, commercial buildings, and industrial facilities radically more energy and water efficient. This is a key strategy for building a greener and more inclusive economy. As professional designers, we know that, in order to fast-forward sustainable urbanism, we will have to mobilize politically to attack this issue at a scale that matters. ●

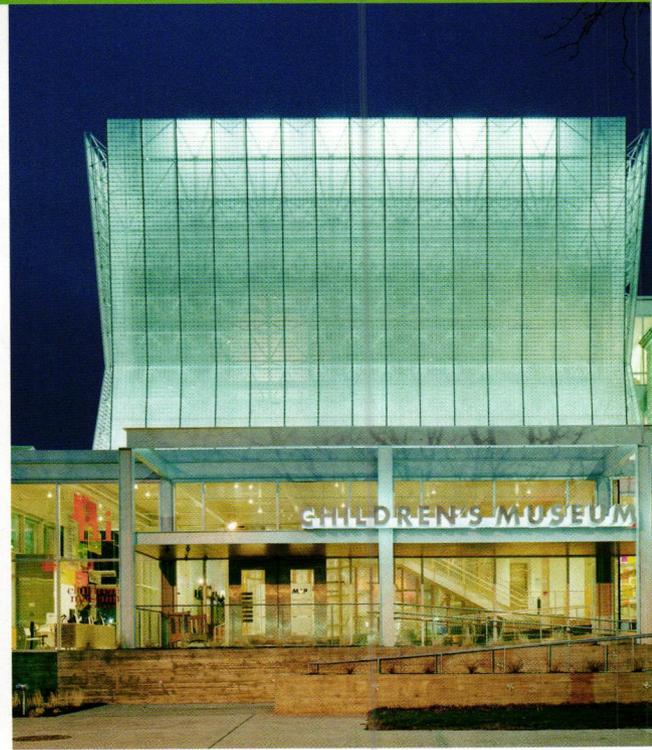
# 2009

## AIACC AWARDS



- . Firm of the Year
- . Lifetime Achievement
- . Architecture
- . Interiors
- . Small Projects
- . Urban Design
- . Energy Efficiency
- . Integration

# 2009 AIACC Firm of the Year



## FIRM OF THE YEAR:

### Koning Eizenberg

[www.kearch.com](http://www.kearch.com)

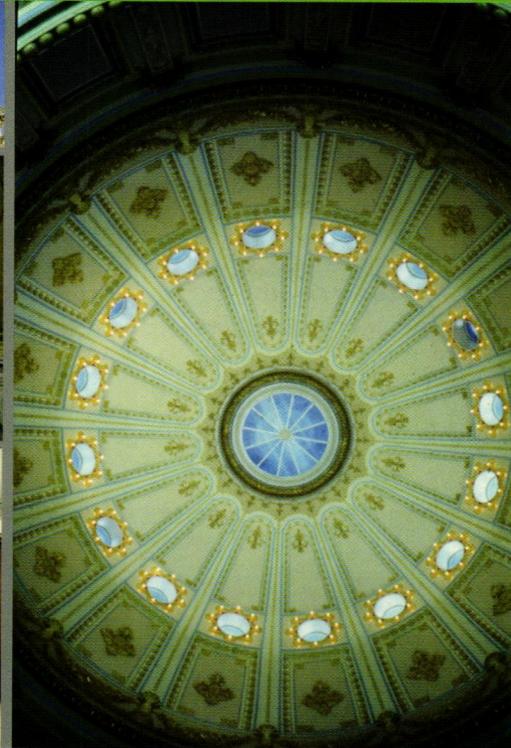
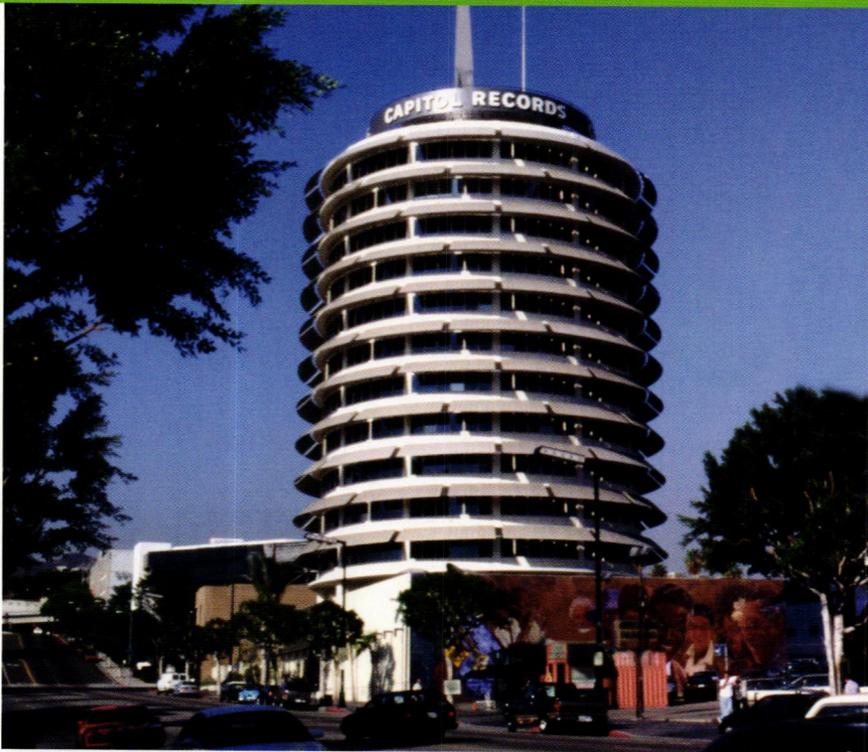


top left: PS #1 Elementary School; photo by Benny Chan.

top right: Children's Museum of Pittsburgh; photo by Albert Vecerka of Esto Photographics. above: Metropolitan Home Installation; photo by Keith Gendel.

Koning Eizenberg was established in 1981 by Hank Koning, FAIA, FRAIA, and Julie Eizenberg, AIA, with Brian Lane becoming managing principal in 2003. By example, the firm's projects have helped transform architectural culture, encouraging architects to see and achieve design opportunity in sustainable and socially responsible projects. Julie Eizenberg's recent book, *Architecture Isn't Just for Special Occasions*, addresses key values for architecture: engendering *trust* to communicate, creating *ease* to empower, and elevating the idea of *fit* beyond conformity to generate the extra-ordinary.

The firm is known for its inventiveness within mainstream construction culture—Hank Koning leads the exploration of new materials and assemblies, extracting cost savings out of careful interpretation of code and knowledge of construction—and its contribution to under-recognized building types. In 1986, the OP12 Housing, featured on the cover of *PA* magazine, marked the first time in many years that affordable housing was thus elevated in status; in 1988, the Electric Lofts introduced an influential prototype for speculative live/work housing; the 1992 Simone Hotel became the first new SRO to be built in Los Angeles in thirty years; in 1999, PS#1 Elementary School provided a paradigm for small schools and attested to the value of a design-rich learning environments; 2002's improvements to the historic LA Farmers Market demonstrated that preservation and retail vitality had gathered new energy; and, in 2004, the Children's Museum of Pittsburgh, which won over ten awards for design, sustainability, and historic preservation, introduced a new model of museum that facilitates intergenerational learning. ●



## LIFETIME ACHIEVEMENT AWARD:

### Louis Naidorf, FAIA



top left: Capitol Records, Hollywood, photo by Marvin Rand; top right and above, California State Capitol, Sacramento, photos courtesy of Welton Becket Associates

Louis Naidorf entered UC Berkeley in 1946, graduating with a masters degree in 1950; four days later he started at Welton Becket Associates, where he remained for forty years, becoming Director of Design in 1973. Naidorf's work with the firm won an AIA National Honor Award, a National Honor Award for Historic Preservation, and seventeen Regional Honor and Merit awards. The work addresses important issues of human emotion and perception: to counter the boredom and feelings of alienation in large office buildings, to allay fear and anxiety in a vast medical complex, or to evoke a sense of excitement and adventure in a convention hotel. It has been published internationally and exhibited at the New York Museum of Modern Art.

