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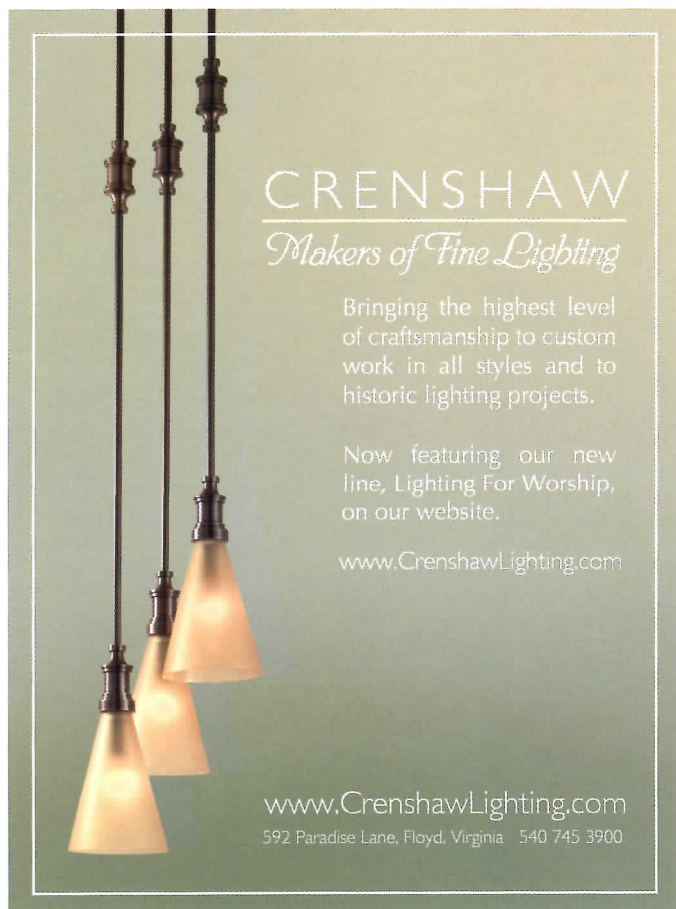
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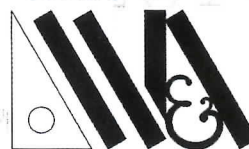
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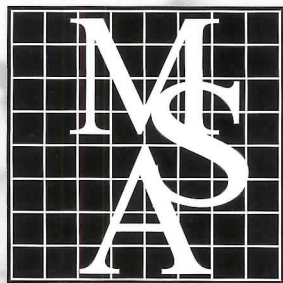
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### Shuttle Shuffle

In his creaky tome *The History of Collegiate Education in Architecture Schools*, Arthur Clason Weatherhead argued that American architectural education was inchoate for the first two decades of its existence. The traditional Beaux-Arts (literally, fine art) curriculum soon came to the rescue, giving American architectural education a pedagogical base and structure, and drawing Weatherhead's admiration. Imported by American architects and educators who studied at the *École des Beaux-Arts* in the latter nineteenth century, Beaux-Arts precepts still survive:

the parti (basic design concept), the *charrette* (intense design session), the design interplay of the plan/section/elevation, and highly academic studio design assignments like "a country villa," or "a university library."

Writing in 1941, at a time when the Bauhaus ideology challenged these precepts, Weatherhead seemed suspicious of Modernism despite his annual "vagabond tour" of Modern European architecture. He concluded his history by asking the reader to consider why Modernism (and the Bauhaus) had thrown the architecture profession into a period of confusion. It's a provocative rejoinder to the original intent of his book (to explore education, not the profession) but it seemed to him that the two were intrinsically tied; both were and remain reflexive spheres of production. Modernism presented a challenge to students and practitioners alike; confusion in one sphere brought confusion to the other.

What is that relationship like today? The issues are the same, it seems, but in an altered form.

Modernism poses more of a historiographic threat than an actual one, as the bigger elephant in the room these days is sustainability. There are, after all, as many definitions of sustainability as there are definitions of Modernism. Both terms are as imprecise as they are evocative. Secondly, vestiges of the Beaux-Arts system remain, but they represent a skill set more than a rigid pedagogy. Capturing the *parti* is still a valuable process, but it is employed along other approaches at the same time. Architectural education is more open now, most would agree, than ever before.

This issue of *Inform* offers some perspective on architecture's education. Where does it happen? Does it end and if so, when? How can it be defined? The guild-style model of learning seems paternalistic and archaic, but, let's face it — there is something to be said about wisdom: the folks who have been around the block usually have it. At the same time, the domain of experience and craftsmanship has reversed this model when it comes to technology and graphic acuity. There is a lot of new knowledge and skill at the younger end of the spectrum.

A formal architectural education may end with the last studio (and the first student loan statement), but architecture is more accurately governed by an informal education in which experience moves freely across the permeable (but very real) boundaries of age, affiliation, and location. To turn Weatherhead on his head: a good idea in one sphere brings good ideas to the other.



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—William Richards



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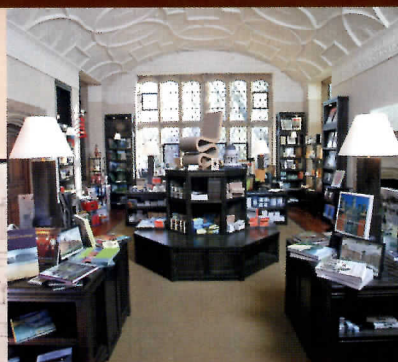


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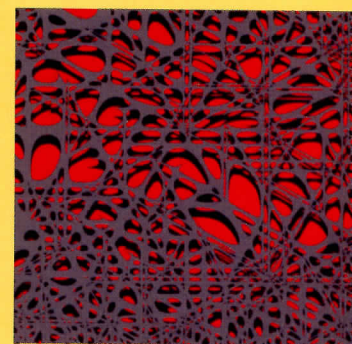


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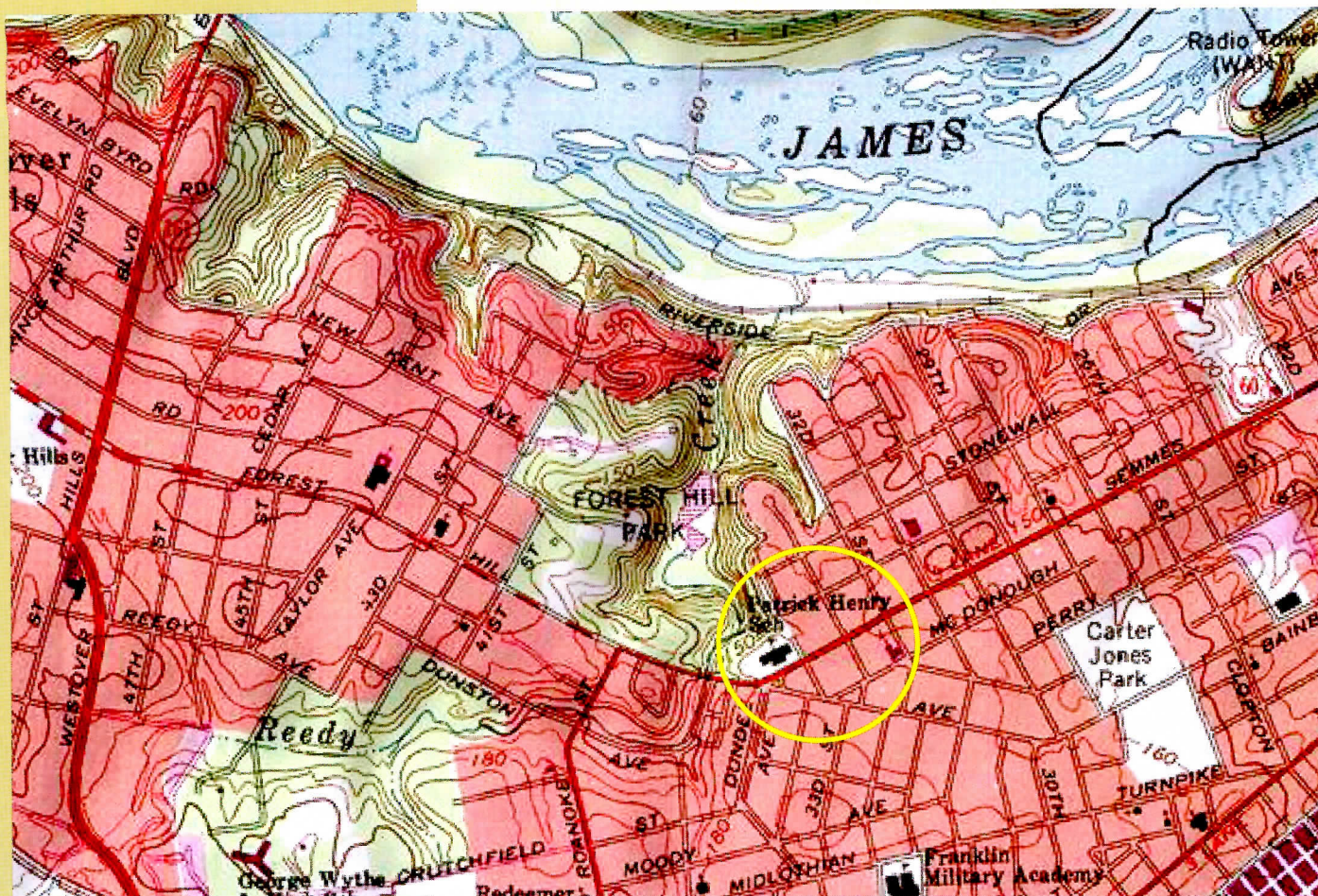
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Reading room detail at the Duke Center for Integrative Medicine.

Photo by: Robert Benson

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Although the building site is a small lot at a busy urban intersection, the rear opens onto the 105-acre Forest Hill Park, which will function as the charter school's vast outdoor classroom.

## Chart(er)ing A Green Course

**Richmond initiative connects students directly to the environment.**

**O**n the first Saturday of November, 200 people filled the auditorium of the abandoned Patrick Henry School building in South Richmond to take critical steps toward realizing the vision of opening Richmond's first charter school. The 1921 school building, with its 1928 additions, is on track to be repurposed as the Patrick Henry School of Science and Arts. The renovation will follow the principles of sustainable design and meet requirements for the state's historic tax credit program.

It took the Richmond School Board months of contentious debate to finally reach agreement to approve the school's charter so that plans could move forward and the community could be stirred to action. At least a couple of School Board members had expressed concern that the charter school was being formed to create a special school that would serve only a privileged few using funds from the public coffer. The bitterness remain-

ing from Richmond's history of massive resistance to integrated schools is hard to dispel or dislodge.

From their seats on the stage at this recent volunteer rally the charter school's board members responded to questions and urged the community to sign up for committee work and donate the money and talent needed to make this vision a reality. The fledgling enterprise is dependent on gifts and volunteer labor to give shape to a charter elementary school that will open perhaps as soon as July 2009 and no later than July 2010.

Although the building site is a small lot at a busy urban intersection, the rear opens onto Forest Hill Park, a 105-acre oasis of rolling green hills, with cobblestone-lined walkways, stone quarries, and a lake encircled by mature woods. The park was originally developed at the turn of the 20th century as a terminus to the electric street car line, whose owners sought to lure residents to the newly developed suburbs of Forest Hill and Woodland Heights. The new charter school plans to introduce students drawn from all over the city to the park by actu-



ally using it as an outdoor classroom.

The plan is to incorporate hands-on experiences in Forest Hill Park as a means of teaching the full range of academic subjects. Immediate access to the park is key to advancing the school's emphasis on environmental science, a core subject in the school's interdisciplinary curriculum. As its mission statement declares, "The school intends to provide the children of Richmond's ethnically and socioeconomically diverse community with an SOL-based academically rigorous science and arts curriculum that emphasizes environmental awareness and social responsibility."

While charter schools accept students throughout the city, reopening Patrick Henry School as a public educational facility that will ultimately serve roughly 350 elementary school students will return the building to a community use that will revitalize a dark corner of a Richmond neighborhood. The building was shuttered as a neighborhood public school because of diminishing enrollment and a number of challenges inherent to this particular location, including its constrained site and the cost of installing ramps and an elevator that would make the building fully accessible.

The Patrick Henry School was built to serve white students living on the south side of Richmond, in neighborhoods that were annexed by the city from Chesterfield County in 1915. The building, like dozens of Richmond's historic public schools, was designed by renowned school architect Charles M. Robinson (1867-1932), whose office produced plans for hundreds of institutions during the first three decades of the twentieth century. His best known projects include Richmond's Landmark Theater (designed as the Acca Temple Mosque with Marcellus Wright, Sr.) and the early 20th century buildings of James Madison University, the College of William and Mary, the University of Mary Washington, Virginia State University, and Methodist churches around the state.

Typical of Robinson's school projects, the Patrick Henry School building presents a three-story symmetrical brick façade with neoclassical ornament framing large multi-light windows. The building is massive T-shaped structure faced in a buff-colored brick. The large gathering spaces - a ground floor cafeteria and

a double-height auditorium - are stacked and project from the front in a three-story mass that is delineated with Doric pilasters that rise from a stone stringcourse. Flanking this feature are the two main entries, which are sheltered by metal canopies and lead to the building's interior stairways. Arts and crafts style hoods supported by carved brackets protect access to the building's two side doors.

The school's interior is bathed in golden light reflected from the clear-finished oak trim that frames windows, doors, chalkboards, and wardrobes. The double-loaded corridors and cast iron stairs are lined with a glazed brick wainscot. The original floors are a mix of buff terrazzo with red borders, and quarter-sawn pine. Most of the classrooms, the auditorium, and even the principal's office are little changed from their historic configuration. With luck these and other features will be fully revealed when vinyl tile flooring and acoustical tile ceilings are removed during the renovation process.

A group of local volunteers dedicated to creating an ideal public school environment has persisted in advancing the notion that "a quality public school education based on meaningful parent,



**Designed by renowned school architect Charles Robinson in 1921, the Patrick Henry School has been shuttered for a year and a half. In fall 2008 Richmond's School Board finally accepted a proposal to repurpose the building as the city's first charter school.**

educator, and community involvement" can take place at the abandoned Patrick Henry elementary school. With generous assistance from the community of architects and builders, some of whom are already involved, this educational ideal just might become reality.