From the mid-1960s, Naidorf has been involved with architectural education, lecturing and teaching at all of the professional architecture schools in southern California, as well as Cal Poly San Luis Obispo, the University of Washington, and elsewhere. In 1990, he joined Woodbury University as head of a newly formed architecture program, founded in part to serve underrepresented Latinos and Southeast Asians. With only scraps of money but strong support from the university, the weak and unaccredited program was rapidly transformed, achieving full accreditation in 1994. Now a Trustee of Woodbury, Naidorf serves as design consultant on several new buildings and as de-facto campus architect. He is also involved in *pro bono* urban planning in Santa Rosa. So far, he has avoided retirement. ●

**HONOR AWARD FOR ARCHITECTURE**

355 11th Street,  
San Francisco  
Aidlin Darling Design

**OWNER, DEVELOPER, AND GENERAL CONTRACTOR:**  
Matarozzi/Pelsinger Builders

**LANDSCAPE ARCHITECT:** Miller Company

**SOILS ENGINEER:** Herzog Geotechnical  
Consulting Services

**CIVIL ENGINEER:** Sandis Civil Engineers

**STRUCTURAL ENGINEER:** Berkeley  
Structural Design

**MEP ENGINEER:** CB Engineers

**SUSTAINABILITY CONSULTANT:**  
Simon & Associates, Inc.

**SIDEWALK LANDSCAPING CONSULTANT:**  
Shift Design Studio

**Photos:** top, Matthew Millman; bottom left and right,  
Richard Barnes

**HONOR AWARD FOR ARCHITECTURE**

Water + Life Museums  
Campus, Hemet  
Lehrer + Gangi Design Build

**OWNER:** The Center for Water Education and Western  
Center for Archaeology and Paleontology

**LANDSCAPE ARCHITECT:** Mia Lehrer & Associates

**SOILS ENGINEER:** Geomatrix Consultants, Inc.

**CIVIL ENGINEER:** KPFF Consulting Engineers

**STRUCTURAL ENGINEER:** Nabih Youssef & Associates

**MECHANICAL AND PLUMBING ENGINEER:**  
IBE Consulting Engineers

**ELECTRICAL AND SOLAR ENGINEER:** Vector Delta  
Design Group

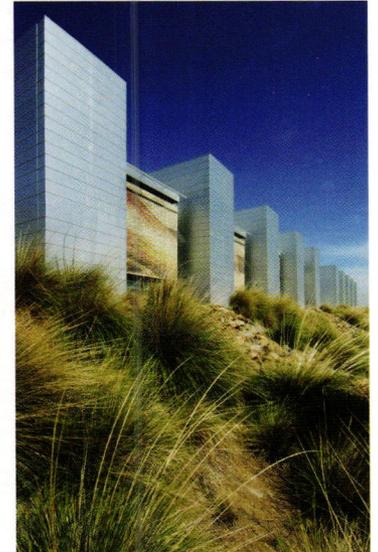
**LEED CONSULTANT:** Zinner Consultants

**PROJECT ADMINISTRATOR:** MWH

**EXHIBIT DESIGNERS:** Design Craftsmen

**CONSTRUCTION MANAGER:** Lehrer + Gangi  
Design Build

**Photos:** top right, Tom Lamb; middle left and  
bottom, Benny Chan Fotoworks



**HONOR AWARD FOR ARCHITECTURE**

**Sava Pool, San Francisco**

Joint Venture—Paulett Taggart Architects  
and Mark Cavagnero Associates

**LANDSCAPE ARCHITECT:** Cliff Lowe and Associates

**CIVIL ENGINEER:** Telamon Engineers

**STRUCTURAL ENGINEER:** Bello and Associates

**MECHANICAL/PLUMBING ENGINEER:** SJ Engineers

**ELECTRICAL ENGINEER:** F.W. Associates, Inc.

**POOL CONSULTANT:** Aquatic Design Group

**Photos:** Tim Griffith



**HONOR AWARD FOR ARCHITECTURE**

**Madrid Public Housing,  
Madrid, Spain**

Morphosis Architects

**ASSOCIATE ARCHITECT:** B+ DU Estudio de Arquitectura / Leon Benacerraf

**LANDSCAPE ARCHITECT:** Ana Luengo

**SURVEYOR:** Gerardo Berrocal, Borja Herrero

**STRUCTURAL ENGINEER:** Carlos Pintor, Roberto Vargas

**FACILITIES:** Rafael Urculo

**GENERAL CONTRACTOR:** UICESA

**Photos:** top left, Nic Lehoux; top right and bottom, Roland Halbe



**HONOR AWARD FOR ARCHITECTURE**

**Cathedral of Christ  
the Light, Oakland**  
Skidmore, Owings &  
Merrill LLP

**STRUCTURAL ENGINEER, INTERIOR DESIGNER,  
GRAPHIC AND PRODUCT DESIGNER:**  
Skidmore, Owings & Merrill LLP

**ARCHITECT OF RECORD:** Kendall/Heaton  
Associates, Inc.

**OWNER:** Roman Catholic Diocese of Oakland

**PROJECT MANAGEMENT:** Conversion Management  
Associates, Inc.

**LANDSCAPE ARCHITECT:** Peter Walker and Partners

**SOILS ENGINEER:** Treadwell & Rollo

**CIVIL ENGINEER:** Korve Engineering

**MECHANICAL AND PLUMBING ENGINEER:**  
Taylor Engineering LLC

**ELECTRICAL ENGINEER:** The Engineering Enterprise

**LIGHTING:** Claude R. Engle Lighting Consultants

**ACOUSTICAL:** Shen Milsom & Wilke, Inc.

**LITURGICAL CONSULTANT:** Brother William Woeger

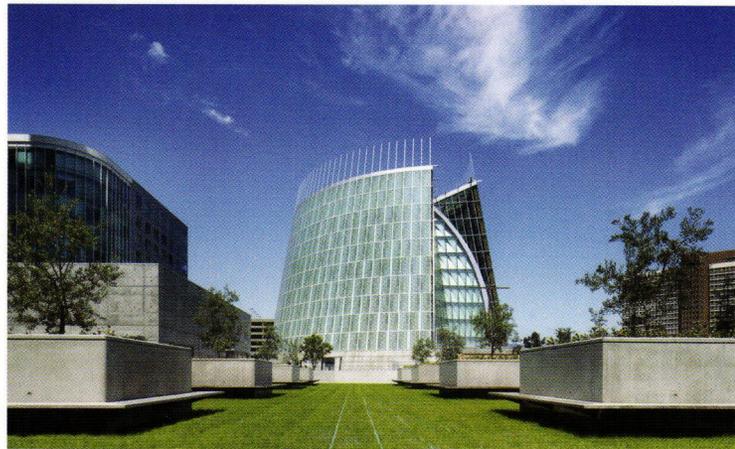
**THEATER CONSULTANT:** Auerbach Pollack  
Friedlander

**CODE CONSULTANT:** Rolf Jensen & Associates

**GENERAL CONTRACTOR:** Webcor Builders

**MAUSOLEUM CONTRACTOR:** Oliver + Co.

**Photos;** top left, John Blaustein; top right  
and bottom, Cesar Rubio



**MERIT AWARD FOR ARCHITECTURE**

**185 Post Street,  
San Francisco**  
Brand + Allen Architects Inc.

**STRUCTURAL ENGINEER:** Murphy Burr Curry, Inc

**MECHANICAL ENGINEER:** Guttman & Blaevoet

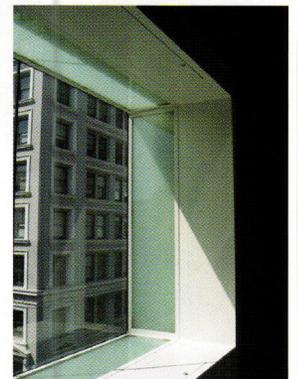
**ELECTRICAL ENGINEER:** Silverman & Light

**LIGHTING:** Revolver Design

**GENERAL CONTRACTOR:** Plant Construction Co., LP

**DESIGN BUILD FABRICATOR, CURTAIN WALL:** C/S Erectors Inc

**Photos:** Mariko Reed



**MERIT AWARD FOR ARCHITECTURE**

**700 Palms Residence, Venice**  
Ehrlich Architects

LANDSCAPE ARCHITECT: Griffith & Zarraga

STRUCTURAL ENGINEER: Parker Resnick

SUSTAINABILITY CONSULTANT: Helios International

TITLE 24 CONSULTANT: Doug Taber

GENERAL CONTRACTOR: Mark Shramek Construction

Photos: top and middle, Erhard Pfeiffer; bottom, Grey Crawford



**MERIT AWARD FOR ARCHITECTURE**

**Salvation Army Ray & Joan Kroc Corps Community Center and Railton Place Housing, San Francisco**  
Herman Coliver Locus Architecture

OWNER: The Salvation Army

LANDSCAPE ARCHITECT: GLS Landscape | Architecture

CIVIL ENGINEER: KCA Engineers

STRUCTURAL ENGINEER: Middlebrook & Louie

MECHANICAL/ELECTRICAL/PLUMBING:

Ajmani & Pamidi

LIGHTING: Architectural Lighting Design

ACOUSTICS: Charles M. Salter Associates, Inc.

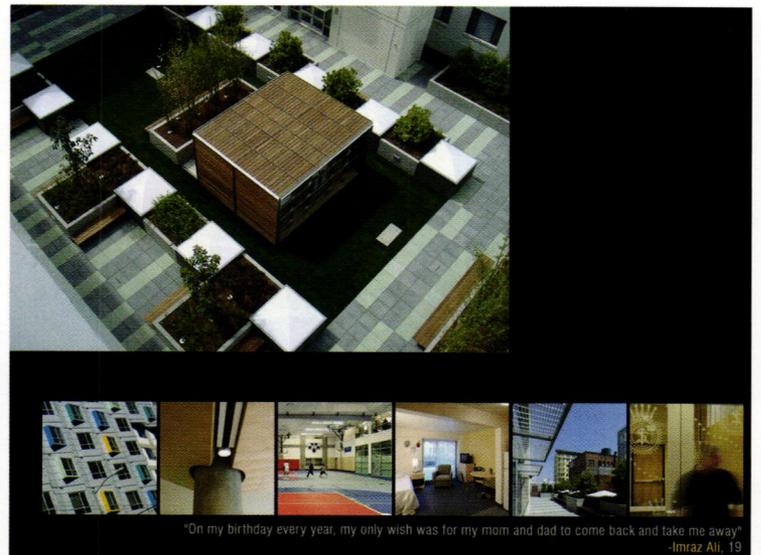
POOL CONSULTANT: Aquatic Design Group

FOOD SERVICE: The Marshall Associates, Inc.