*- Mary Harding Sadler*

#### **Access points:**

Read about the PHCS initiative at [www.patrickhenrycharter.org](http://www.patrickhenrycharter.org) and the National Education Association's (NEA) explanation of charter schools: [www.nea.org/charter](http://www.nea.org/charter).

Better living through ecology? Fewer bullies and improved "social interaction" are among the benefits listed by the British Learning Through Landscapes program: [www.ltl.org.uk](http://www.ltl.org.uk).

What if my school doesn't abut an enormous park? The Boston Schoolyard Initiative has some solutions for an urban context: [www.schoolyards.org](http://www.schoolyards.org).



# Eco Lit Now

Every school of design should adopt an ecology-based curriculum. *Now.*

A proposal by Kira Gould, Assoc. AIA, and Lance Hosey, AIA



Biologist Janine Benyus studying the concentric structure of a spider web (left) and students kayak into a mangrove forest during a Biomimicry Guild workshop in Costa Rica last year. (opposite).

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**T**hree years ago, on behalf of the AIA Committee on the Environment (COTE) and sponsored by the Tides Foundation, we co-authored a study, “Ecology and Design: Ecological Literacy in Architectural Education,” on how schools are embracing sustainability. Our conclusion was that they aren’t. After months of research, visiting universities, and interviewing faculty and students, we discovered many exciting courses and innovative programs. However, no school of architecture—not one—has adopted a curriculum to steep every student in the principles of ecology. Until this happens, sustainable design education can only scratch the surface.

But schools aren’t to blame—the profession is, because it doesn’t encourage ecological literacy. “If there were strong industry-wide demand for this kind of training,” insists Ann Thorpe,

author of *The Designer’s Atlas of Sustainability*, “architecture education would have it well covered.” She lists ten ways graduates can work toward sustainability within the current state of architectural practice. But the profession at large isn’t promoting alternative education. The AIA recently launched its “Walk the Walk” campaign, mandating that architects everywhere go green. “The time for talk is over. Green design should be a reality for everyone in every region and every industry, starting today.” A laudable goal, but the fate of the future doesn’t rest solely with the current generation. We can start with architects today, but without students we won’t make it to tomorrow.

The AIA wisely adopted the 2030 Challenge, a commitment to make every building carbon neutral by that year. Yet, in the next 21 years, today’s architectural leaders will have retired and the current crop of interns—the very people education has failed—will be running the industry. They will do *their best*, but their best might not be enough. In that year, however, today’s infants will begin entering the workforce. Our greatest hope lies with future architects just now being born—but only if we educate them well. Yes, the time for talk is over. So walk the walk—straight into the schools. The AIA can’t fulfill its mission without educational reform.

But reform won’t come easy. “Is environmentalism simply another subject or academic department,” asks David Orr, the noted environmental educator at Oberlin College, “or is it potentially an integrative principle leading to a radical re-conceptualization of education?” Fully embracing ecology, Orr argues, will take more than subtle curricular changes—it requires nothing short of revolution. As the foundation for an “earth-centered education,” he offers five basic principles:



1. **All education is environmental education.**
2. **Environmental issues are too complex to be understood through a single discipline.**
3. **Education occurs as a dialogue with a place.**
4. **Method is as important as content.**
5. **Experience with nature promotes better intellects and practical competence.**

Understanding and experiencing these principles is what Orr calls “ecological literacy,” interdisciplinary awareness grown from full immersion in one’s environment. This might sound mild, but *Eco Lit* demands two radical acts—tearing down the conceptual walls between subjects, and tearing down the physical walls between classrooms and the outdoors.

How will the revolution begin? To supplement Orr’s five principles, we offer five strategies toward ecological literacy in architectural education:

### Adopt an ecology-based curriculum

Academia marginalizes sustainability by parceling it into single courses or programs, but this won’t do. Every school should integrate sustainability in the entire curriculum so that every student becomes ecologically literate. Our favorite guide is the **Sustainable Environmental Design Education (SEDE)** model curriculum, developed by Margot McDonald and others in and around **Cal Poly San Luis Obispo** “to fundamentally change the existing paradigm for environmental design education that has limited the imagination and understanding of designers.” SEDE intends to create a better environment and better designers at the same time.

### Break down barriers

Architecture is a cultural and environmental discipline, but students often learn very little about culture and environment. An excellent nudge toward interdisciplinary education is **another Cal Poly initiative**, the **Sustainable Environments minor**, which won top honors in our COTE report. The university-wide program spreads through various departments, from Economics to English, Philosophy to Psychology, Anthropology to Zoology. Tamara Wright, a recent graduate, says the program “introduced us to all the issues our generation will face. The more we are aware, the more impact we can have.”

### Nurture collaboration and community

In nature, biodiversity, the variety of species in an ecosystem, ensures versatility and longevity. In schools, cultural and educational diversity can build similar strength. The school of architecture at the **Catholic University of America** in Washington, D.C., has an exceptionally diverse student body, with a rich ethnic, international, and socioeconomic blend promoting greater awareness and broader perspectives. The culture of lone star designers created a landscape of insensitive buildings, but a more responsible and responsive architecture will grow out of an ethic of collaboration and community. The Fountainhead is dead. Let it rest.

### Learn by doing

Author and farmer Wendell Berry believes the best way to care for the earth is to work it—sink your hands in the dirt

and plant some life. The best way to create great buildings is to learn to put them together—grab a hammer and build some life. Many schools still do not give students construction experience, but some inspired programs have appeared in the last handful of years. The **University of Virginia’s ecoMOD program**, another COTE/Tides winner, assembles multidisciplinary teams to design, build, and monitor ecological, modular, and affordable houses. The first ecoMOD house won in the “design and livability” and “energy balance” categories of the 2002 Solar Decathlon, proving that great design, craft, and environmental performance go hand-in-hand.

### Get outdoors

The optimal learning environment, Orr tells us, isn’t a classroom—it’s a riverbed, or a meadow. When was the last time you studied a meadow, or were even *in* a meadow? The week-long field workshops conducted by Janine Benyus and the **Biomimicry Guild** provide a wonderful model for outdoor education. Three times a year, in Montana, Costa Rica, and Peru, bi-ologists pair with designers from every field to explore nature as “model, measure, and mentor.” “It’s liberating,” says Suzanne Charest, an architecture student who attended the Costa Rica workshop with us. “We’re used to sitting at a desk, trying to figure things out. But this way seems so obvious now.” This year, the AIA added sustainability to the list of required subjects for members’ continuing education, and a component of this should take place outdoors. If you want to learn from nature, get to know it up close. So go outside.



### Access points:

AIA Committee on the Environment study: “Ecology and Design: Ecological Literacy in Architectural Education”  
[www.aia.org/cote\\_tides](http://www.aia.org/cote_tides)

Ann Thorpe’s ten ways to work toward sustainability from *The Designer’s Atlas of Sustainability*  
[www.designers-atlas.net/top-ten.html](http://www.designers-atlas.net/top-ten.html)

Walk the Walk campaign launched by the AIA:  
[www.aia.org/walkthewalk](http://www.aia.org/walkthewalk)

Two from CalPoly: the Sustainable Environmental Design Education (SEDE) model curriculum [www.calpoly.edu/~sede/doc/ASES03.doc](http://www.calpoly.edu/~sede/doc/ASES03.doc) and the Sustainable Environments minor [www.calpoly.edu/~sede/pdf/SE-minor.pdf](http://www.calpoly.edu/~sede/pdf/SE-minor.pdf)

Catholic University as a way of thinking and UVA’s ecoMOD as way of doing: <http://architecture.cua.edu>  
[www.ecomod.virginia.edu](http://www.ecomod.virginia.edu)

Nature as model, measure, and mentor: Janine Benyus’s Biomimicry Guild [www.biomimicryguild.com](http://www.biomimicryguild.com)



# Society, Materiality and an Architectural Education

By Robert Dunay, AIA



Students of architecture, industrial design and interior design at Virginia Tech engage in an impromptu discussion of work in the design studio.

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**O**ur world presents a cacophony of interests and products. The electronic and digital environments increasingly promote a seamless flow of advertisement. Overtly and subliminally, an unbridled mania to consume influences many of our decisions. We come to believe that the possessions we station around ourselves are indispensable for revealing to others why we are different, and perhaps better. Status, not stature, dominates the daily interchange of individuals through belongings. In this consumer society the sign value of a product replaces its existence as a thing. The image projected by objects in everyday life, and the magnification of that image, serves to imprint oneself on society.

Products are accumulated for their ability to enhance personal identity. Everyone walks around with their own headlines stapled to their chests. This may be an inevitable dynamic of society. Ever since the tenets of modernism began to erode in the 1970s, there has been a radical rethinking. The rational and analytical foundations of design as posited by the Bauhaus and its German successor, the Ulm School of Design, were overthrown by a much freer and open approach. The abstract purity of Braun gave way to the psychological, symbolic and poetic works of groups such as the Italian collaborative Memphis in the 1980s. Functionalist design and its attendant characteristics of homogeneity, structural clarity and perfection were replaced by visions from pop art and pop culture. Everything suddenly was possible. Design became fun, immensely popular, and accessible to the mass market.

The design studio is not immune. In some quarters, the cornerstone of architectural education suffered from commod-

itization as students were regarded as customers. Students of architecture reveled in the newfound potentials of expressing oneself through design - self-expression became indistinguishable from self-disclosure. In reaction, the critique of the design studio as insular, detached and disenfranchised from contemporary issues arrived on its regular interval (every four or five years). Calls for the overhaul or dismantling of the design studio found their way into editorials, erudite papers and the administrator's stump speeches. The educational bankruptcy of the studio once again became a seasonal mantra for those seeking recognition in the education conference circuit.

Sometimes it is best to hold one's head low until the debris passes over. Arnold Schoenberg commented towards the end of his career that his music was not tainted by success because he was "protected by neglect." In three words he defined both the province and refuge of the studio. It is not part of a methodology just as it is not a curriculum element. The studio environment depends on individuals building a real place allowing for the occasion of education. It is a sphere of knowledge embedded in activity commensurate with a finely tuned instrument that must be played every day, managed every week and examined every semester. It is one of the few forums by which the tendency of architecture as commodity can be resisted through an iterative asking of fundamental questions - how to stay relevant without sacrificing ideals; how to complete projects without compromising ideas; and how to sell concepts without selling one's soul.

It is little wonder that the members of Memphis disbanded and went on to other things. Their work was a polemic. The impact was not intended to have staying power, nor was it intended to throw out the entire history of design. As a salvo by the avant-garde against the status quo, their goal was to break what had become sterile and stagnant, and open new possibilities. The many who attempted to follow could not handle the luxury of unrestrained freedom. Any effort un-renewed exhausts itself under its own weight. The movement's followers, lacking ideals and the vital energy of its founders, have fallen by the wayside, suffering from the vicissitudes of caprice, mannerism, empty form and hollow rhetoric.

Chaos theory tells us that the flap of a butterfly's wings in a remote province in China is capable of changing the weather patterns in North America. Though the chance of altering consumerist values in today's society is remote, the possibility to shift the discussion remains. The design studio remains the place to provide a foundation to navigate in a world of diversity through slowness of approach and redundancy of questions. It causes one to reflect upon the nature of design and re-examine its place and potential in the world. Thus, the true efficacy of the studio seeks introspection over entertainment. It is a probe set out with the hope of discovering essence. It follows the distant trajectory of an ideal, while freezing an instant of the process.

Courtesy: Robert Dunay



# Design Dialogue

## Confronting the Divide between Academy and Practice

For some designers, the ghosts of studio are only reluctantly conjured; for others, the academic studio is still part of their lives as educators and practitioners. Regardless, the so-called "practice/academy divide" is a perennial debate within architecture, which raises difficult questions about the nature of architectural training and the exigencies of practice. To offer a critical lens for the path from school to work, *Inform* interviewed **Andrew Caruso, Assoc. AIA, LEED AP**, currently the firm-wide Director of Intern Development for Gensler in Washington, D.C.

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**Inform:** How would you frame the current relationship between architectural practice and architectural education?

**Andrew Caruso:** Tenuous, at best. Academia and practice are truly different communities. Each operates at a drastically different pace, is burdened by remarkably different financial pressures, and answers to significantly diverse audiences. Our first challenge, therefore, is to recognize that these distinctions provide opportunities rather than complete incompatibilities. Frankly, if you think of these communities as "sides," it is a mark of your age. As a young professional, I expect to develop an academic and professional career, simultaneously. Anything else would be uninformed and antiquated; a casualty of a historically siloed approach.

**Inform:** What can the historic relationship between those two interests teach us?

**AC:** We are seeing the evolution of a discipline within this tension, fueled by dramatic changes in generations of talent, technology, and both educational and practice models. Schools and firms are actively challenged by their clients (students and owners, respectively) to redefine old ways of doing business to reflect a more integrated, holistic, global and value-infused way of thinking. In fact, the whole way clients conceive of value has transformed. There has also been a historic argument about the role of learning in the broader development of the profession. Should schools be creating graduates who are ready to practice architecture? Or, should they be creating graduates who are broader critical thinkers and comprehensive designers and prepared to learn the practice of architecture through their internship period?

**Inform:** What does it mean to be "ready to practice architecture?"

**AC:** The ability to function as an independent professional of the built environment. One should emerge from their education with broader intellectual abilities that enable them to become a skilled and competent practitioner through a successful internship experience. Believe it or not, some hold the unrealistic expectation that professional curricula should aim to create instantly productive, highly billable architects. It's almost a "just add water" mentality, yet such expectations actually limit the potential of the academy and devalue the importance of the internship period.

**Inform:** Can the culture of architecture – its ideas and its dialogues – mediate between practice and the Academy? Or, is there an inexorable divide?

**AC:** Frankly, it must. The challenges our world faces require

the active development of new knowledge, as well as its application to real-life situations of global populations. With millions of people around the world seeking shelter, ozone layers and rainforests in a race for extinction, and a finite number of resources whose global sourcing exploits thousands of communities, architecture must leverage *all* of its intellectual capital to confront its responsibility to a global public.

Research is the best bridge between these two worlds, and that the relationship between the academy and practice should be conceived of as a vibrant intellectual economy. Academia thrives on the creation of new knowledge and the testing of accepted ideas. This knowledge affects everyday architectural practice that should, in turn, energize and inform (perhaps even fund) the academy's explorations. It all constitutes a feedback loop.

**Inform:** Thinking about this reflexive feedback loop, do you consider this to be an improvement on a dialectical relationship, or just another version of it?

**AC:** If the relationship is framed in a way that creates progress, it would be an incredible improvement. We must stop thinking of one's career process as linear. The next generation of talent (and of buildings) demands a circular and integrated model. It is the feedback loop mentioned earlier which will continue to inform the profession and engage the next generation of talent as they develop and hone their skills.

**Inform:** In your experience as a designer, educator, photographer, and musician, how do you reconcile the creative and the technical aspects of these pursuits?

**AC:** It is really a mindset. Thinking of creative and technical aspects as being separate is the fundamental flaw. When I began training vocally, it was not possible to breathe creativity into the expression of an aria or the experience of a patron's performance without the support of impeccable technical ability. I also had to be creative in order to technically hit a high F#.

**Inform:** Richard Sennett makes this point well in his recent book *The Craftsman*: that creativity and technical ability are bound intrinsically and the act of "making" is an alchemical one. Is that a fair assessment of what can be learned by the sum of training and the Academy's parts?

**AC:** I think this is at the heart of the matter. Architecture is always about seeing the broad idea, the bigger picture; yet at the same time it requires an intricate understanding of how to put a building together. Operating at these different scales is precisely the importance of integrating academic and practice experience to reach professional maturity.



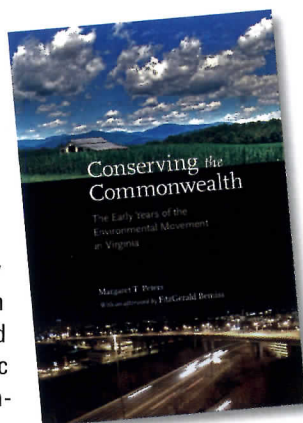
## Conserving the Commonwealth: The Early Years of the Environmental Movement in Virginia

By Margaret T. Peters

Charlottesville: University of Virginia Press

2008, 144 pages, \$27.95

The postwar environmental movement in the United States has still generated relatively few histories, considering the significance of the movement in American society. Much of the scholarship has treated the major conservation issues of the day in the American West, especially dam construction, water distribution, and the management of the federal public domain generally. But the story of environmental protection in the East was just as significant during this period. In 1954, for example, Supreme Court Justice William O. Douglas famously led an eight-day hike along the C&O Canal towpath, to advocate not only the preservation of the Potomac River corridor (threatened by road construction), but the environmental movement in general. The Storm King decision of 1965, which led to the preservation of a scenic and historic piece of the Hudson Highlands, established legal standing for environmental



non-profits to sue in such cases. While historic preservation has always been understood as beginning in the East, the contemporary roots of the environmental movement have been less examined.

Margaret T. Peters has provided an important service with her knowledgeable history of both environmental and historic preservation in Virginia during the postwar period. Her approach, which recognizes the degree to which the preservation of history and scenery have always been joint causes, yields a balanced and thorough narrative of these efforts during this crucial time of great change in American society and landscape. Peters writes with the authority of an insider, one who began working with the Virginia Historic Landmarks Commission (now the Department of Historic Resources) in 1968. She also benefits from her association and friendship with key participants, such as State Senator FitzGerald Bemiss, who in 1965 chaired the Virginia Outdoor Recreation Study Commission (VORSC), an initiative modeled on the national Outdoor Recreation Resources Review Commission authorized in 1958. The result is an authoritative recounting of events, names, and dates associated with the VORSC and the many preservation initiatives and successes that issued from the commission's work and recommendations.

This is a book that anyone interested in postwar preservation or the history of Virginia will find fascinating. It should be read critically, with an understanding that the author is close to her subject; more incisive and critical analysis of these preservation efforts perhaps is yet to come. As a source of both information and inspiration, however, Peters' work is a welcome and vital contribution. — Ethan Carr

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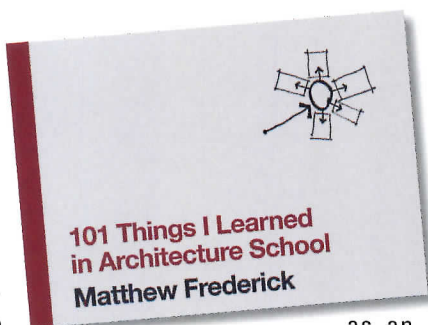
## 101 Things I Learned in Architecture School

By Matthew Frederick

Cambridge, Massachusetts: MIT Press

2008, 128 pages, \$12.95

When I read Matthew Frederick's "101 Things I Learned in Architecture School," I laughed and I cringed — in a good way. The book's chip-board cover and flash-card format immediately transported me back to my time



as an architecture student with its alternately enlightening and baffling design pedagogy. Like a hot-air balloon pilot, Frederick, an architect and educator in Cambridge, Massachusetts, lifts the reader above the density of a necessarily jam-packed architectural curriculum in order to discern many of its most salient and enduring lessons. The design guidance offered on the topics of design, drawing, design process and presentation ranges from the practical (#1: "How to draw a line") to the more abstract (#45: "Three Levels of Knowing"). Pleasantly un-self-conscious sketches accompany each lesson on the facing page.

The success of *101 Things* lies both in its concise explanations of fundamental architectural concepts and its acknowledgement that architecture is not all Ayn Rand. Anyone who's been to architecture school knows that students aspire not only to the built expression of cultural ideals but also to the artful placement of whoopee cushions on studio chairs. Frederick's tongue-in-cheek offerings, such as #72's "Design with Models" with its illustration

of a student flanked by supermodels, gives him a sort of studio cred that makes it possible to hear him out on #83's theory-thickened "All design endeavors express the zeitgeist." Who among us hasn't followed a juror's mid-review parti-changer only to have another juror pine for our original scheme at the final review? Frederick serves up humorous validation of the student experience by pairing Mies van der Rohe's "Less is More" (#61) with Robert Venturi's "Less is a bore" (#62).

However useful or entertaining these nuggets of architectural wisdom are, the real gems address the oft-neglected design process. Architecture students and practitioners alike face the conundrum of assimilating dizzying quantities of technical, historical and theoretical data while at the same time uncovering their own individual creative process. *101 Things* serves as an architectural lovechild of Francis Ching's *Architecture: Form, Space and Order* and Julia Cameron's *The Artist's Way*, offering a mentor's guidance to the earnest and overwhelmed. Frederick reassures in #81, "Properly gaining control of the design process tends to feel like one is losing control of the design process." And cautions in #86, "Manage your ego."

Architects are teased for obsessing over aesthetics. Guilty as charged. *101 Things* isn't as lovely a volume as it could be, and won't get any more so in the bottom of a backpack or briefcase if used as intended, as a reference. It's downright hard to return to a favorite lesson in the absence of a table of contents, an index, or even those sticky tabs some of the clever design magazines use. But these are issues Frederick can fix in what I hope will be ensuing volumes in a series like *101 Things I Learned During Internship*. I'll get him started: #1: On the jobsite, always be the last one up the ladder, and the first one down (to be accompanied by sketch of leering construction workers). — Whitney Morrill



## The Power of Design

by Richard Farson

Norcross, Georgia: Greenway Communications  
2008, 215 pages; \$39

Dr. Richard Farson, psychologist, educator, and self-proclaimed industry outsider offers this argument: design *can* be an agent for good and, indeed, its agency is fundamentally altruistic. What's the problem, then? If design's benefits are self-evident or inherent, why argue for its potential?

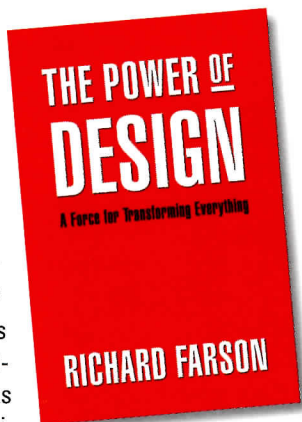
Farson is not the outsider he claims to be; this book renews the ideological base of design in a way that speaks about an insider's experience. His positions with CalArts, Aspen's International Design Conference, the AIA and the Design Futures Council affords Farson a breadth of perspectives that make for some compelling salvos. Industry or popular design awards, the commoditization of design, and professional design societies are all targeted in this short but piquant volume.

Farson's proposal is structuralist: renovate the framework of design culture and you will transform the way that culture expresses itself. His agent for change is a so-called "metadesign," or a "reformulation" of design's definition. Metadesign struggles with the systems that created and served traditional definitions of design: institutions, schools, organizations. It is a reconsideration of how we work in service of changing what we produce.

To his credit, Farson establishes "design" and its attendant metadesign as about more than just architecture. Embracing the post-1970s legacy of academic border-jumping, he is concerned with design writ-large: Design as an idea and a problem that has universal applications. Without the benefit of sources or notes, however, Farson's "metadesign" has trouble finding a life as an argument. He fixes his sights on architecture, the criminal justice system, healthcare, and education as a way of showing the design paradoxes of these institutions. But, even in the noble spirit of interdisciplinary, they are all given short shrift and we can no more understand the impact of metadesign on them than we can understand the impact of the weather.

If his subject are systems of thought (and how we ought to change our approach to them), where are the means to engage these systems realistically?

None of this detracts from his candor and willingness to ask devastating questions about institutions specific to design culture. The self-congratulatory nature of design awards, insular licensing practices, and the transference of august professions (architecture, law, journalism, and so on) into marketable products all garner half a dozen pages each. Herein are the consequential issues that would have benefitted from a deeper application of metadesign. Alas, they only amount to anecdotes in a foggy lecture. — William Richards



## Contributors to **Inform** Issue 1, 2009

**Sally Brown** has written for *Oculus* and *Architectural Record* and was the architecture critic for the *Richmond Times Dispatch*. She holds a masters degree in Architecture and Design Criticism from Parsons in New York.

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**Lance Hosey, AIA** is a Director with William McDonough + Partners in Charlottesville, Virginia. He has been featured in *Metropolis* magazine's "Next Generation" program and *Architectural Record's* "Emerging Architect" series. His essays on the environmental and social aspects of design have appeared in *The Washington Post*, *Metropolis*, *Architectural Record*, and *Architecture*, and he writes the "ecology" column in *Architect*.

**Roger Lewis, FAIA** is an architect, planner, and Professor Emeritus of the University of Maryland School of Architecture, Planning, and Preservation. Lewis, a columnist for *The Washington Post*, is also the author of *Architect: A Candid Guide to the Profession* (1985, 1998).

**Whitney Morrill** is principal of Woollerton Edifice, PLLC in Charlottesville, Virginia. Her work has appeared in *Slate*, *Arris* and *Streetlight*.

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**Courtney Cook Spearman** is a landscape designer with EDAW in Alexandria, Virginia. Her research interests lie where historic landscapes meet contemporary cultural and social needs. She has master's degrees in landscape architecture and architectural history from the University of Virginia.

### Issue 1, 2009 Corrections

In Taking Note (Inform 4, 2008), there were inconsistencies in the spelling of Peter Culley's name. We regret the errors.

In "Defying and Defining the Age," a feature on two retirement communities by SFCS Architects (Inform 3, 2008), the first paragraph should have referred to "the active, if somewhat older, North Carolinian," as opposed to the South Carolinian.



**B**roadband networking is the technology behind the way your cell-phone or smart-phone is able to send and receive data. Also known as WWAN (Wireless Wide Area Networks), the range of connectivity depends on your cell-phone's range – a much wider sphere of connectivity than standard Wi-Fi (wireless fidelity). This is great for your smart-phone but how does that help you connect your laptop or mobile computing device?

Most computers these days have the ability to connect to your cellular phone via a process called Bluetooth pairing. Bluetooth is simply a technology that allows your computer to talk wirelessly to other devices. Your phone, for instance, can become a modem to connect to your DSL or internet cable service. The problem with this, though, is that service providers are inconsistent when it comes to this feature. Some phone companies are not keen on the idea of piggy-backing onto your cell-phone's data services to get free internet for your laptop.

In addition to offering cell-phone service, most companies also offer broadband networking service that is handled by a special connection card. These cards usually go into your laptop or computing device's USB port or PCMCIA card slot. A network card acts as an external antenna by which your computing device can access broadband networks. Just about all of the major carriers (Sprint/Nextel, AT&T, and so on) provide data service plans for subscribers with trademark titles "Mobile Broadband Connection Plan" or "LaptopConnect" card plans.

Alternately, many laptops come equipped with broadband networking devices already installed, making a separate card unnecessary. Most computer manufacturers partnered with network service providers to offer specialized data services. The Lenovo ThinkPad series laptops, for instance, have the option of installed WWAN and a rebate offer for network service with Verizon's Wireless' "BroadbandAccess." Both Hewlett-Packard and Panasonic are taking advantage of the Gobi™ global mobile internet service which allows laptops to connect to network service providers using a variety of high speed broadband technologies. Since broadband connections react similarly to cell phone voice connections, broadband service can be limited to regional and national areas. Gobi™ service provides a way to ensure connections wherever services are available in the world outside of the usual cell phone service regions. After all, this is the main purpose of mobile technology: to stay connected no matter where you go.

Consumer demand have influenced the streamlined design of laptops and other mobile computing devices. You might have noticed some of the "ultraportable" laptops available such as Apple's Macbook Air, Lenovo's IdeaPad and Fujitsu's LifeBook: smaller, thinner and lighter-weight than traditional laptops. For professional mobility, a popular alternative to laptop computing are pocket-sized devices. The UMPC (Ultra-

Mobile PC) is not new, but it is becoming sophisticated enough to provide the computing power of a laptop in a handheld device. These devices can run standard versions of Windows XP or Vista or variants of Linux. When buying a mobile device the connection technology is just as important as the form factor. Similar to ultraportable laptops, many of these devices are also coming equipped with WWAN capabilities. The Samsung Q1-CMXP, in partnership with AT&T, provides broadband networking access via HSDPA, a form of broadband connection that is quickly becoming a faster mode of data transfer than the standard EV-DO connection used by most cell-phones. Another UMPC device is the QOQ 02, in partnership with Sprint and Verizon, to provide broadband access. The form factor of the 02 is a lot less bulky than the Q1 providing even greater mobility. But the factor to consider might be the networking capability of a mobile device. The Q1 has adopted faster HSDPA broadband connectivity while the 02 uses the more ubiquitous (but slower) EV-DO connection.

So why even use Wi-Fi if WWAN provides greater coverage? The main reason is cost. While Wi-Fi isn't free to provide, access to Wi-Fi connections at any non-password protected hotspot (such as the one at your favorite coffee shop) can be made freely with your laptop or mobile device's built in Wi-Fi antenna. Anytime you connect to a broadband network, however, you are being charged by your ISP or cell-phone company. Whether or not you have unlimited data connections in your service plan, you are paying for every connection.