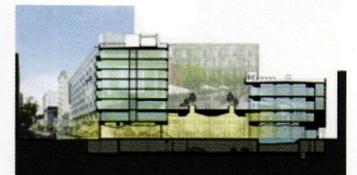
CONSTRUCTION MANAGER: Michio Yamaguchi CM

GENERAL CONTRACTOR: Cahill Constructors

Photos: Tim Griffith



"On my birthday every year, my only wish was for my mom and dad to come back and take me away"  
-Imraz Ali, 19



**MERIT AWARD FOR ARCHITECTURE**  
SFMOMA Rooftop Garden, San Francisco  
Jensen Architects /  
Jensen & Macy Architects

**LANDSCAPE ARCHITECT:** CMG Landscape Architecture

**SURVEYOR:** Martin M. Ron Associates

**STRUCTURAL ENGINEER:** Forell/Elsesser Engineers Inc.

**MECHANICAL, ELECTRICAL, & PLUMBING ENGINEERS:**

Guttman & Blaevoet Consulting Engineers

**LIGHTING DESIGN:** Horton Lees Brogden Lighting Design, Inc.

**ACOUSTICAL CONSULTANT:** Charles M. Salter Associates, Inc.

**AUDIO & VISUAL CONSULTANT:** Auerbach-Pollock-Friedlander

**WATERPROOFING CONSULTANT:** Simpson Gumpertz & Heger Engineers

**PROJECT MANAGEMENT:** Pro PM

**FOOD SERVICES:** The Marshall Associates, Inc.

**GENERAL CONTRACTOR:** Vance Brown

**Photos:** top and middle, Bernard Andre; bottom, Henrik Kam

**MERIT AWARD FOR ARCHITECTURE**  
Cahill Center for Astronomy and Astrophysics, California Institute of Technology, Pasadena  
Morphosis Architects

**LANDSCAPE ARCHITECT:** Katherine Spitz Associates

**CIVIL ENGINEER:** KPFF Consulting Engineers

**STRUCTURAL ENGINEER:** John A. Martin & Associates

**MECHANICAL ELECTRICAL PLUMBING ENGINEER:** IBE Consulting Engineers

**ARCHITECTURAL LIGHTING:** Horton Lees Brogden Lighting Design, Inc.

**ACOUSTICAL ENGINEER:** Martin Newson & Associates, LLC

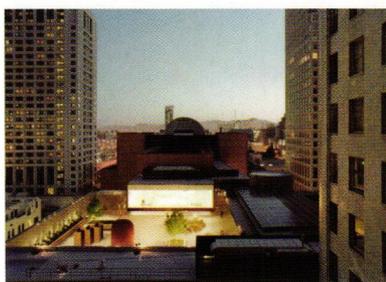
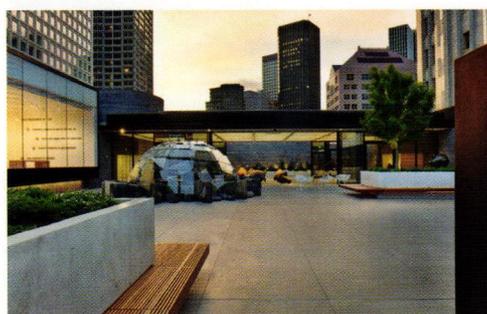
**CODE AND SECURITY CONSULTANT:** Schirmer Engineering Corporation

**SPECIFICATIONS:** Technical Resources Consultants, Inc.

**COST ESTIMATOR:** Davis Langdon

**GENERAL CONTRACTOR:** Hathaway Dinwiddie Construction Company

**Photos:** Michael Powers



**MERIT AWARD FOR ARCHITECTURE**

**NOAA Satellite  
Operations Facility**  
Morphosis Architects

**JOINT VENTURE TEAM AND MEP ENGINEERS:**  
Einhorn Yaffee Prescott

**STRUCTURAL CONCEPTS:** Ove Arup & Partners

**STRUCTURAL ENGINEER:** Cagley and Associates

**MECHANICAL CONCEPTS:** IBE Consulting Engineers

**MISSION CRITICAL ELECTRICAL ENGINEER:**  
EYP Mission Critical Facilities

**CIVIL ENGINEER:** A. Morton Thomas &  
Associates, Inc.

**LANDSCAPE ARCHITECT:** EDAW

**ARCHITECTURAL LIGHTING:** Horton Lees Brogden  
Lighting Design, Inc.

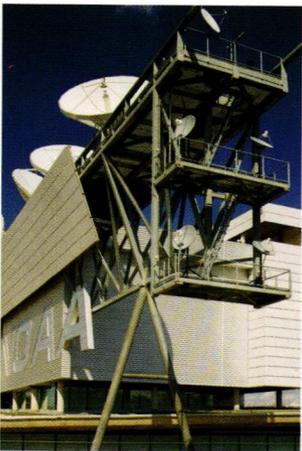
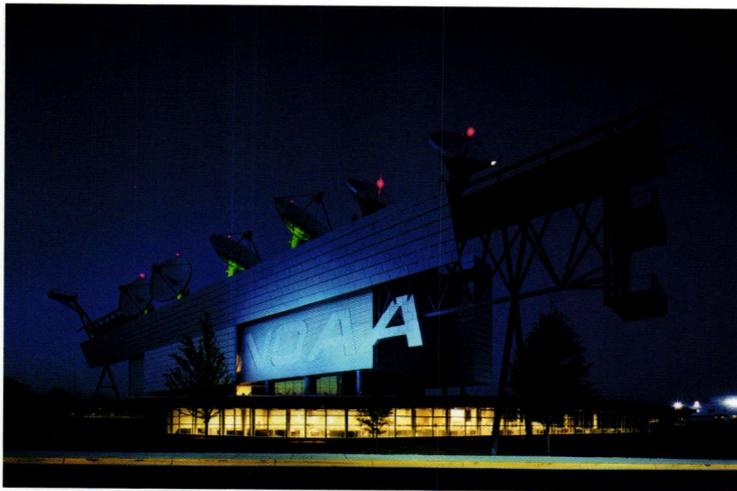
**SPECIFICATIONS:** CMS Consultants

**AUDIO VISUAL/ACOUSTICAL ENGINEER:**  
Shen Milsom & Wilke, Inc.

**COST ESTIMATOR:** Davis Langdon

**GENERAL CONTRACTOR:** P.J. Dick

**Photos:** top, Maxwell MacKenzie; middle left,  
Nic Lehoux; bottom right, Roland Halbe



**MERIT AWARD FOR ARCHITECTURE**

**James And Rosemary  
Nix Nature Center,  
Laguna Coast  
Wilderness Park**  
Roesling Nakamura Terada  
Architects

**CONTRACTOR:** Metro Builders

**Photos:** Zoom Photography

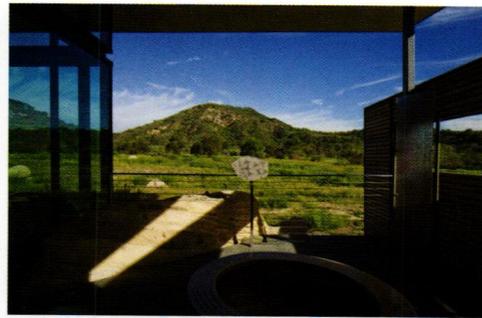
**LANDSCAPE ARCHITECT:** Spurlock Poirier  
Landscape Architects

**STRUCTURAL ENGINEER:** GSSI

**MECHANICAL ENGINEER:** Bender Dean

**ELECTRICAL ENGINEER:** EPI

**CIVIL ENGINEER:** Flores Lund Civil Engineers



**MERIT AWARD FOR ARCHITECTURE**

Portola Valley Town  
Center, Portola Valley  
Siegel & Strain Architects

**LANDSCAPE ARCHITECTS:** Lutsko Associates and  
Carducci & Associates

**INTERIOR DESIGNERS:** Staprans Design and  
Pivot Interiors

**CIVIL ENGINEER:** BKF Engineers

**STRUCTURAL ENGINEER:** Forell/Elsesser Engineers Inc.

**MECHANICAL & PLUMBING ENGINEER:**  
Rumsey Engineers Inc.

**ELECTRICAL ENGINEER:** Integrated Design  
Associates, Inc.

**ENERGY CONSULTANT:** High Sun Engineering

**LIGHTING DESIGNER:** David Nelson & Associates LLC

**ACOUSTICS:** Ewart Wetherill

**CONSTRUCTION MANAGER/CONTRACTOR:**  
TBI Construction Management

**Photos:** César Rubio



**MERIT AWARD FOR ARCHITECTURE**

Congregation Beth  
Sholom Synagogue,  
San Francisco  
Stanley Saitowitz/Natoma Architects Inc.