What about connection speed? Wi-Fi speeds are usually faster than even the emerging 3g (third generation) broadband networks. And then there's the fabled promise of WiMax to consider. WiMax is like Wi-Fi on steroids, providing a much wider area of high speed wireless network coverage. For a few years now, it has been the promised solution to free wireless networking for everyone and cities like Philadelphia have looked into the possibility of hardwiring their neighborhoods with WiMax transmitters for free network access. Only a couple of months ago Sprint tested its own proprietary WiMax technology called XOHM on the streets of Baltimore and Washington, D.C. But, even WiMax has its geographic limitations in providing wireless access much like Wi-Fi does. With the phone companies banking on the success of broadband networking plans, it's uncertain what will become of WiMax and the prospects of free internet for all. Like many technologies these days, the current state of network accessibility is transitional. Through this transition, though, more choices are becoming available for professionals to stay connected outside of the hardwired office.

*For more information and links to some of the technologies discussed here visit my blog at <http://rezn8r.blogspot.com/>. – WR.*

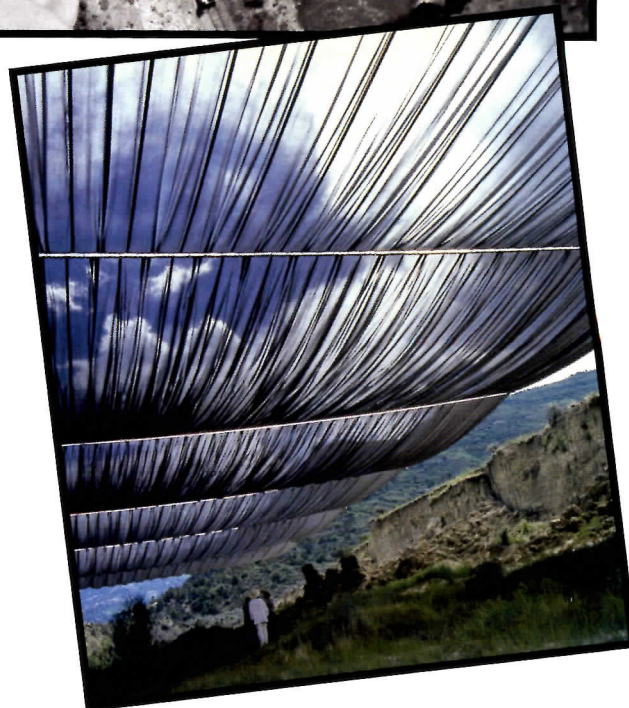
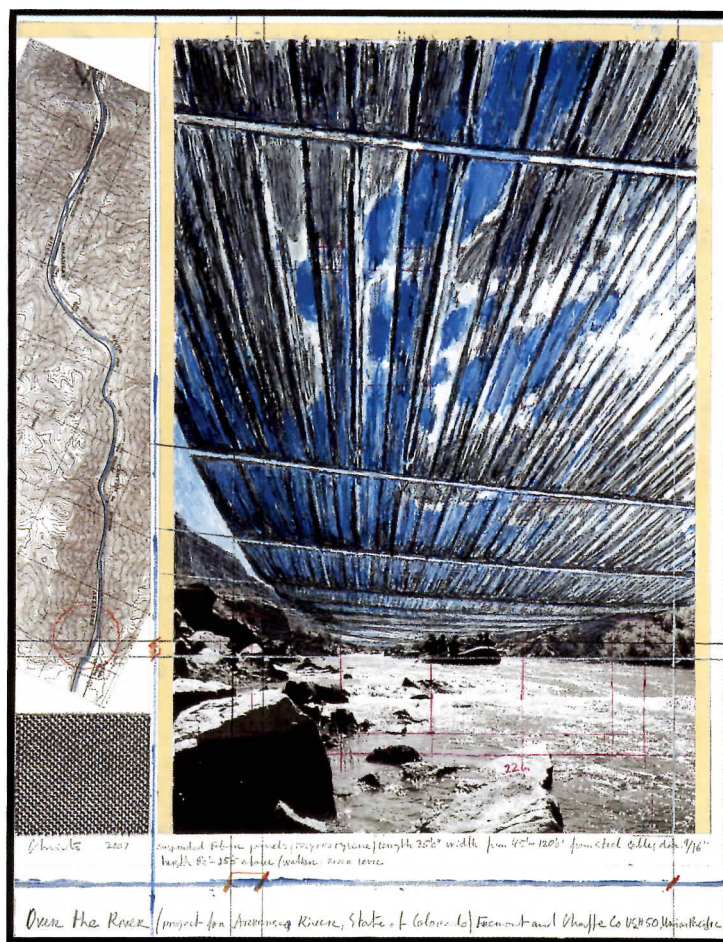
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**QOQ's 02 model balances connectivity, size, and performance to make for an effective field device.**







# Christo and Jeanne-Claude

Over the River, Project for the Arkansas River, State of Colorado  
At the Phillips Collection, Washington, D.C. until January 25, 2009

Distinct from *The Gates*, Christo and Jeanne-Claude's heralded 2005 installation in Central Park, *Over the River* will be 5.9 miles of silvery, translucent fabric, suspended horizontally over the Arkansas River in rural Colorado. It will intermittently parallel US-50, stopping or starting where bridges intersect or where conditions are too delicate to accommodate the heavy-duty apparatus required to suspend the fabric. The project is intended to be seen from above along the road and from beneath by canoers, kayakers, and rafters on the water. If Christo and Jeanne-Claude can successfully navigate the maze of approvals and permits required to build the project, *Over the River* will be installed for two weeks in June or July 2012.

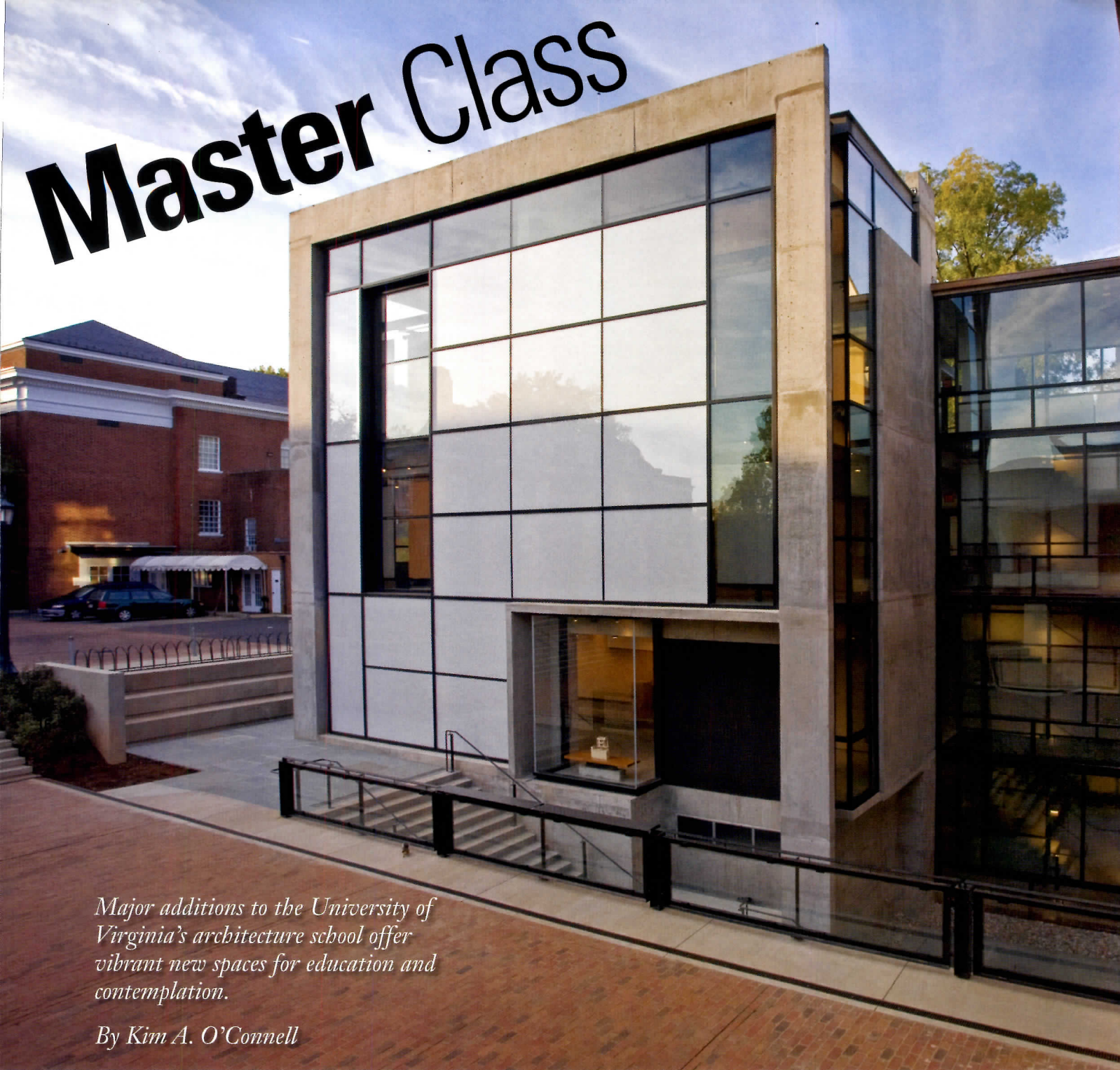
This surprisingly extensive preview at the Phillips includes a wide array of materials: drawings and collages of the concept, engineering site plans and geotechnical information, photos from myriad community and agency meetings, and even samples of the materials, including impressive structural supports and a full-sized piece of the fabric itself. The exhibit explains the lengthy process Christo and Jeanne-Claude have followed for their installation thus far; since beginning work in 1992, the show offers drawings and documentation from that time to the present.

But one wonders if all this information is greater than the sum of its parts? The intent of the actual project, as in all their work, is to transform a familiar place and to "reflect the temporality of life." In *The Gates*, it was the sound and movement caused by the wind, the striking and joyful color of the fabric, and the festival atmosphere on the paths underneath that made it remarkable. A different but equally powerful transformation of place is possible for *Over the River*, but the preview is a thin version of what it will be as it's relegated to the gallery in a somewhat uninspiring way. The ephemeral and temporal environment of *Over the River* simply can't be delivered in a canned space, even one as lovely as the Phillips. Couldn't a more tantalizing installation have been arranged, maybe one that reflects the material and conceptual nature of the piece?

— Courtney Spearman

The exhibit combines graphic proposals and documentary evidence of the everyday process of local approvals and construction.





# Master Class

*Major additions to the University of Virginia's architecture school offer vibrant new spaces for education and contemplation.*

*By Kim A. O'Connell*

**A**lthough it is challenging to design new buildings on any historic campus, nowhere does the specter of history loom as large as at the University of Virginia. When adding to the campus, few architects have resisted the temptation to mimic Thomas Jefferson's Academical Village. Even when they do, the result is sometimes a pastiche of old and new, causing perennial tongue-wagging over which newer buildings are the most successful. Such was the case with Campbell Hall, home to the university's architecture school.

Designed by a trio of firms (Sasaki Associates of Massachusetts, Italian modernist Pietro Belluschi, and Rawlings, Wilson and Associates of Richmond) and completed in 1970, Campbell Hall is a distinctly modern, almost Brutalist, building that sits just to the

north of the Rotunda and the campus's central grounds. Massive and horizontal, yet elegant and spare, Campbell Hall nonetheless echoed the historic campus with its exterior cladding of red brick and horizontal white trim.

Much has changed since Campbell Hall was built: not only the size of the school's student body and faculty (the former has doubled; the latter has tripled), but also perceptions about the education of architects and landscape architects, the need for collaborative space, and the great imperative of environmental sustainability. To address these exigencies, faculty architects have designed two major new additions to the building, among other design-build projects such as an outdoor sculpture called the Eric Goodwin Memorial Passage, that create dynamic spaces for teaching, learn-





The new east wing (left) is primarily composed of three review rooms stacked on top of each other, while the new south wing of Campbell Hall (this image) extends the horizontal thrust of the original structure while remaining distinct from it in materials and design.

ing, and thinking. Working closely with SMBW Architects in Richmond as the architects of record and based on planning studies by Bushman Dreyfus Architects of Charlottesville, the school has added about 13,000 square feet of interior space, as well as several exterior spaces that emphasize sustainability.


"The building additions are not just about making new spaces or renovations; they've really been considered in terms of supporting the mission and pedagogy of the school," says Dean Karen Van Lengen, who spent a decade spearheading the project and appointed various faculty as lead designers. "The reason to have our faculty involved is because they understand those principles. They incorporated students into the projects wherever possible."

The largest intervention is the addition to the South Wing,

designed by William Sherman, an associate professor of architecture and the associate dean for academics, which primarily addresses the school's desperate need for new faculty offices. Previously, faculty offices were cramped and scattered throughout the building. The new addition, by contrast, provides 26 new offices that are clustered around shared porches (Sherman was inspired by the Venetian porches at Monticello), which allow privacy when needed and community when desired. Glass louvers on the exterior filter sunlight and could even be fitted with solar photovoltaic panels in the future, while regulating light and heat on the porches and other areas.

Sherman was insistent that the offices not be a series of doors along an enclosed, tube-like corridor. Instead, the office





Glass louvers on the new south wing help to regular air and light and can be outfitted with solar photovoltaic panels in the future. The louvers also offer a series of shared porches that designer William Sherman says were inspired by the Venetian porches at Monticello.





clusters open up to the studios, lit with large banks of windows and crowded with drafting tables and the ephemera of architecture students' lives. A fourth-floor "technology bridge" between the studio and the offices includes rows of computers but also acts as a gathering place for students and teachers, as does a second-floor conference room.

"The additions just open up the building in some extraordinary ways," says Judith Kinnard, an associate architecture professor who led another of the school's design projects, the sustainable renovation of its café. When I have my office door open, I can see my students and they can see me."

One particularly arresting feature of the South Wing is a new concrete stairwell that encloses a previously external stairway. It's a dim space except for one narrow, vertical clear-glass window punctuated by a single, small red pane of glass. As the sun moves through the sky, the window acts as a sundial, and students mark the passage of time in chalk on the concrete. "This addition is kind of a threshold between the inside and the outside," Sherman says. "We always consider how to design in relationship with dynamic natural forces."

Although distinctive, the South Wing complements the existing building and maintains its overall horizontality. The new Victor and Sono Elmaleh East Wing, however, is a bold vertical stroke and, for the most part, an aesthetic departure. Tall and thin, the wing contains three review rooms stacked on top of each other, as well as a staircase and elevator. Accessed by wide swinging wood doors, the review rooms are warm, light-filled, and inviting places that will surely counteract (at least somewhat) the anxiety of presenting one's work for critique. Framed in clear glass on one side and a

**The South Wing addition primarily addresses the school's need for new faculty workspaces (above and below), with 26 new offices situated in clusters. Ample day-lighting was essential to the overall design. A newly enclosed concrete stairwell (right) turns this concept on its ear with a narrow vertical window that acts as a sundial.**







collage of clear and white glass on another, the rooms allow in abundant light while letting passers-by witness architectural education in action. Ingenious review panels both pivot and tip down for pinning up and reviewing student work.

"These rooms are at the heart of the educational process," says W.G. Clark, the Edmund Schureman Campbell professor of architecture, who designed the tower. "Natural light is not as deadening, and students come through a three- or four-hour review feeling fresher."

Finally, an essential aspect of the overall expansion of Campbell Hall is the series of landscape additions designed by emeritus professor Warren Byrd, principal of Nelson Byrd Woltz Landscape Architects in Charlottesville. In addition to outdoor classrooms, a native planting scheme, and a gabion soil retention wall, the landscape features a bioretention garden that addresses stormwater runoff through rills and drains.

Despite their outward differences, the additions at Campbell Hall all reflect the strong desire of their designers and the dean to provide connections—between students and professors, between buildings and the land, and even between the Jeffersonian past and the ever-evolving present. "A studio culture is so internal, but students need to step outside, to witness and become part of a series of landscapes," Byrd says. "It was a tremendous design and teaching opportunity."

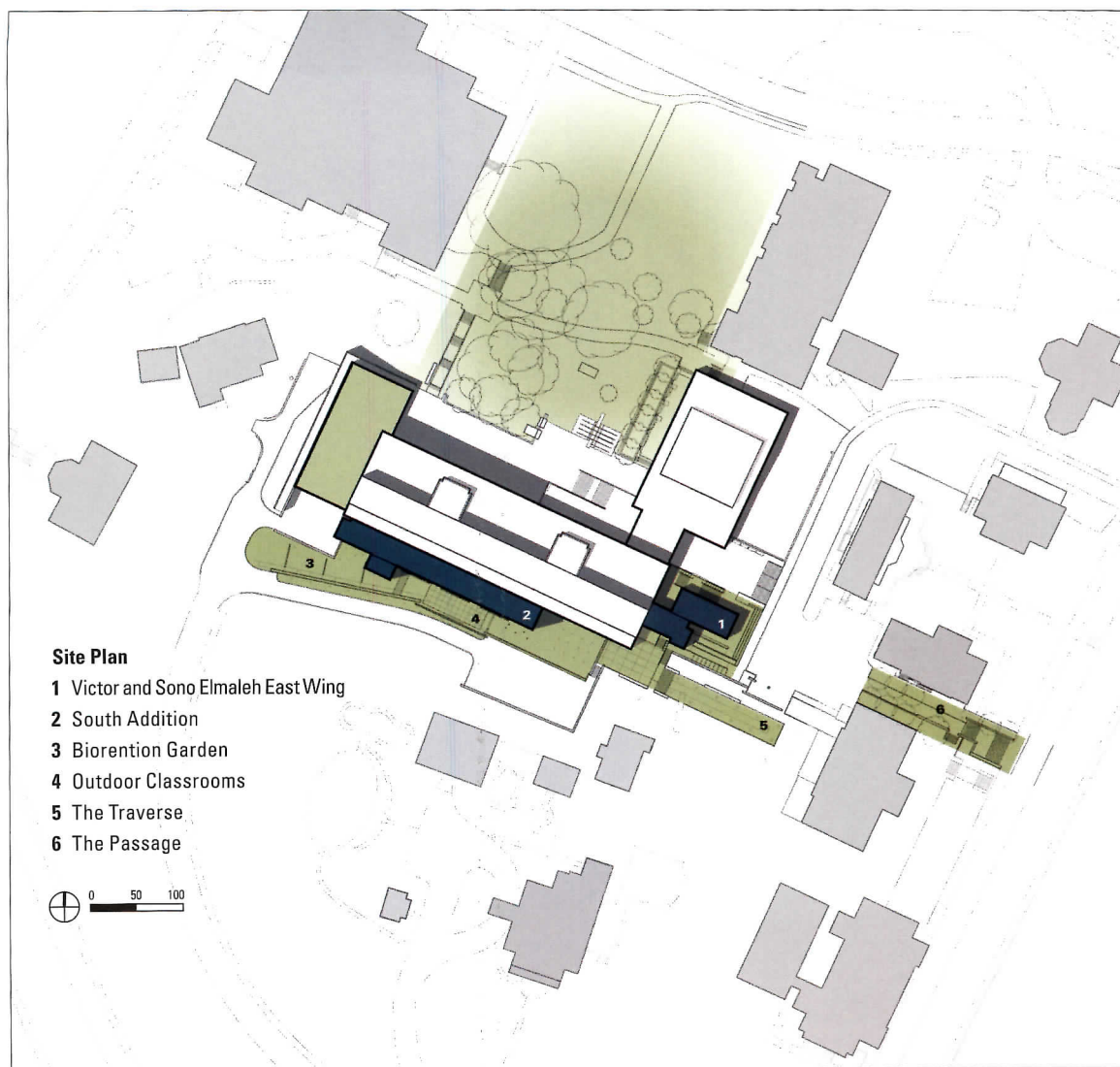
**Lined with ingenious panels that pivot or, in some cases, tip down for reviewing student work, the rooms in the new east wing (above) are warm and airy—a counterpoint to often difficult student critiques.**

**Project:** Campbell Hall, School of Architecture  
**Architects:** SMBW Architects (Willard Scribner, FAIA, principal in charge); WG Clark Associates Architects (W.G. Clark, FAIA, principal in charge); William Sherman and Associates Architects (William Sherman, AIA, principal in charge)  
**Landscape Architects:** Nelson Byrd Woltz Landscape Architects (Warren Byrd, FASLA, principal in charge)  
**Contractor:** Donley's LLC  
**Owner:** University of Virginia

#### RESOURCES

**DRYWALL & PLASTERING:** Piedmont Plaster & Drywall, Inc. (see ad p. 39); **CONCRETE:** Cleveland Cement Contractors; **MASONRY:** Bat Masonry Company, Inc.; **ELECTRICAL SYSTEMS:** Design Electric, Inc.; **CIVIL ENGINEERING:** Draper Aden Associates; **MECHANICAL SYSTEMS:** EMC Company; **STRUCTURAL CONSULTANT:** Fox & Associates; **EARTHWORK:** Linco, Inc.; **SITework:** Faulconer Construction Co., Inc.





Campbell Hall's expansion also features a native planting scheme, bio-retention garden, and outdoor classrooms (top). The redesigned Fine Arts Café (left), a small but efficient space, is lined with recycled-rubber floors and old blackboards on the walls.



# Hippocrates Rising

*Duke University's Center for Integrative Medicine by Duda-Paine Architects creates new spaces to explore old ideas about wellness.*

*By Sally Brown*

Integrative medicine is defined by the Bravewell Collaborative, a small group of philanthropists dedicated to transforming healthcare, as patient-centered care that focuses on healing the whole person: mind, body and spirit. It believes in educating and empowering people to be active participants in their own care and it synthesizes the best of Western scientific medicine with a non-Western and alternative understanding of the nature of illness, healing and wellness. The Duke Center for Integrative Medicine in Durham, North Carolina (DIM) was the first facility designed for this new paradigm in the practice of medicine by a major medical institution. Designed by the Durham-based firm Duda-Paine Architects, DIM serves as a "living laboratory" for the treatment of the whole person, according to Executive Director Tracy Gaudet, M.D.

Gaudet collaborated with the architects, along with Christy

and John Mack – who donated \$14 million – to provide a place where nature and technology were seen as serving the same wellness goals. He is a CEO of Morgan Stanley and a trustee of Duke University; she is a Reiki master and President of the Board of Directors at Bravewell, and both are dedicated to advancing alternative medicine. Addressing the audience at the dedication, Christy Mack said, "The hope is that this new center will give people the opportunity to experience a real change in healthcare. It is a place people will love to work in and where clients will want to come to learn to be proactive in their health and wellness."

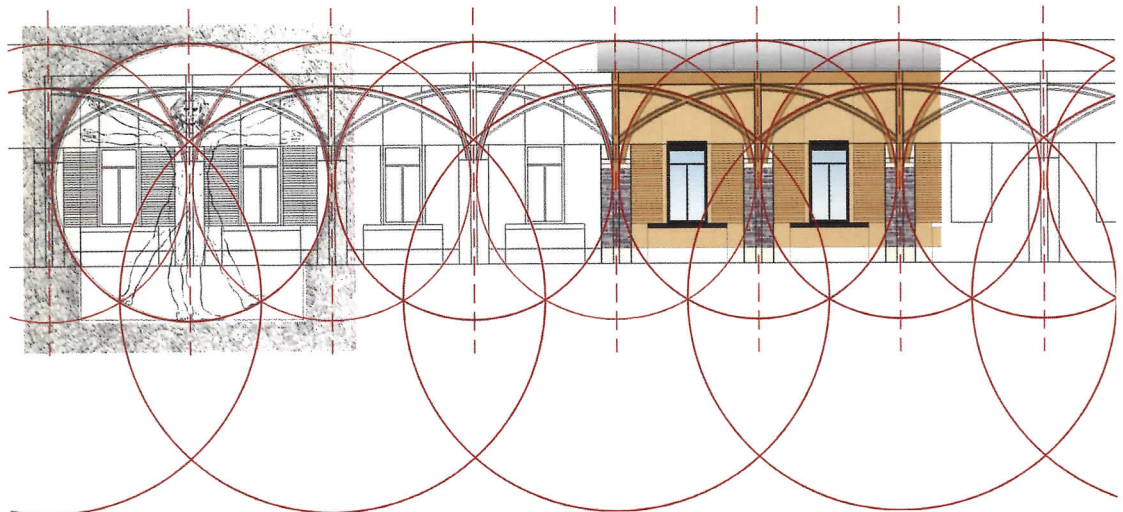
Turan Duda, lead architect for the project, explained recently that "how society defines wellness is changing. The visionaries behind Duke's carefully crafted integrative medicine program have taken this logical conclusion. Our mission as ar-



An arrival at the Duke Center for Integrative Medicine draws you in with what the architect calls "the repeating geometry of overlapping circles."



In diagram, this repeating geometry employs the "golden section" (right) that is most notably expressed by Leonardo's "Vitruvian Man" on the left side of the sequence.



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chitects was to forge a similar paradigm shift to create a new kind of facility." Reports Gaudet, "We believe there is a powerful relationship between the mind, body, spirit and community and we want to shift the focus of medical care to a health orientation rather than a disease-based model of care." As collaborators, Duda continues, "we were rethinking the whole process of what does integration mean, not just with medicine but with the building into the landscape."

Duke Medicine's Center for Living Campus, which contains the Center for Integrative Medicine, is a 26-acre, bucolic setting carved out of the Duke Forest whose existing structures were in the diluted post-modern style of the early 1980's. Beige stucco facades, cast concrete columns, and bronze standing seam roofs define much of this area of campus. Duke University's main campus, however, has a strong tradition of

Gothic Revival architecture in the English style. The general image of Duke is of stone facades, arches, and quatrefoil windows and the beloved Sarah Duke Gardens on the east side of the campus. Duda, challenged to design a building that acknowledged both styles, emerged from the programming phase of design by asking, "What does it feel like? [We were concerned with] everything about the tactile aspect, everything about the visual aspect, what you touch, what you see, [and] what you feel when you see it."

Having grown up the son of faculty members at the university, Duda spent weekends picnicking with his family in the Sarah Duke Gardens. There are two structures in the gardens that heavily influenced his concept of the center: the Gate House and the Pergola. The neo-Gothic truss systems, the stone work and the quatrefoil windows were the architec-





Above the center's library (left), a skeletal light screen diffuses light in a nod to the Sarah Duke Gardens pergola, and carries the golden section idea through the building.

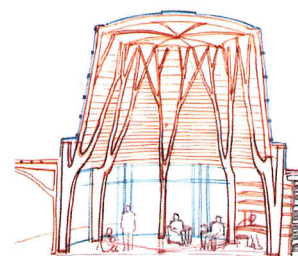
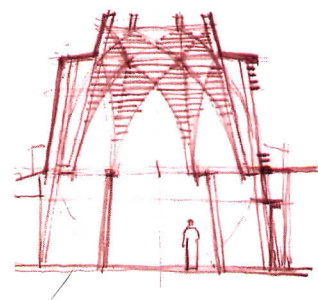
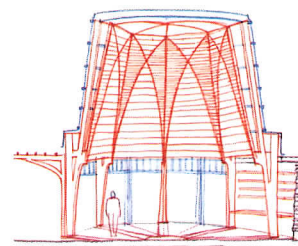




tural elements that stood out as inspiration for connecting Duke Integrative Medicine into the university as a whole.

The connection of inside and outside was of ultimate importance. Whether proceeding through the building or around the perimeter he created a sequence of experiences much like you would find in traditional Japanese temples and gardens. It is about the procession, the gathering of information and opportunity for reflection, with a goal toward self-awareness on a journey towards well-being.

The exterior of DIM appears as a collection of platonic shapes jutting like the pipes of a calliope towards the forest. The façade is wrapped in the same beige stucco as the existing structures, although the bottom half of the walls are painted the color of cocoa in effect anchoring the building. Duda describes the exterior as “a repeating geometry of overlapping circles that create segmented arcs (and a golden ratio), the motif used throughout this house and garden dedicated to well being.” These arcs continue in the wooden truss work of the gently curving entrance – a loggia inspired by the Gate House. Rich in texture, the pillars are stone from which the wooden Gothic arches spring up toward the glass peak of the bronze standing-seam roof. Planters line the walkway spilling foliage with abundance. The path is a texture of alternating smooth concrete with “streams” of river rocks measuring your way through the glass and wooden entrance to that “ah-hah” moment of the reception area, exercising a measure of control often seen in the work of Frank Lloyd Wright. Here one sees most clearly his use of the Golden Mean in architecture, the proportional system that seems intrinsically familiar to all of us.