**LANDSCAPE ARCHITECT:** Blasen Landscape  
Architecture

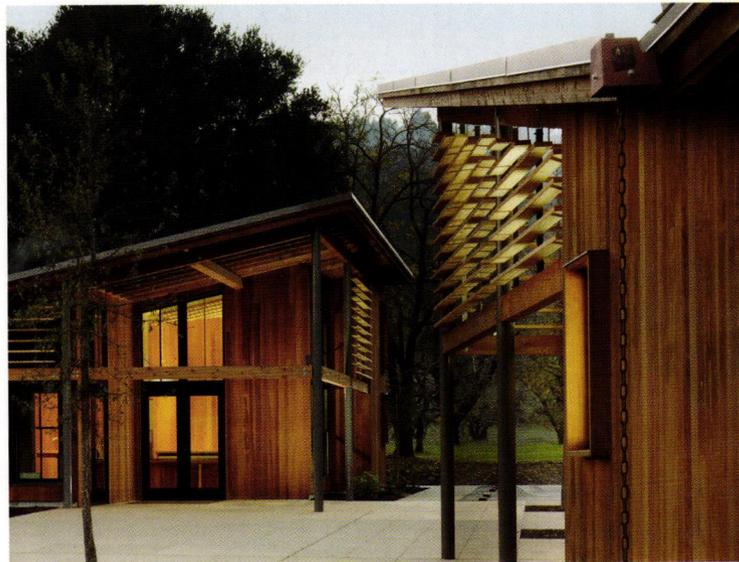
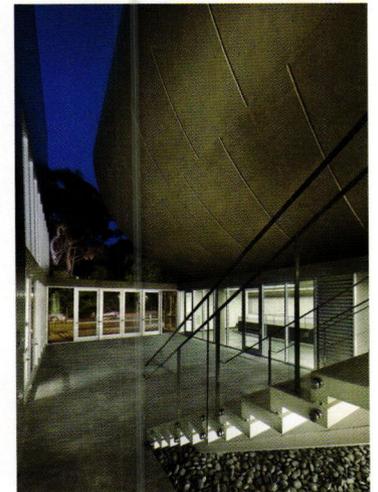
**STRUCTURAL:** Forell/Elsesser Engineers Inc.

**MECHANICAL:** Rumsey Engineers Inc.

**ACOUSTICS:** Charles M. Salter Associates, Inc.

**GENERAL CONTRACTOR:** Overaa Construction

**Photos:** Rien van Rijthoven



**MERIT AWARD FOR ARCHITECTURE**  
Teahouses, Silicon Valley  
Swatt | Miers Architects

**INTERIOR DESIGNER:** Connie Wong

**STRUCTURAL ENGINEER:** Yu Strandberg Engineering

**GENERAL CONTRACTOR:** Neto Builders Inc.

**Photos:** Tim Griffith



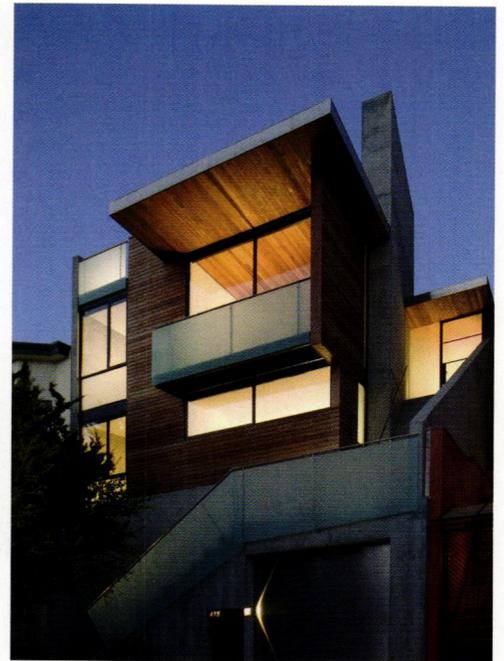
**MERIT AWARD FOR ARCHITECTURE**  
Diamond Project, San Francisco  
Terry & Terry Architecture

**OWNERS:** Colleen Bal, Alex Terry

**ENGINEER:** Santos & Urrutia Inc.

**GENERAL CONTRACTOR:** Timberline Construction

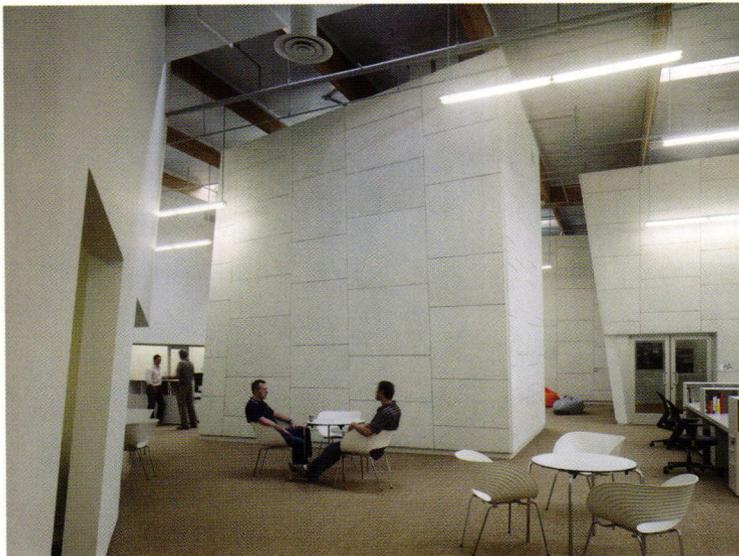
**Photos:** top left and right, Ethan Kaplan; bottom, Alex Terry



**MERIT AWARD FOR INTERIOR  
ARCHITECTURE**

**BMW DesignWorks USA,  
Newbury Park  
Daly Genik**

**STRUCTURAL ENGINEER:** Thornton Tomasetti  
**ELECTRICAL ENGINEER:** MDC Engineers  
**MECHANICAL ENGINEER:** The Sullivan Partnership  
**GENERAL CONTRACTOR:** Staples Construction  
**Photos:** Tim Griffith

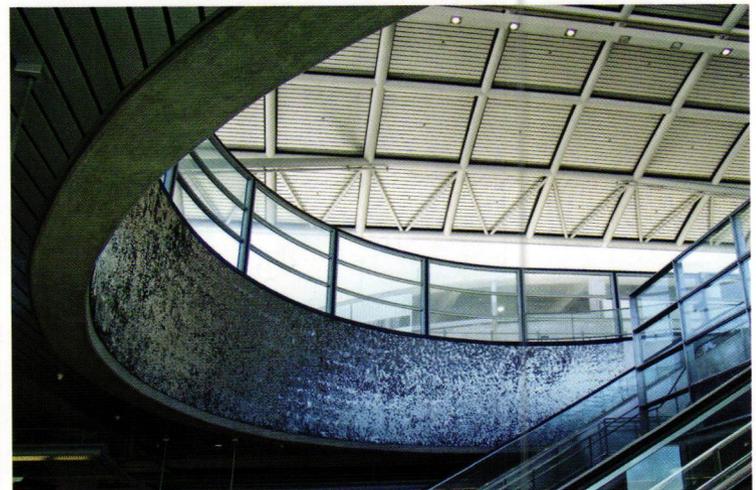


**MERIT AWARD FOR INTERIOR  
ARCHITECTURE**

**The Wind Portal at  
San Francisco  
International Airport  
BART Station**

**DESIGN ARCHITECT FOR THE WIND PORTAL:**  
Paul Woolford, AIA, LEED AP  
**ARTIST:** Ned Kahn  
**ARCHITECT OF RECORD FOR THE  
SFO BART STATION:** MBT/ED2

**STRUCTURAL ENGINEER:** Mason Walters,  
SE Degenkolb-Forell/Elsesser Engineers Inc.  
**GENERAL CONTRACTOR:** Tutor-Saliba Corporation  
**Photos:** top, Frederic Larson; middle, Ned Kahn;  
bottom, Paul Woolford



**MERIT AWARD FOR INTERIOR  
ARCHITECTURE**

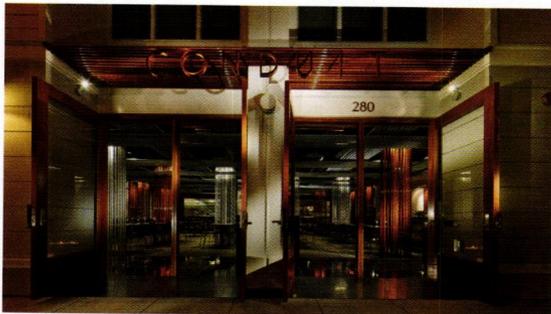
Conduit, San Francisco  
Stanley Saitowitz/Natoma  
Architects Inc.

**OWNER / GENERAL CONTRACTOR:**

Spiers Construction

**ACOUSTICS:** Colin Gordon & Associates

**Photos:** Rien van Rijthoven



**HONOR AWARD FOR SMALL  
PROJECTS**

Texas Prairie Hopper  
Anderson Anderson Architecture

**ORGANIZER:** Institute for Environmental Studies, Texas Christian University

**SCULPTOR:** Cameron Schoepp

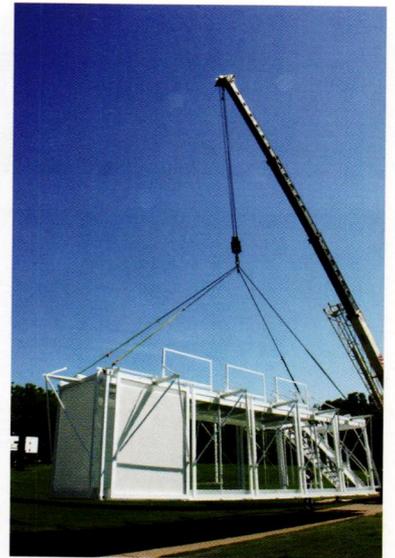
**GREEN ROOF DESIGN & INSTALLATION:** Prairie Designs, LLC