The entry experience, intended to be a “path of discovery,” begins at the front loggia (top). The library’s exposed structure in these conceptual sketches (right) are meant to echo the Duke Forest and Gothic arches of the university’s main campus.





The Quiet Room (left) offers a place for patients to wait with a bubbling water wall at its terminus. Offering an outside space of respite, the Contemplative Garden (this image) occupies one of the interstitial spaces of the plan.

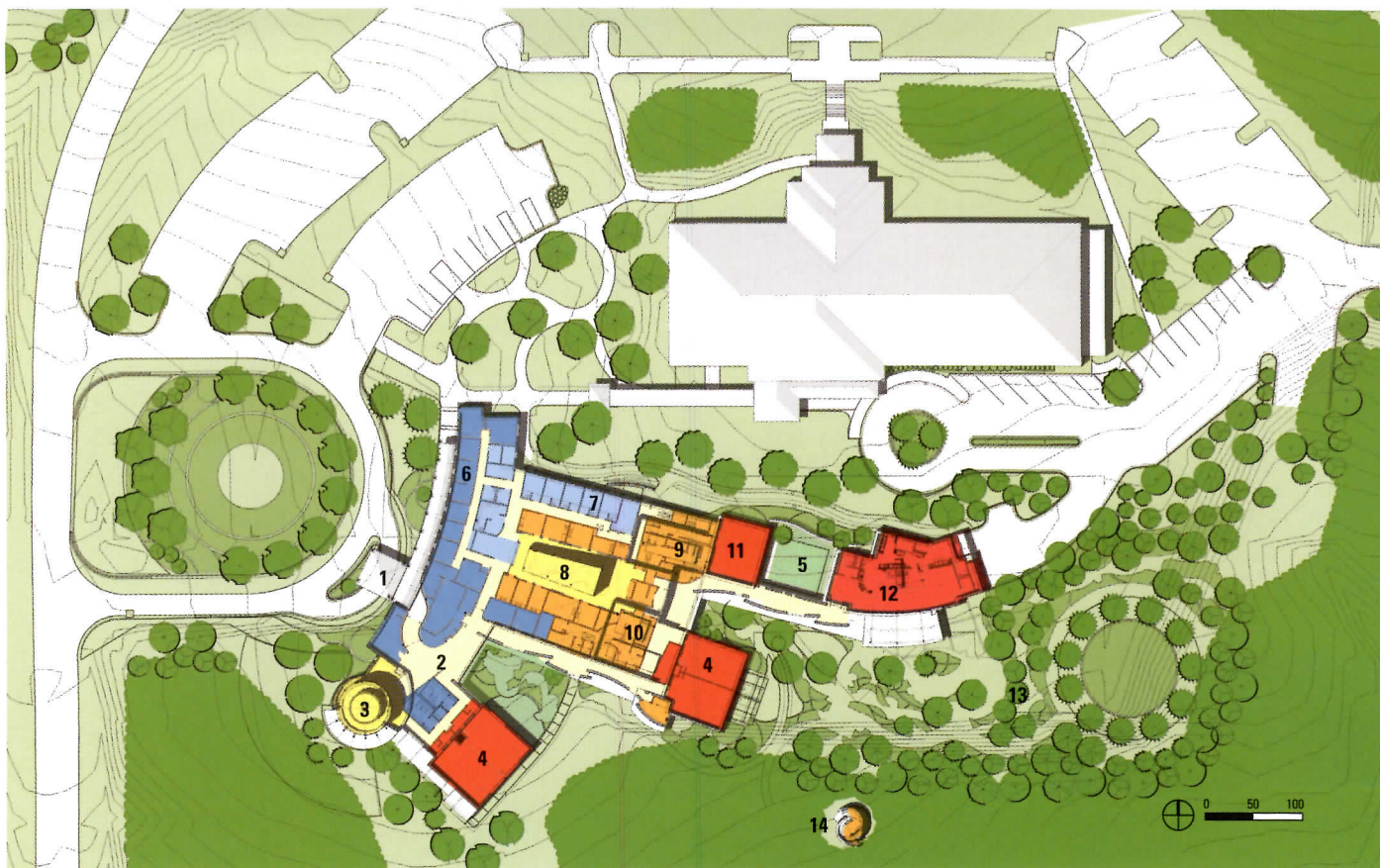


Paths of discovery interspersed with moments of repose gently stimulate all the senses through a play of light and shadow, visually tactile materials and textures, honey colored woods, the muffled sound of gurgling water, even a curved wall of natural bark, a surprise at every turn. Upon entering the lobby your gaze is thrust back outside to the water fountain spilling into a creek bed that flows in and out of the building. The structure stretches its fingers into the landscape, creating a variety of gardens within its interstitial spaces. An ornamental herb garden, contemplative rock garden with its auburn-leaved Japanese maple and large boulders, a stone-edged labyrinth, and on to a meditation “hut” shaped like a three dimensional yin/yang symbol complete the sequence of spaces here. Connecting all of them is a meandering path of lightly raked concrete with its ethereal impressions of leaves scattered

**A glass canopy encircles the library at the edge of the Duke Forest and creates a quiet space between inside and outside (right). The center’s cafeteria (far right) also takes advantage of the forest’s privacy and seclusion.**







#### Site Plan

- |                      |                           |
|----------------------|---------------------------|
| 1 Front Entry        | 8 Quiet Room              |
| 2 Entry Lobby        | 9 Women's Transition Room |
| 3 Library/Rotunda    | 10 Men's Transition Room  |
| 4 Multipurpose Rooms | 11 Fitness Center         |
| 5 Gardens            | 12 Nutrition Center       |
| 6 Offices            | 13 Labyrinth              |
| 7 Consultation Rooms | 14 Meditation Rooms       |

here and there along the way as if blown by the breeze, reminiscent of transience in the work of Andy Goldsworthy.

The architecture invites you into a dialogue with nature, while shielding you in the man-made. One of the focal points for the building is the library, a rounded glass walled sanctuary for relaxation and reflection crowned by arched glass ceilings and capped with an oculus. Inspired by the pergola in Sarah Duke Gardens, it replicates the experience of streams of light and connectedness to platonic Nature. Its counterpart is the Quiet Room, a "dry creek bed" planted with a bamboo forest whose members leap through the wooden trusses above that support a vaulted space and light-filled clerestory. A water wall shuts out the bustle of the clinic.



**Project:** Duke Center for Integrative Medicine

**Architect:** Duda Paine Architects, LLP

**Landscape Architect:** Hughes, Good, O'Leary, & Ryan Planners & Landscape Architects

**Contractor:** Balfour Beatty Construction (Shelly Goodwin, project superintendent; John Rankin, senior vice president, Raleigh division)

**Owner:** Duke University Medical Center

#### RESOURCES

**GENERAL CONTRACTING:** Balfour Beatty Construction (see ad back cover); **STRUCTURAL ENGINEERING:** Gardner & McDaniel, PA; **CIVIL ENGINEERING:** Haden Stanziale; **MECHANICAL, ELECTRICAL, & PLUMBING ENGINEERS:** Newcomb & Boyd Consultants and Engineers; **GREEN BUILDING CONSULTANT:** The Folsum Group; **ACOUSTICAL CONSULTANT:** Stewart Acoustical Consultants



# Reclining Architecture



“Bland” is a fair characterization of campus architecture at American University in northwest Washington, DC, where buildings ranging from sedate neo-classical to utilitarian modernist frame pleasantly landscaped quadrangles. But blandness went out the window in 2005 when AU opened its new Katzen Arts Center designed by the Washington office of Einhorn Yaffee Prescott. The Katzen Arts Center represents a radical departure from campus antecedents and substantially redefines AU’s public architectural image.

Rather than being embedded within the campus, the arts center occupies a publicly visible site and stretches nearly 700 feet along Massachusetts Avenue,

*The sculptural form of American University’s Katzen Arts Center along Massachusetts Avenue, by Einhorn Yaffee Prescott, redefines Ward Circle.*

*By Roger K. Lewis, FAIA*

Seen from Ward Circle, the Katzen Arts Center’s bold, convex forms and monolithic appearance make it an imposing, memorable university landmark.



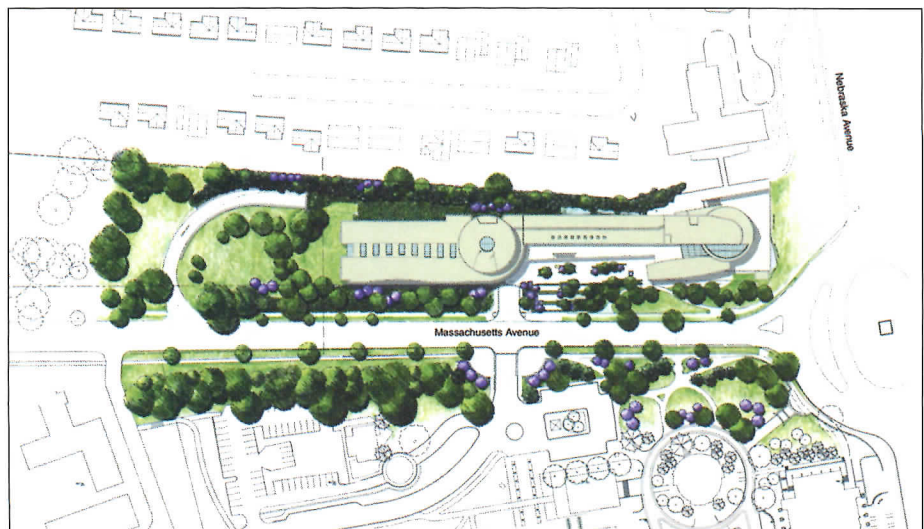


Photos: Peter Aaron, Esto



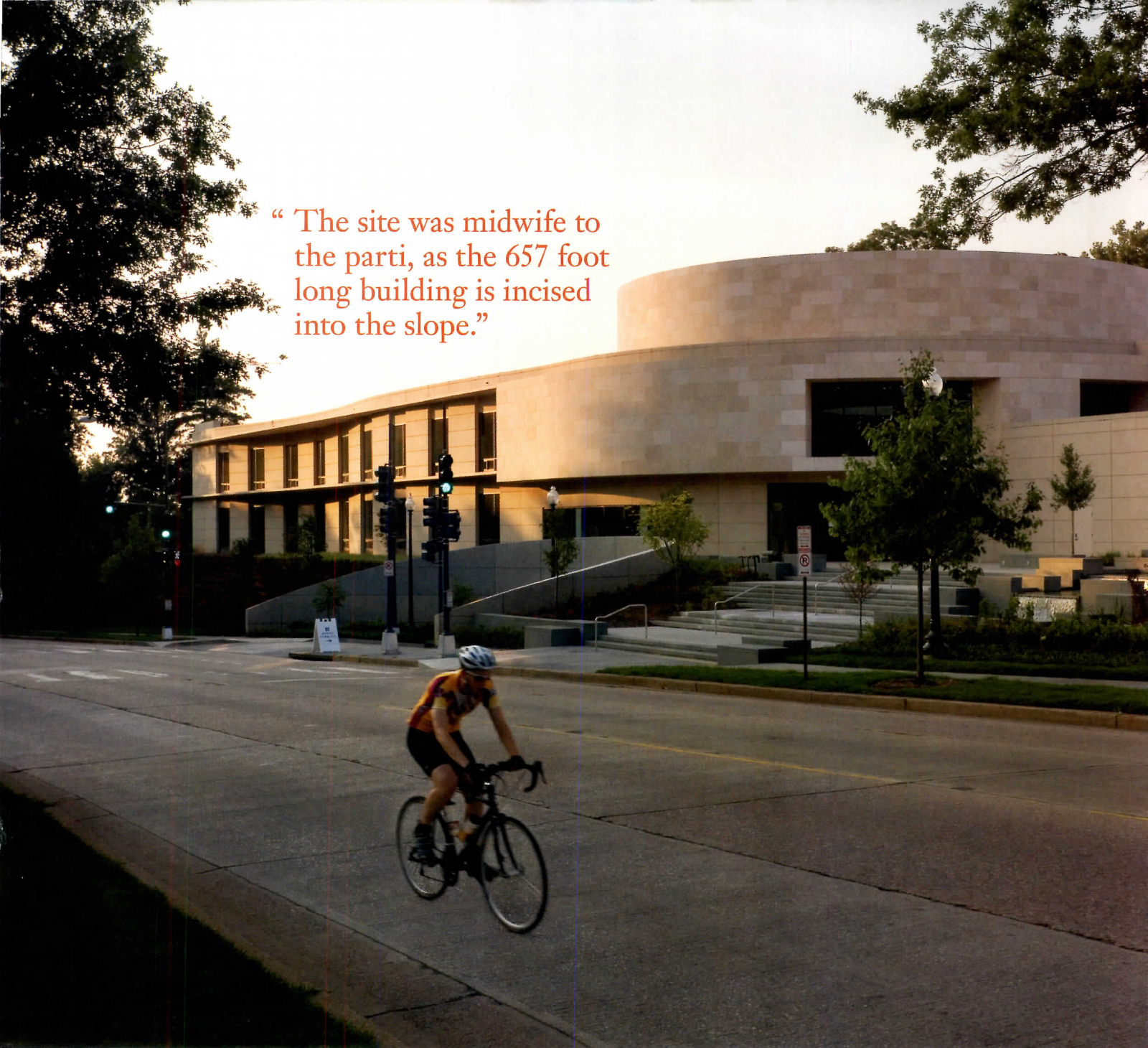
one of Washington's principal L'Enfant plan avenues, also known as "Embassy Row." Equally important, the site abuts Ward Circle where Massachusetts intersects Nebraska Avenue, another major city thoroughfare. Thus EYP had an opportunity to create a memorable architectural icon, a gateway building marking the threshold of the campus and seen every day by thousands of passers-by.

Designing the arts center was literally an uphill battle. A long but relatively narrow strip of land, the site slopes up from the avenue as much as two full stories across its constraining width. A venerable neighborhood of single-family homes abuts the long, uphill edge of the property. Worried about height, use, pe-



Site Plan





“The site was midwife to the parti, as the 657 foot long building is incised into the slope.”

destrian access and parking, neighboring residents spent decades demanding that any new construction on the site bow to their concerns. They prevailed. The arts center is only one story high along the uphill side, a story shorter than first envisioned, and is partially buried in the hillside with a 212,000 square foot basement level for parking 550 cars.