**STRUCTURAL STEEL SOURCE AND FABRICATION:** Advantage Steel Service, Inc.

**VERISTEEL FRAME:** Bennet Industries, Inc.; Veristeel, Inc.

**SUSTAINABLE ENERGY TECHNOLOGY:** NextEra Energy Resources

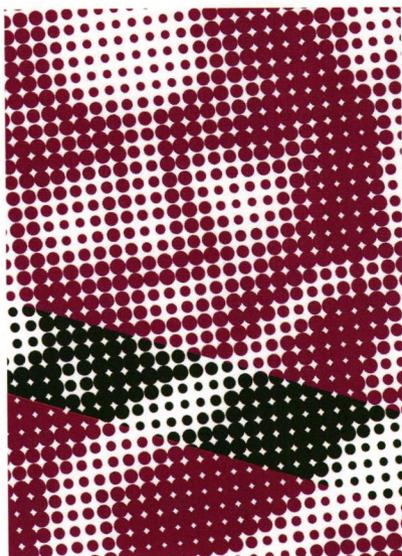
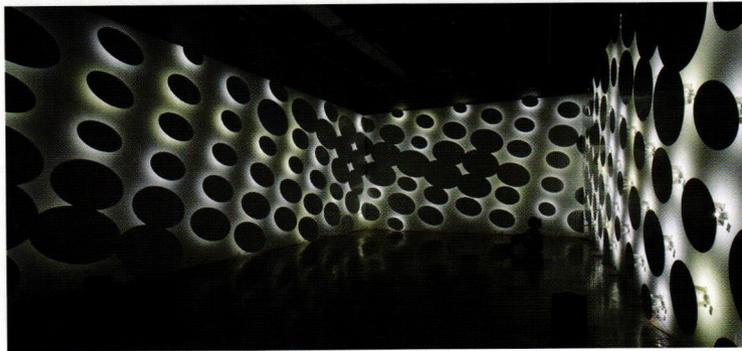
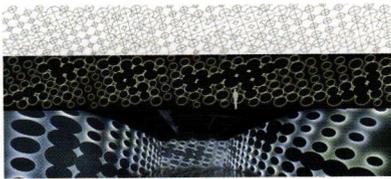
**Photos:** top left, David Williams; top right, Yevgeniy Ossipov;  
rendering, bottom, Anderson Anderson Architecture



**HONOR AWARD FOR SMALL PROJECTS**

kē-ärō'-sköör'ō,  
SCIArc, Los Angeles  
Hodgetts + Fung Design and  
Architecture

Photos: Craig Hodgetts, FAIA.

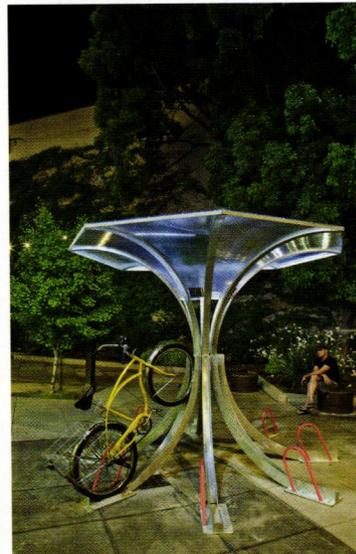


**HONOR AWARD FOR SMALL PROJECTS**

**Bike Arc**  
Joseph Bellomo  
Architects, Inc.

CONSULTING ENGINEER: Morris Engineering & Associates, Inc.

Photos: top left, Stirling Elmendorf; renderings,  
right and bottom, Joseph Bellomo Architects, Inc.



**HONOR AWARD FOR SMALL PROJECTS**

**Kayak Hut at Mission Creek Sports Park, San Francisco**  
MKThink

**OWNER:** Mission Bay Development Corporation

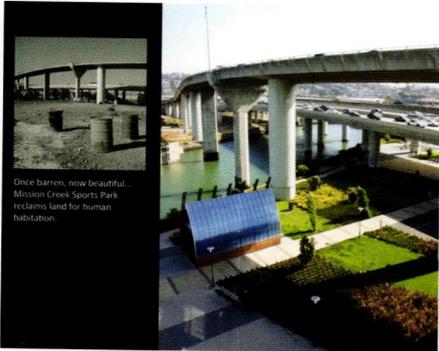
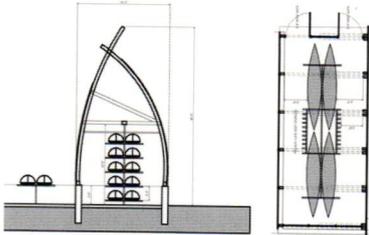
**LANDSCAPE ARCHITECT:** MFLA

**STRUCTURAL ENGINEER:** SOHA Engineers

**LIGHTING DESIGN:** HLB Horton Lees Brogden

**GENERAL CONTRACTOR:** Nibbi Brothers General Construction

**Photos:** Jacob Elliott, Steven Kelley, Marcia Lieberman



**HONOR AWARD FOR SMALL PROJECTS**

**Conditional Reflections, F15 Pool Bathhouse at Stapleton, Denver, Colorado**  
UrbanRock Design

**BUILDING DESIGN ARCHITECT:** Semple Brown Design

**DEVELOPER:** Forest City Stapleton

**PUBLIC ART CONSULTANT:** The Park Creek Metropolitan District, Barbara Neal, Public Art Consultant for Stapleton

**CONTRACTOR:** Mortenson Construction

**Photos:** top, Renee del Gaudio; bottom, Mayra Galvez



### MERIT AWARD FOR SMALL PROJECTS

#### Jessie Square, San Francisco Handel Architects LLP

**OWNER:** The San Francisco Redevelopment Agency

**CLIENT'S REP / CONSTRUCTION MANAGER:**  
Millennium Partners

**LANDSCAPE ARCHITECTS:** Cliff Lowe and Associates

**STRUCTURAL ENGINEERS:** Tipping Mar and  
Associates

**PLUMBING ENGINEER:** SJ Engineers

**LIGHTING ENGINEER:** Silverman and Light

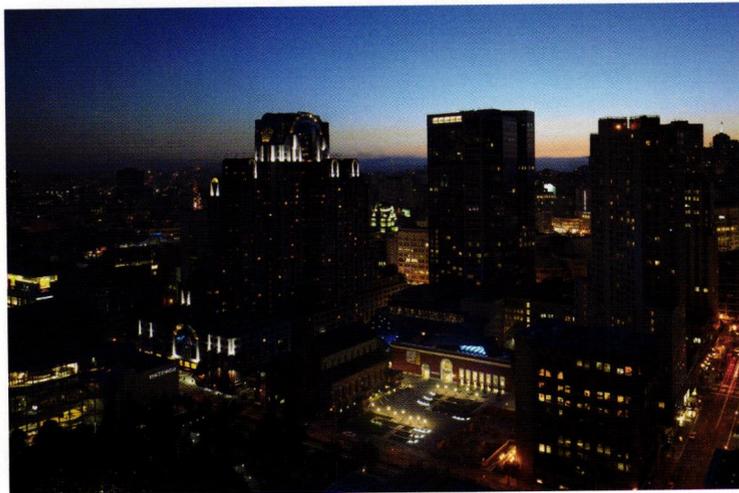
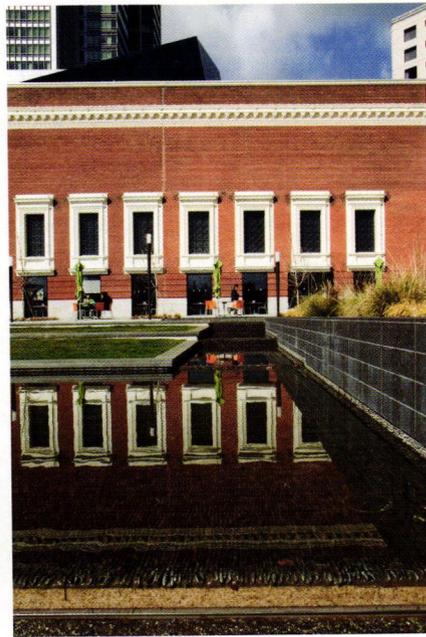
**WATER FEATURE CONSULTANT:** Goepf Associates

**WATERPROOFING CONSULTANT:** Simpson Gumpertz  
& Heger Inc.

**IRRIGATION CONSULTANT:** Wihlborg Designs

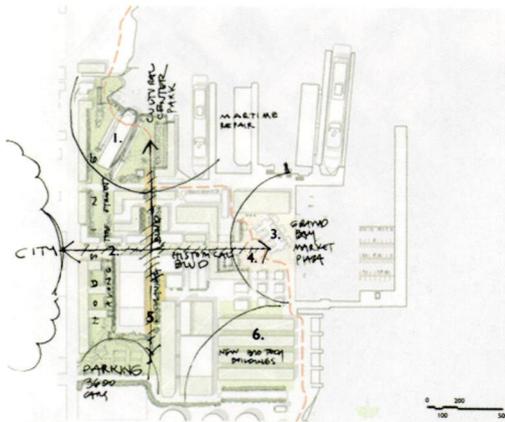
**GENERAL CONTRACTOR:** Plant Construction

**Photos:** Bruce Damonte



**HONOR AWARD FOR URBAN DESIGN**

Pier 70 Master Plan, San Francisco  
BRU Architects



**HONOR AWARD FOR URBAN DESIGN**

North Grant Park,  
Chicago, Illinois  
Rios Clementi Hale Studios

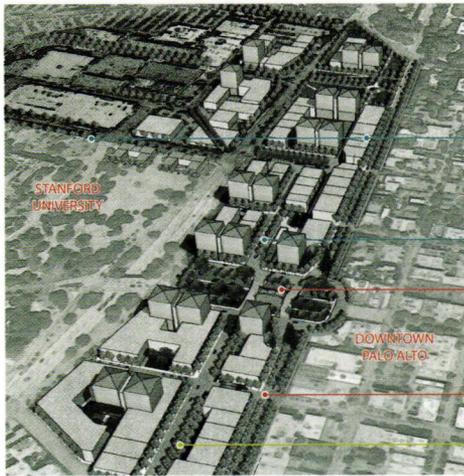


**HONOR AWARD FOR URBAN DESIGN**

From An Age of Movement to An Age of Place, Palo Alto

Tony Carrasco, AIA, Carrasco & Associates; John Barton, AIA, Barton Architect; Bruce A. Fukuji, AIA, Fukuji Planning & Design

Architectural Illustrations: by Robert Frank

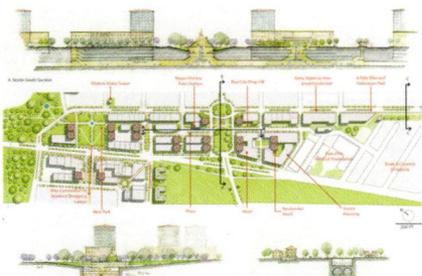


A Grassroots, Volunteer Effort to advocate for undergrounding the High Speed Train through Palo Alto, which will:

- Protect Neighborhoods from elevated train
- Connect Downtown Palo Alto to Stanford University, Shopping Center and Medical Center
- Create a Sustainable and Resource Efficient Community
- Create an urban 18-hour innovation place for intergeneration living and working
- Create Healthy Places and move people efficiently
- Use Air Rights to Generate \$700 Million to pay for undergrounding and infrastructure
- Strengthen Connections between Neighborhoods and Businesses
- Build a 4 mile, 31 Acre Linear Park with a Bike and Ped Path

from an age of movement to an age of place

A Vision for Palo Alto

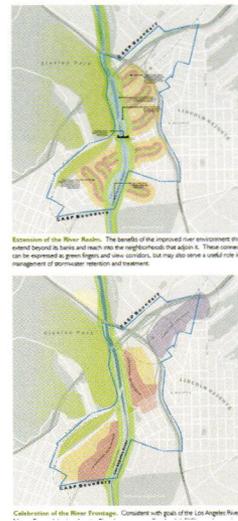


from an age of movement to an age of place

Center of Civic Life

**MERIT AWARD FOR URBAN DESIGN**

River Town, Los Angeles  
Johnson Fain



**MERIT AWARD FOR URBAN DESIGN**

Grangegorman  
Masterplan,  
Dublin, Ireland  
Moore Ruble Yudell  
Architects & Planners /  
DMOD Architects, Dublin

LANDSCAPE ARCHITECT: Lützw 7

CLIENT: Grangegorman Development Agency

ARCHITECTURAL CONSERVATION CONSULTANT:

Patrick Shaffrey Associates.

HEALTHCARE & EDUCATIONAL ENVIRONMENT

EXPERTISE: Prof. Bryan Lawson

TRANSPORT PLANNING/CIVIL & INFRASTRUCTURE:

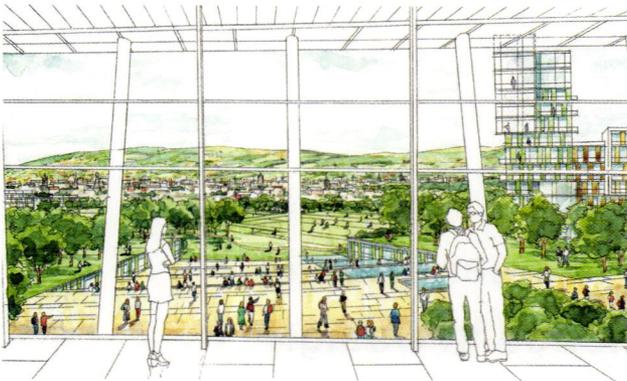
Arup Consulting Engineers

SUSTAINABILITY & ENVIRONMENTAL EXPERTISE:

Battle McCarthy Ltd.

Digital Renderings: Shimahara Illustration

Watercolor Renderings: Tony Tran



**MERIT AWARD FOR URBAN DESIGN**

Foshan Lingnan Tiandi Master Plan,  
Foshan, China  
Skidmore, Owings & Merrill LLP

ASSOCIATE ARCHITECT: Ben Wood Studio

CLIENT: Shui On Land Limited

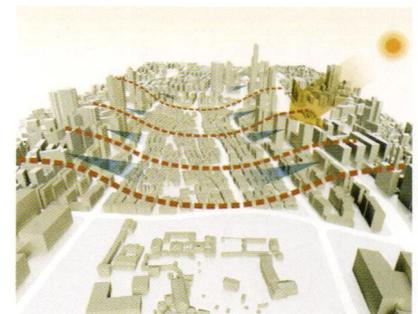
LOCAL PLANNER: Guangzhou Planning, Design and Survey Research Institute

Renderings: Christopher Grubbs



Higher density to locate along transit corridor

Cluster of towers to minimize impact



Energy  
Efficiency  
Integration  
Award  
Winners

2009 Winners Achieve  
Excellence in Design  
and Energy Efficiency

The Savings By Design Energy Efficiency Integration Design Awards, cosponsored by the American Institute of Architects, California Council, annually recognizes professionals who are successful in combining design and creativity, environmental sensitivity, and innovative energy efficiency solutions in their non-residential designs.

Energy Efficient buildings happen by design. They happen because they make sense to the owner, to the design team, to the bottom line, and to the environment.

Savings By Design is a program to encourage high-performance nonresidential building design and construction. Sponsored by California utilities under the auspices of the Public Utilities Commission, Savings By Design offers building owners and their design teams a wide range of services.

**Savings By Design Energy Efficiency Integration Awards Jury:**

Bonnie Bridges, AIA - Boor Bridges Architecture

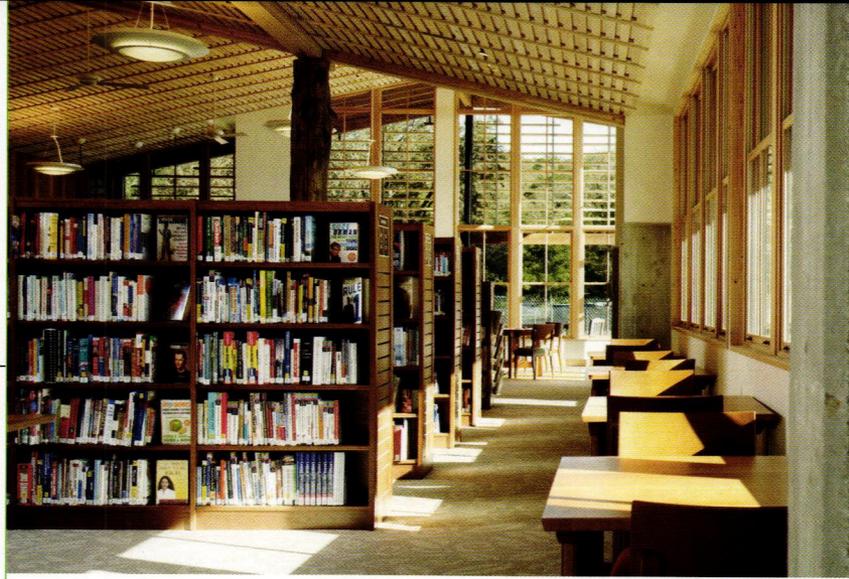
Paul Schroeder, AIA - Delawie Wilkes Rodriques Barker

Jim Gabriel, AIA - Hanna Gabriel Wells

Jorden Segraves, AIA, LEED AP

## HONOR AWARD:

Portola Valley Town Center  
Portola Valley



Photos by Cesar Rubio

**ARCHITECT:** Siegel & Strain Architects

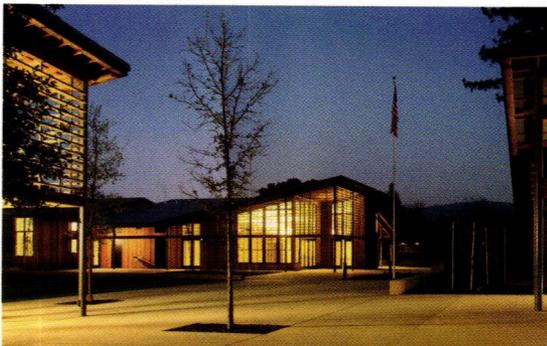
**OWNER:** Town of Portola Valley

**DESIGN TEAM:** Goring & Straja Architects; Rumsey Engineers; Lutsko Associates; TBI Construction & Construction Management; Forell/Elsesser Engineers Inc.; Staprans Design; Pivot Interiors; Carducci & Associates, Inc.; BKF Engineers; Integrated Design Associates, Inc.; David Nelson Associates, Inc.; Ewart Wetherill; Christina Manansala; Jack West

This redeveloped, 11-acre Town Center houses a library, community hall, and town hall offices. Originally the site of a 1950s public school, the new center uses reclaimed vertical redwood cladding, which links the buildings to the two large redwood groves also located on the site. The old school buildings were deconstructed, with wood being remilled into paneling and ceilings. The remaining concrete and asphalt were used as base rock. The high slag concrete keeps 100 tons of carbon dioxide out of the atmosphere, and the passive design strategies used include daylighting, exterior shading, natural ventilation, and thermal mass.