The university's overarching goal was to create an “arts community” in a single building. Encompassing over 112,000 gross square feet above the parking level, the center accommodates all of AU's visual and performing arts programs, plus a large art museum. This

entailed weaving together exhibition galleries, art studios and classrooms, a multi-media lab, music recital and practice spaces, a music library, theatre and rehearsal spaces, dance studios and dozens of faculty offices. The menu also included a sunken sculpture garden adjacent to the museum and a broad, terraced entry plaza facing the campus directly across Massachusetts Avenue.

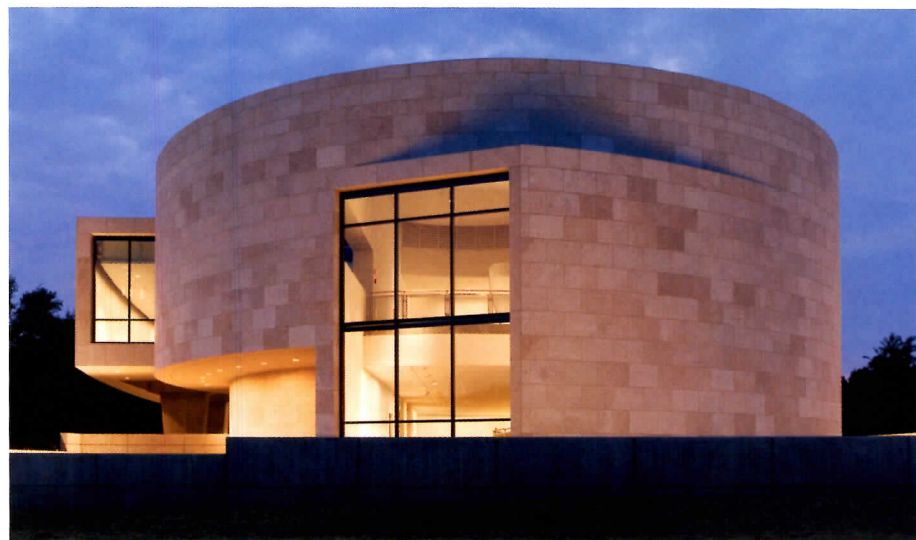
The site was midwife to the parti. A building 657 feet long is incised into the slope, with functions deployed on one or both sides of a concourse, the arts community's interior “Main Street” running the length of the building. Circular, free-

standing concrete columns, polished floor slabs and painted drywall are the dominant materials. As the concourse subtly changes width and varies in height, daylight pours in through skylights and the long window wall facing the plaza. Entering from the plaza, one arrives in a skylit rotunda, an interior mini-piazza straddling the concourse and serving as both lobby and informal performance venue. To the left of the rotunda, the double-story concourse serves two floors housing less public spaces for arts teaching and production. To the right of the rotunda, the concourse leads to public performance spaces and, anchoring





The center juxtaposes curving and planar geometries, inside and out, while using strategically placed skylights (top right) and windows (right) to capture daylight and views.



Photos: Peter Aaron, Esto

the end of the concourse, the volumetrically exuberant, three-level art museum, the most publicly visible segment of the building overlooking Ward Circle.

The museum is the center's "wow" destination. Its open, fluid plan and abstractly shaped galleries are visually dramatic but curatorially challenging. Overlapping and interpenetrating vertically and horizontally, and varying in size and scale, the lofty exhibition spaces are hardly neutral. Every installation obliges the museum's director, Jack Rasmussen, to creatively respond to the imposing, in-your-face architecture, which in effect becomes co-curator. With galleries

requiring collaborative improvisation, Rasmussen has built temporary walls to further enclose exhibition spaces, increase display area, redirect visitors or baffle daylight. Windows provide wonderful views out from the galleries, linking the center to the campus and city, but they also introduce unwanted glare and daylight threatening light-sensitive works of art.

While the Katzen Center's functional organization is straightforward, the building's overall form is not. EYP created a complex, expressive interplay of curvilinear and rectangular geometries sometimes recalling compositional mo-

tifs seen in works of Marcel Breuer, Le Corbusier and even Frank Lloyd Wright. Despite disparate programmatic components, the building can be perceived as a 657-foot long, sculpted monolith hewn from a single block of material. With apologies to sculptors and painters, the stretched-out, curvaceous edifice could be titled "reclining architecture."

Ivory-hued French limestone and precast concrete panels, closely matching the limestone's color, cover all opaque surfaces, the only exception being Breuer-like concrete piers supporting one of the museum's cantilevered gallery volumes. The unorna-



The museum's stairway atrium reveals boldly contrasting geometries and materials animated by suspended art.





mented, monochromatic cladding unifies the elongated structure and its projecting, convex appendages. Large, rectangular windows are starkly carved into the building's curved and planar walls, occasionally acting as visual gaskets between juxtaposed volumes. Tinted glazing with dark-chocolate-colored frames and mullions make windows read as voids that contrast sharply with the soft, cream-colored tone of surrounding wall surfaces. This fenestration tactic amplifies the building's bold massing.

There are things to quibble about - overly fortress-like imagery in places, inadequate lighting in the sculpture garden, conventional suspended ceilings. Budget constraints undoubtedly took their toll. Given the unique site and program, it's easy to imagine other viable design strategies: a more fragmented building using more materials, textures and colors; a more skeletal, tectonic building; or a building with more fine-grain detailing. Despite compromises and shortcomings, the Katzen Arts Center's overall design and aesthetic character are undeniably effective. American University now has both its unified arts community and its memorable architectural landmark.

**Project:** Katzen Arts Center

**Architect:** Einhorn Yaffee Prescott Architecture & Engineering, P.C. (Steve Kleinrock, AIA, principal in charge)

**Landscape Architect:** EDAW, Inc.

**Contractor:** Holder Construction Company (Thomas Shumaker, project manager)

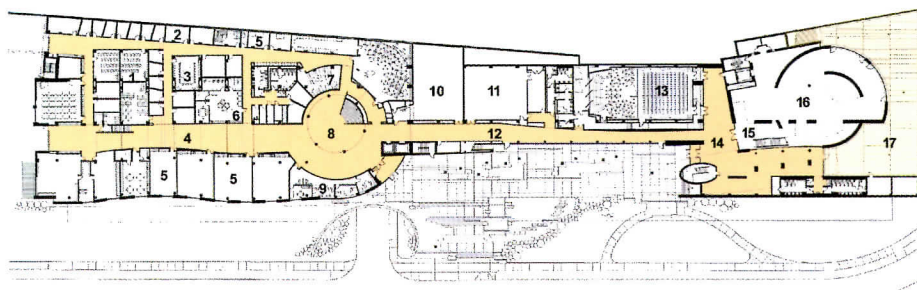
**Owner:** American University

## RESOURCES

**STRUCTURALENGINEERING:** Cagley & Associates;  
**CIVIL ENGINEERING:** Alpha Corporation; **THEATER CONSULTANT:** Fisher Dachs Associates;  
**ACOUSTICS, MECHANICAL, & A.V.:** Miller Henning Associates, Inc.; **GEOTECHNICAL CONSULTANT:** Schnabel Engineering; **ELEVATOR CONSULTANT:** Robert L. Seymore & Associates



Curved walls, penetrating daylight, and intense glare make this museum gallery a curatorial challenge.



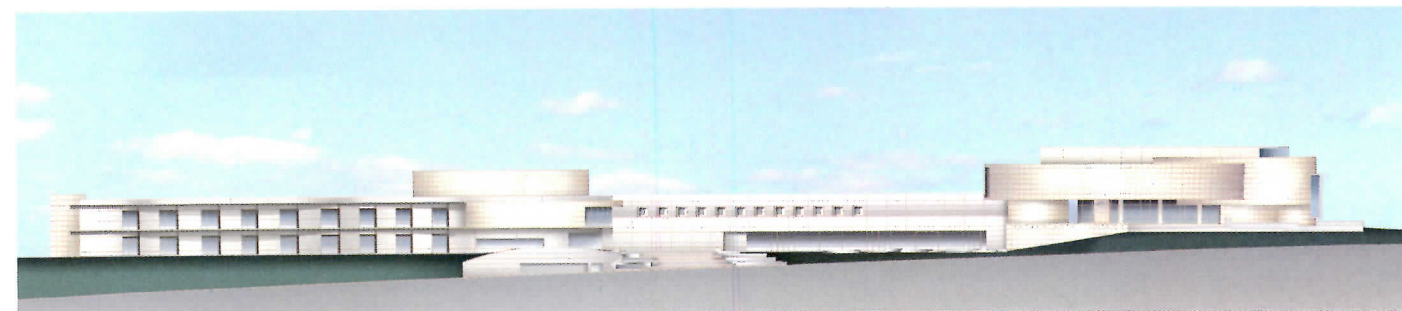
First Floor Plan

- 1 Classroom
- 2 Music Practice Room
- 3 Seminar Room
- 4 Academic Wing/Atrium
- 5 Studio
- 6 Slide Library

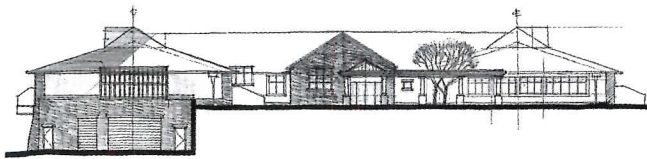
- 7 Music Ensemble
- 8 Rotunda, "Piazza"
- 9 Department Chair Suite
- 10 Dance Rehearsal Studio
- 11 Theater Studio
- 12 Main Avenue



- 13 Recital Hall
- 14 Lobby
- 15 Grand Stair Hall
- 16 Gallery
- 17 Sculpture Garden







**Architect:** PSA-Dewberry, Fairfax

**Project:** Capital Hospice, Loudoun County

Capital Hospice will include 21 patient rooms, palliative care, home care, and administrative offices within a two-level, 40,000 s.f. building on a 4-acre site. Tel: 703-698-9050 / [www.psa-dewberry.com](http://www.psa-dewberry.com)



**Architect:** Baskervill, Richmond

**Project:** Dalian Software Park, Dalian, China

This 1.25 million s.f. complex will consist of three 25-story residential towers with retail/office space and underground parking. The design promotes a new urban model supporting public transportation, density, and sustainability. Tel: 804-343-1010 / [www.baskervill.com](http://www.baskervill.com)

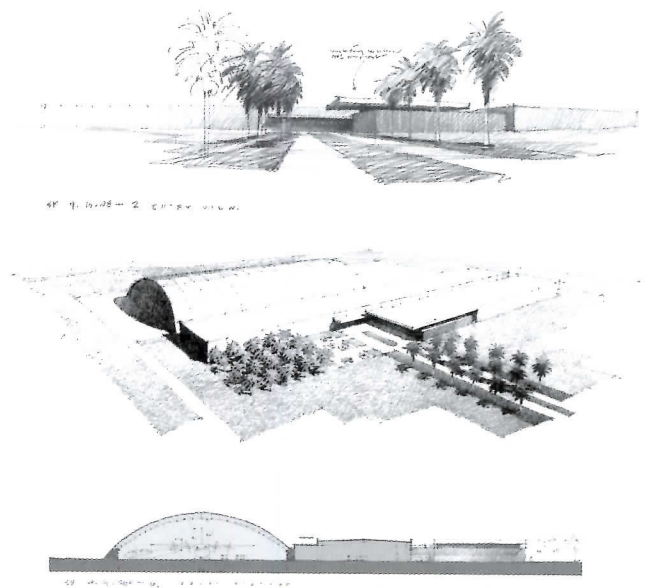
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**Architect:** BeeryRio, Inc., Springfield

**Project:** Private School master plan, McLean

Our design concept is to incorporate the existing buildings into a larger campus for pre-K to grade 12, by utilizing context, engaging the environment, and impacting the site as little as possible. Tel: 703.426.9057 / [www.beeryrio.com](http://www.beeryrio.com)



**Architect:** AECOM Design, Washington, DC

**Project:** Military Museum Curatorial Centre, Abu Dhabi, UAE

To preserve a part of UAE history, this 430,000 s.f. museum facility is designed for consolidating and restoring military artifacts for future exhibition in Abu Dhabi. Tel: 703-682-4900 / [www.aecom.com](http://www.aecom.com)





**Architect:** EDAW AECOM, Alexandria with AECOM Design, Roanoke  
**Project:** Marine Corps University master plan, Quantico

Included in this master plan, which evaluates existing facilities and articulates a vision for future growth and development, is the main campus at Quantico and several sites around the world. Tel: 800-366-4766 / [www.aecom.com](http://www.aecom.com)



**Architect:** nbj Architecture, Glen Allen  
**Project:** United Land Corporation office building, Charlottesville

Designed to comply with the federal government's anti-terrorism standards, this building will provide 112,500 s.f. of office space on five levels, four above grade. Tel: 804-273-9811 / [www.nbjarch.com](http://www.nbjarch.com)



**Architect:** Clark Nexsen, Norfolk  
**Project:** Virginia Beach Market Square, Virginia Beach

Combining a large development with the comforts of a small town community, this project focuses on a central village green surrounded by retail, apartments, office space, and a 120-key hotel. Tel: 757 455 5800 / [www.clarknexsen.com](http://www.clarknexsen.com)



**Architect:** Shriver and Holland Associates, Norfolk  
**Project:** Norfolk Collegiate School Fine Arts Addition, Norfolk

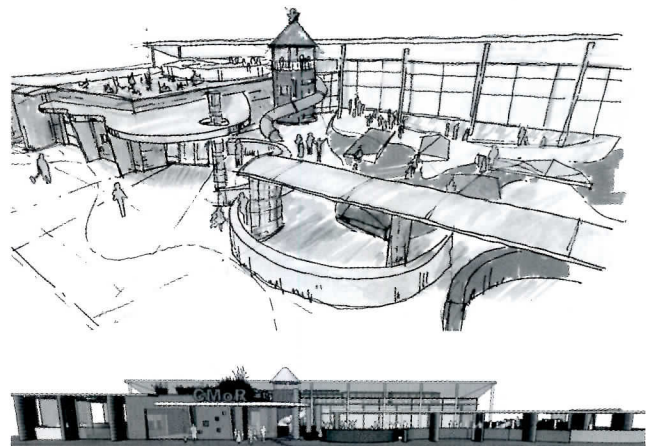
This 41,750 s.f. addition will contain, among other things, a theater, black box theater, rehearsal rooms, art and journalism classrooms, and offices. Site work includes a courtyard and landscaping. Tel: 757-627-4525 / [www.shrivhol.com](http://www.shrivhol.com)