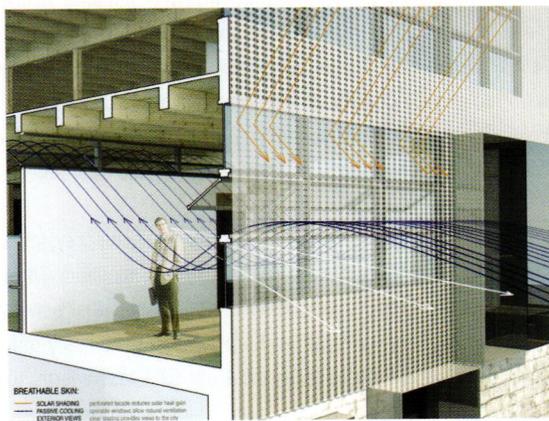
"This program is about integration, and this building is just a great example of the complete integration of sustainability with architecture," Jim Gabriel of Hanna Gabriel Wells in San Diego and a Savings By Design juror, commented on the project. "You're seeing great architecture that just so happens that, among the many wonderful things it does spatially and formally, it's also performing and creating a sustainable approach, but at no cost to the overall experience of the environment."

The town center also made use of efficient mechanical systems, such as radiant heat and nighttime cooling, to keep energy use to a minimum. Three of the five buildings on the site have roof-mounted photovoltaic panels that generate a total of 76 kW of on-site power. This power generation, as well as the many other aspects of efficient design used, results in buildings that use 53% less energy than Title 24 compliant buildings.



# 2009 Savings By Design

**HONOR AWARD:**  
355 11th Street  
San Francisco



Photos by Richard Barnes

**ARCHITECT:** Aidlin Darling Design

**OWNER, DEVELOPER, AND GENERAL CONTRACTOR:** Matarozzi/Pelsinger Builders

**DESIGN TEAM:** Berkeley Structural Design; CB Engineers; Sandis Civil Engineers; Herzog Geotechnical Consulting Services; Miller Company; Simon & Associates, Inc.; Shift Design Studio

Originally a warehouse, this historic structure is slated to become San Francisco's first Gold-level LEED-NC building. The owner, who is also the general contractor, occupies the entire second floor, with the third floor leased to design professionals. Plans are in place for a restaurant and bar to occupy the first floor and exterior courtyard.

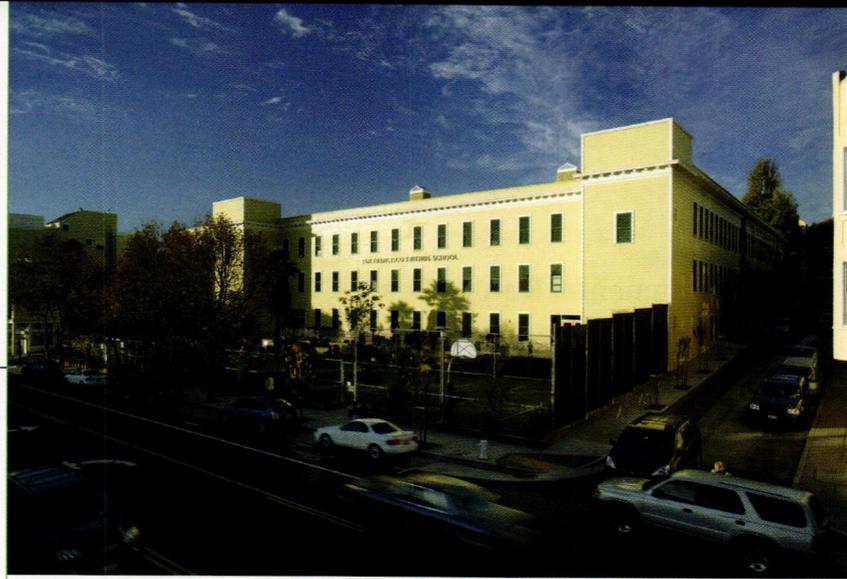
A collection of metal and glass apertures, sensitively inserted into the original structural frame, provide the requisite functions of entry, exit, light, and view necessary for the building's new mixed-use program. On the east and west façades, the new metal skin is perforated with fields of small holes that mitigate solar heat gain while enabling cross-ventilation of the interior. The building's north façade was preserved and refurbished, the existing timber and concrete frame sandblasted to reveal the warmth and texture of the original materials.

"This design team and developer should be commended for taking a found resource and making it truly relevant in today's architectural dialogue, not only from an environmental and sustainability standpoint, but also from a design standpoint," noted Jorden Segraves, LEED AP and Savings By Design juror.

The building utilizes natural ventilation and passive cooling, and its 30 kW photovoltaic array provides 79% of the annual electricity use of the structure. Based on the Title 24 metric, the building touts a compliance margin of 25.1%.

## MERIT AWARD:

San Francisco Friends School  
San Francisco



Photos by Tim Griffith

**ARCHITECT:** Pfau Long Architecture

**OWNER:** San Francisco Friends School

**DESIGN TEAM:** Page & Turnbull; Forell/Elsesser Engineers Inc.; Miller Company; Plant Construction; Timmons Design Engineers; KCA Engineers; Revolver Design; Shen Milsom Wilke; Simpson Gumpertz & Heger, Inc.

This K-8 school purchased the historic Levi Strauss Blue Jean Factory, originally built in 1906. The design objectives were to create a positive learning environment, express the school's Quaker-based values through simplicity of design, and demonstrate a high level of environmental stewardship. The exterior of the building was left virtually unchanged, while the interior space was transformed into classrooms, meeting rooms, faculty offices, a cafeteria, library, gymnasium, black box theater, reception area, and student gallery.

The key to the school's design is the introduction of four passively activated thermal towers, each of which draw air up and out of one of the four quadrants of the building. These towers improve air quality and night cooling rates as well as reducing energy use, CO<sub>2</sub> emissions, and noise levels.

Bonnie Bridges of Boor Bridges Architecture and juror for Savings By Design stated, "Dealing with an adaptive reuse of an historic building and integrating as much energy efficiency, sustainability, daylighting, and passive systems is commendable. They have integrated into their school curriculum the sustainability of the building, and they did a lot of recycle and reuse."

The original wooden beams from the ground floor were reused as the treads for the entry stairs, and the original maple floors were preserved as an historic element of the structure. Skylights were reintroduced into locations where they were previously located in the historical building. The site's sustainable features and elements resulted in 17.3% greater performance than the Title 24 baseline.



# 2009 Savings By Design

## MERIT AWARD:

Environmental Nature Center, 1601 16th Street  
Newport Beach



Photos by LPA, Inc./Costea Photography, Inc.

**ARCHITECT:** LPA, Inc.

**OWNER:** Environmental Nature Center

**DESIGN TEAM:** Culp & Tanner; Gentosi Builders, Inc.; Griffin Structures; Tsuchiyama Kaino Sun & Carter;  
Konsortium I; CTG Energetics

With a limited budget and larger than life dreams, this two building structure was designed to co-exist with the site and the delicate habitat that has been cultivated in the area. Effective site placement and orientation, material selection, storm water management, and water conservation techniques were the most sustainable solutions possible for the tight budget. A generous donation allowed for the inclusion of a rooftop photovoltaic array, which provides all of the onsite power requirements for the center.

Heating and cooling systems were eliminated from this project, allowing the spaces to be conditioned naturally through simple ventilation techniques. A dramatic 25 foot high, north facing glass wall allows natural light to filter through the public spaces while also incorporating automatic dimming systems. Bioswales and retention ponds treat storm water, while the landscape pallet is an extension of the indigenous California plants already on site.

"There's a real simplicity in the use of materials and how they integrated that into the design," Paul Schroeder, Delawie Wilkes Rodrigues Barker principal and Savings By Design juror, commented. "They allowed that to be part of the experience of the building, too. You got to understand how the components of the building work together, and they didn't try to mask it. The building orientation is also very appropriately placed for the site."

The buildings' 40 kW PV system creates a "net zero energy" facility and achieves 45% interior lighting energy savings and an 80% reduction in exterior lighting power compared to Title 24 standards. To date, the project has produced approximately 2.5 times the renewable energy that it consumes.



**CITATION AWARD:**  
Orinda City Hall,  
Orinda



Photos by David Wakely

**ARCHITECT:** Siegel & Strain Architects

**OWNER:** City of Orinda

**DESIGN TEAM:** Tipping Mar + Associates; Merrill Morris Partners; Ralph Larsen & Son, Inc.; Taylor Engineering; AfterImage + Space; BKF Engineers; Davis Langdon; High Sun Engineering; Bill Buchholz

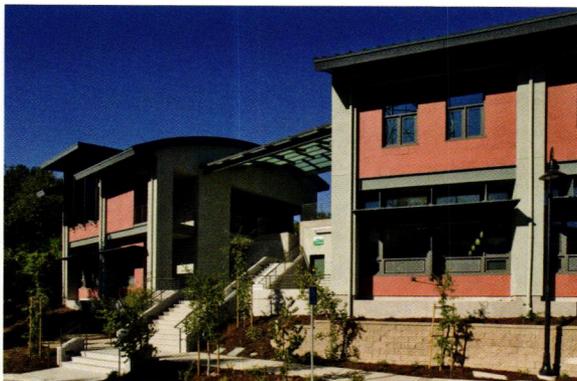
This new city hall unites departments previously spread throughout the city and is within walking distance of transit and downtown on a newly created infill site. High performance started with climate based design, including daylighting and natural ventilation while minimizing heat gain. The narrowly restricted site allowed only a slight reorientation of the building away from the hot, southwest exposure.

“The architect has really dealt with the environmental aspects of the project well, and they were very strong in conveying the integration of natural ventilation, daylighting, solar shading, orientation, and thermal mass while also dealing with a challenging site,” said Jordan Segraves, LEED AP and Savings By Design juror.

Since this small office building uses relatively little water, the architects concentrated on conserving water on site. The creek at the edge of the site was preserved, and drainage from paving was directed away from the creek. Landscaping was also designed to return the site to a native, pre-development palette of plants, minimizing the need for irrigation.

The building also incorporates significant amounts of green materials that reduce embodied carbon, including recycled steel, 70% slag concrete, cork and linoleum flooring, formaldehyde free desktops and case work, and recycled glass countertops. The high performance structural system meets the requirements of an essential services facility with four exposed steel frames intended to “rock and recover” in the event of a major earthquake.

This LEED Gold project demonstrates the city’s commitment to environmental stewardship. The mixed-mode mechanical systems run on natural ventilation whenever conditions allow, reducing anticipated energy use by 72% better than Title 24.



# 2009 Savings By Design

## CITATION AWARD:

University of California,  
Santa Barbara Student Resource Building  
Santa Barbara



Photos by Robert Benson

**ARCHITECT:** Sasaki Associates, Inc.

**OWNER:** University of California, Santa Barbara

**DESIGN TEAM:** ARUP; Rogers-Quinn Construction; Penfield & Smith; Horton Lees Brogden Lighting Design

This student resource building has become a community hub and source of campus pride that reflects the diverse interests of its users. The LEED Silver building is comprised of two, three-story wings flanking a vertical forum space. The forum opens to the multi-purpose room, which in turn opens to a “free speech” plaza for celebrations and public events.

Sustainability was a resolute goal for the project, and every effort was made to promote a healthy environment. The building's orientation is ideally configured for daylighting, climate control, and natural ventilation. Operable windows along the south façade and the forum's clerestory windows enhance and increase the natural ventilation through the building.

“This is a project in which starting with a really clear diagram for the building resulted in the ability to integrate quite a few sustainable features,” Jim Gabriel of Hanna Gabriel Wells and Savings By Design juror stated. “It’s a simple idea, but it’s strong and it’s bold and it evolves into a cross section that works for them. They carried their design intent out to the exterior and, to me, this is just a good, solid piece of architecture.”

Placed at a major campus intersection, the building is a component of the campus that is met with 10,000 students, staff, and faculty daily. It is used as the students’ “living room” to meet, study, and socialize, while also using 15.1% less energy than Title 24 standards.



# Savings By Design

## Provides Design Assistance and Financial Incentives

It's no accident that these award-winning buildings are energy efficient; high performance buildings happen by design. Savings By Design and Energy Design Resources are two valuable resources that can make the process easier.

Savings By Design, a program that encourages high-performance design and construction, offers design assistance and financial incentives to architects and building owners who strive to integrate energy efficiency into their non-residential, new construction projects.

Energy Design Resources offers energy design tools and resources that help make it easier to design and build energy-efficient commercial and industrial buildings in California.

The design assistance, financial incentives, resources, and tools are immediate, but the added benefits of an energy-efficient facility are ongoing, including lower operating expenses as well as increased occupant comfort, productivity, and property value.

For more information about Savings By Design or the Savings By Design Energy Efficiency Integration Awards, visit [www.savingsbydesign.com](http://www.savingsbydesign.com). For more information about Energy Design Resources, visit, [www.energydesignresources.com](http://www.energydesignresources.com).

*Savings By Design is funded by California utility customers under the auspices of the Public Utilities Commission and sponsored by Pacific Gas and Electric Company, San Diego Gas & Electric, Southern California Edison, Southern California Gas Company, and Sacramento Municipal Utility District.*





**David Meckel, FAIA**, is Director of Research & Planning for the California College of the Arts (CCA) in San Francisco. He may be reached at [dmeckel@cca.edu](mailto:dmeckel@cca.edu).

"For the first time in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death."

*Silent Spring* by Rachel Carson,  
Houghton Mifflin, 1962

#### Some online resources beyond architecture

[www.climatemanual.org](http://www.climatemanual.org) (climate research)  
[www.sustainer.org](http://www.sustainer.org) (multidisciplinary research)  
[www.sustainabilitydictionary.com](http://www.sustainabilitydictionary.com) (dictionary of terms)  
[www.saatchi.com/birthofblue](http://www.saatchi.com/birthofblue) (green vs blue)  
[www.naturalstep.org](http://www.naturalstep.org) (sustainability framework)  
[www.globalreporting.org](http://www.globalreporting.org) (sustainability index)  
[www.ecoinvent.ch](http://www.ecoinvent.ch) (life cycle inventories)  
[www.eiolca.net](http://www.eiolca.net) (life cycle assessment)  
[www.asknature.org](http://www.asknature.org) (biomimicry)  
[www.pharosproject.net](http://www.pharosproject.net) (materials evaluation)  
[www.ethiscore.org](http://www.ethiscore.org) (shopping guide)  
[www.kld.com](http://www.kld.com) (sustainable investing)  
[www.grn.com](http://www.grn.com) (recycling network)  
*Design is the Problem* by Nathan Shedroff,  
Rosenfeld Media, 2009

#### California's first net zero commercial building

One of the first zero-energy commercial buildings in the United States is David Kaneda AIA's Integrated Design Associates (IDeAs) Z-Squared Design Facility. Opened in October 2007, this San Jose, California building was designed by EHDD Architecture to meet a net-zero-energy/zero-carbon-emissions (Z-squared) target. Z-squared performance was achieved through simple, affordable strategies, including daylighting, radiant heating, ground source heat pump cooling, advanced insulation and glazing and reduced computer and appliance loads through careful equipment selection and wiring.  
[www.ideasi.com](http://www.ideasi.com)

#### Biology is the new Architecture

Terms that you thought you wouldn't need to be familiar with when you selected a college major in architecture instead of science.

Alkylphenols  
Dichloro-diphenyl-trichloroethane  
Eutrophication  
Organochlorines  
Persistent bioaccumulative toxins  
Phthalates  
Propylene glycol  
<http://library.cca.edu>

#### Some Rating Systems other than LEED

Japan | CASBEE  
Comprehensive Assessment System for Building Environmental Efficiency  
[www.ibec.or.jp/CASBEE](http://www.ibec.or.jp/CASBEE)  
United Kingdom | BREEAM  
Building Research Establishment Environmental Assessment Method  
[www.breeam.org](http://www.breeam.org)  
Australia | Green Star  
[www.gbca.org.au](http://www.gbca.org.au)  
Hong Kong | HK-BEAM  
Hong Kong Building Environmental Assessment Method  
[www.hk-beam.org.hk](http://www.hk-beam.org.hk)  
France | HQE  
Haute Qualite Environnementale  
[www.assoHQE.org](http://www.assoHQE.org)  
Netherlands | GreenCalc  
[www.greencalc.com](http://www.greencalc.com)  
Singapore | The Green Mark Scheme  
[www.bca.gov.sg](http://www.bca.gov.sg)  
South Africa | GBCSA  
Green Building Council of South Africa  
[www.gbcsa.org.za](http://www.gbcsa.org.za)

#### David Meckel, FAIA

Portugal | LiderA

Liderar pelo Ambiente

[www.lidera.info](http://www.lidera.info)

Germany | Guideline for Sustainable Building

[www.bbr.bund.de](http://www.bbr.bund.de)

Italy | Casa Clima

[www.agenziacasaclima.it](http://www.agenziacasaclima.it)

*Fundamentals of Integrated Design for Sustainable Building* by Marian Keeler & Bill Burke, John Wiley & Sons, 2009

#### Three environmental ideas you may not be familiar with yet

**Blended Value:** A term coined by Jed Emerson at Stanford University to describe social, financial, and environmental value created by all of an organizations' activities.

**Ceres Principles:** This is a ten-point code of environmental conduct that is publicly and voluntarily endorsed by companies as an environmental mission statement or ethic. Formed in 1989, Ceres is a partnership among environmental groups, labor unions, and institutional investors.

**Dematerialization:** Reducing the total material that goes toward providing benefits to customers. May be accomplished through greater efficiency, the use of better or more appropriate materials, or by creating a service that produces the same benefit as a product.  
[www.sustainabilitydictionary.com](http://www.sustainabilitydictionary.com)

**Number of megawatts California needs on a summer day - 40,000**

**Number of megawatts added to grid-tied solar power in California last year - 158**

[www.wsj.com](http://www.wsj.com)

*"The world we have created today, as a result of our thinking thus far, has problems that cannot be solved by thinking the way we thought when we created them."*  
—Albert Einstein

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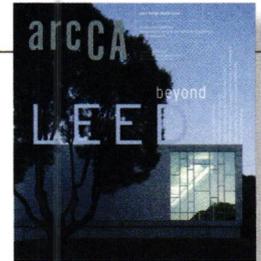
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Expiration Date: \_\_\_\_\_  
Signature: \_\_\_\_\_  
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Specification Department at:

1-888-260-1600 or [tech-info@merchantsmetals.com](mailto:tech-info@merchantsmetals.com)

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