**Architect:** William Henry Harris & Associates, Inc., Richmond  
**Project:** St. Matthews Episcopal Church, Chesterfield County

This new sanctuary and educational wing, sheathed in sustainable “board and batten” siding with a standing seam metal roof, will include a 300-seat auditorium and spaces for administration, fellowship, and support. Tel: 800-473-0070 / [www.harrisarchitects.org](http://www.harrisarchitects.org)



**Architect:** BCWH Architects, Richmond  
**Project:** The Children's Museum of Richmond

In developing a master plan for future renovations, the front exterior may include additional outdoor educational and exhibit spaces, as well as a green roof exhibit including viewing platform. Tel: 8047884774 / [www.bcwh.com](http://www.bcwh.com)

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**Architect:** Bowie Gridley Architects, Washington, DC  
**Project:** St. Christopher's School, Richmond

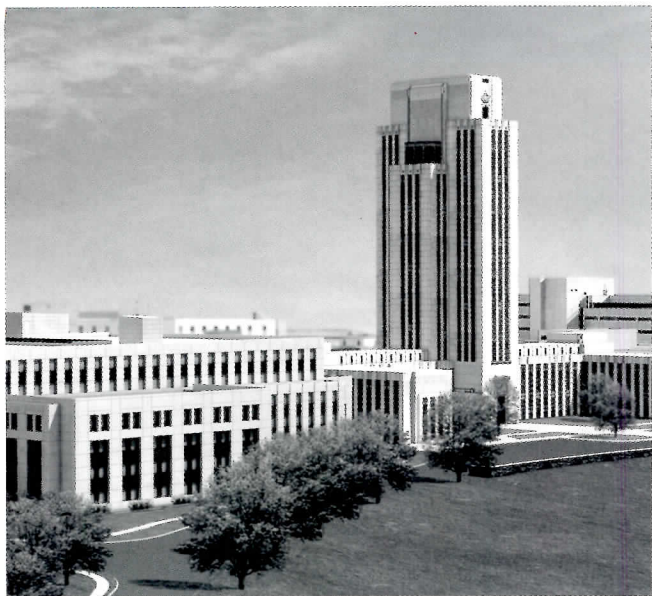
This new 30,000 s.f. student center, designed for an independent all-boys school, will provide a dining hall and collection of learning spaces that encourage collaboration. Tel: 202-337-0888 / [www.bowie-gridley.com](http://www.bowie-gridley.com)



**Architect:** CMSS Architects, PC, Virginia Beach, Richmond, Reston  
**Project:** Gateway Tower, Virginia Beach

This new 22-story, mixed-use tower in the town center will feature 326,000 s.f. of Class-A office space, 34,400 s.f. of street-level retail, and 654-space internal parking structure. Tel: 757-222-2010 / [www.cmssarchitects.com](http://www.cmssarchitects.com)





**Architect:** HKS Architects, Richmond

**Project:** Walter Reed National Military Medical Center, Bethesda, MD

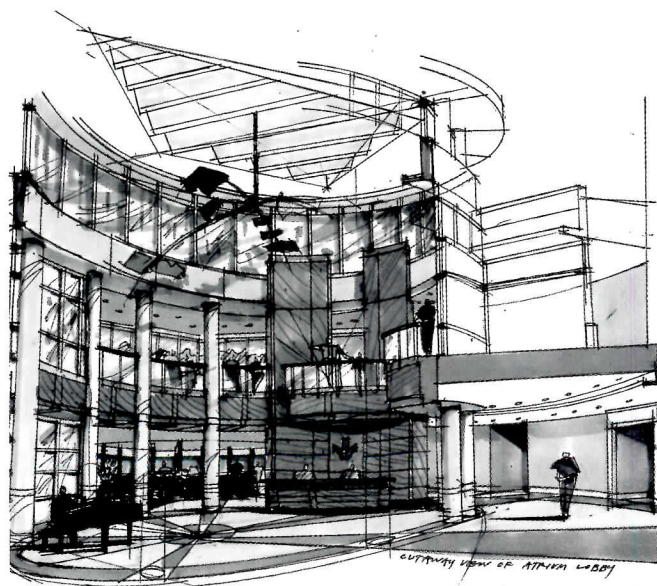
Designed to achieve LEED Silver, the design preserves and enhances this landmark's iconic character with over 1 million s.f. of additions and renovations. Tel: 804-644-8400 / [www.hksinc.com](http://www.hksinc.com)



**Architect:** Mitchell/Matthews, Charlottesville

**Project:** Grove Square 2&3

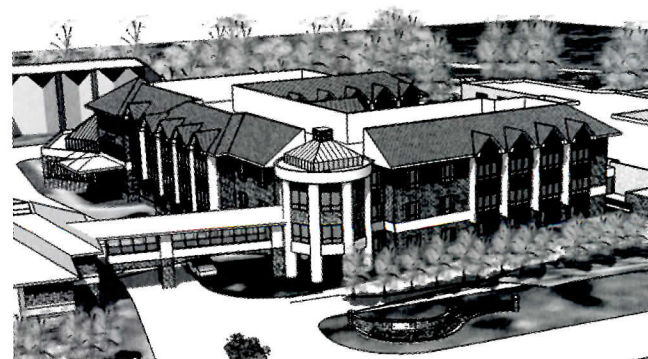
The second and third phases of this mixed-use project, adjacent to the University of Virginia Medical Center, will provide approximately 26,000 s.f. of office space, 14,600 s.f. of retail space and 24 residential units. Tel: 434.979.7550 / [www.mitchellmatthews.com](http://www.mitchellmatthews.com)



**Architect:** Odell Associates Inc., Richmond

**Project:** Bon Secours St. Mary's Hospital New I-MRI and Lobby Expansion, Richmond

This expansion will add a state-of-the-art IMRI and provide an opportunity to redesign and expand major public spaces including a new entrance sequence and public lobby. Tel: 804-287-8200 / [www.odell.com](http://www.odell.com)



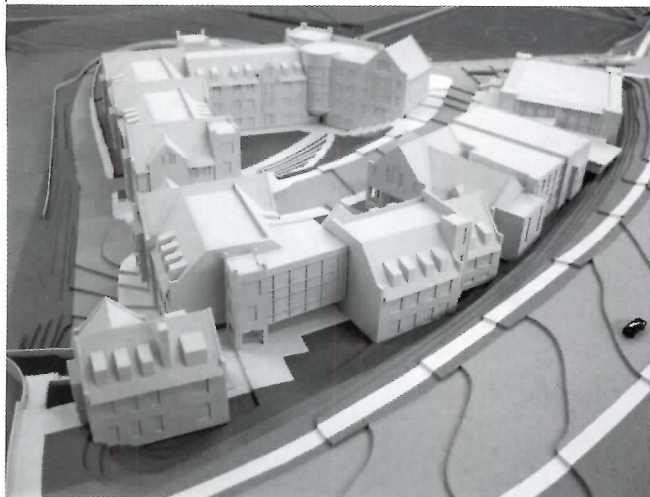
**Architect:** SFCS Inc., Roanoke

**Project:** Beth Shalom Expansion, Richmond

Parkside at Beth Shalom is a 72 room assisted living building. The design is distinctive, yet sympathetic to the existing campus. Tel: 540-344-6664 / [www.sfcs.com](http://www.sfcs.com)



## On the Boards



**Architect:** SHW Group LLP, Barnes Vanze Architects Inc., and Michael Winstanley Architects & Planners, Reston  
**Project:** St. Patrick's Episcopal Day School, Alexandria

This new upper- and middle-school campus will consist of several buildings tucked into the existing topography to limit the visual impact of the school. Tel: 571-521-7510 / [www.shwgroup.com](http://www.shwgroup.com)



**Architect:** Zimmer Gunsul Frasca Architects LLP, Washington, DC  
**Project:** Emily Couric Clinical Cancer Center, Charlottesville

Anticipating LEED Silver, this 150,000 s.f. center will consolidate functions currently dispersed throughout the University of Virginia Health System, be designed to foster patient- and family-focused care. Tel: 202-380-3120 / [www.zgf.com](http://www.zgf.com)



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Contact: Cathy Guske

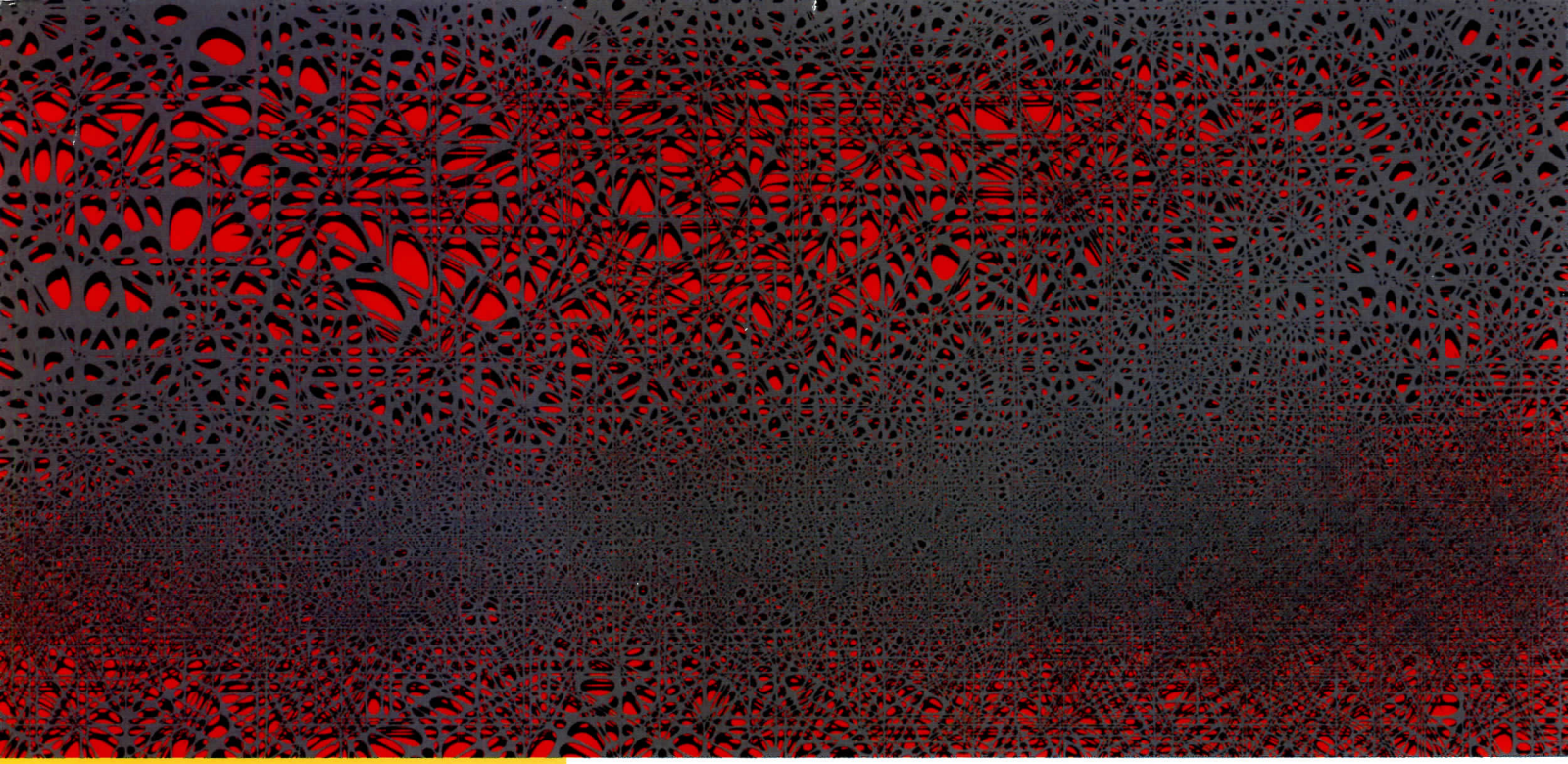
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Image courtesy of Cunningham | Quill Architects PLLC, with Terrance R. Williams, FAIA





**F**or their next Solar Decathlon house, students at Virginia Tech's School of Architecture and Design are working with "biomimicry" as a tool to generate both the design and structure of shutter screens that will define two of its exterior walls. Below faculty advisors **Robert Dunay**, **Joe Wheeler** and **Robert Schubert** explain how their team seeks to rescue the house shutter from mere ornament in what he calls "responsive architecture": self-regulating, completely functional elements that are integrated into the changing light qualities of everyday life. The house will be in Washington D. C. this fall as part of the Solar Decathlon Competition sponsored by the U.S. Department of Energy.

**Consider this:** you are sitting in your living room around 10:00 a.m.

## An Architecture of Delight

on a cold, cloudy winter day. Dispersing clouds allow sunlight to strike the south facing window wall. As heat builds, sensors indicate the passive solar gain to be a positive contribution to the indoor thermal climate. Automatically, insulation panels slide open and admit the sunlight. **Later that day**, you sense the direct sunlight is too strong for reading but the solar warmth feels good. You reach for your iPhone, select the MY HOUSE icon, and signal the shutters to close. Soft, natural light spills through the delicate shutter screens offering a subtle degree of privacy.

This is a grid-tied solar house on the cutting edge of "*responsive architecture*" designed by the Virginia Tech Solar Decathlon Team. It adjusts to climactic changes and user requirements through systems that optimize energy use and

offer an architecture of delight. **While you're away**, the house responds on its own, adapting to changing conditions sensed by the weather station mounted on the roof. From your iPhone, commands can be issued so that appropriate temperature, mood lighting and desired music are orchestrated as you enter the house from a hard day at the office.

Shutters are mostly a decorative element in popular residential building. This research project refines the shutter in its historical context as a spatial element and a technological component. The prototype shutter screen depicted here was generated by algorithms simulating the growth of plants and crystals. Additional criteria are imposed to adjust the mechanical form giving properties of the equation to produce an architectural element of sensible and sensual qualities.

A prototype shutter screen pattern (above), developed by Nathan Melenbrink, uses "biomimicry" to apply a naturally-occurring pattern to the structure of a privacy screen that also disperses sunlight. Melenbrink, a fourth-year student at Virginia Tech, developed this pattern based on an algorithm for Tech's entry in the upcoming Solar Decathlon, to be held in Washington, D.C. this fall.