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Other Juries

In this issue we present the winners of the 41st annual TSA Design Awards competition, which were selected by jurors Bruce Kuwabara of Toronto, Enrique Norten of Mexico City, and William Turnbull, FAIA, of San Francisco. During their review of the projects, the ground shared by the jurors was defined less by stylistic or technical issues than by a sense of place. In retrospect, the jury seemed to have recognized rather than selected the projects to be awarded, which I suspect was the more difficult of the two tasks. In order to select, we must measure and describe, which we do well. In order to recognize, we must wait and watch, which we do less well.

In his essay on traveling, architect Max Levy of Dallas invites us to not only wait and watch, but to walk the paths, in this instance of Thomas Jefferson's Monticello, and Frank Lloyd Wright's Fallingwater. His recent pilgrimage addresses the more visceral aspects of these two places that reveal much that cannot be captured by photographs. His observations and insights render much about how we might experience architecture, and may suggest the Achilles heel of the virtual world.

Also in this issue, we begin an effort to explore the complex relationship between architectural education and architectural practice, beginning with observations and proposals emerging from their academic experience by architects Charles Graham of Texas A&M University and William Rose of the University of Illinois. Although it is not included in the body of their article for reasons of space in the magazine, much of their suggested approach to design education was prefaced by their difficult experiences as students navigating through design-studio juries. As a companion to this article, San Antonio architect Dan Wigodsky of Kell Muñoz Wigodsky shares some of his expectations as a practitioner, particularly those expectations of interns entering the profession. With emerging needs and requirements for architects to continue their professional education in a more structured and disciplined manner, perhaps a good place to begin a discussion of these issues is with an evaluation of our own professional education and expectations.

For those of you with Internet access, please look for our new home page on the World Wide Web. This format will provide expanded coverage of projects of particular interest to an expanding audience, without the space limitations of the magazine. This month we feature each of the award-winning projects, as well as additional photographs of the new gate for the Zilker Botanical Gardens taken during the gate's fabrication in Austin. Our address is: http://www.eden.com/~txarch. We would like to thank Mark Denton and Canan Yetmen for getting our home page up and running. This was Mark's last project with Texas Architect after a year and a half as Associate Publisher. We thank Mark for his work and creativity.

With this issue, we also welcome Canan Yetmen as the new Associate Publisher. She worked closely with Mark Denton, and is responsible for the marketing and advertising side of the magazine.  

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Off the Ground

AUSTIN After nearly two decades of discussion, Austin has taken a decisive step toward moving its airport from near the central city to an area southwest of town.

In September, Page Southwell of Austin, the managing partner of the team chosen to design a passenger-terminal complex at the new Austin-Bergstrom International Airport, released renderings of its proposed design. According to Chuck Tilley, PSP project manager, the terminal project was scheduled to go out for bid in October. The team includes PSP, Lawrence W. Speck of Austin, Gensler and Associates Architects of Santa Monica, Calif., and Landrum & Brown of Los Angeles, Calif., among others.

The new airport is to be located on the site of Bergstrom Air Force Base, abandoned in the recent wave of federal military base closings.

According to Tilley, the team had dual objectives in developing the design for the $300-million passenger terminal: to provide a facility that would be easy to use and would reflect the character of the city.

Those goals were accomplished, Tilley says, by making the 560,000-square-foot terminal building as open and inviting as possible and by using local materials in a variety of ways.

The terminal is a long, narrow structure organized as a gently sweeping curve. The passenger gates are along the outer edge of the curve, while the entry is on the inside. Arriving and departing passengers enter the terminal from a split-level road, arrivals on the top or concourse level and departures on the lower or baggage-claim level.

Renderings of the terminal interiors show a light-filled, open space. Energy-efficiency was one reason for the extensive use of natural light. Another was the idea of “bringing the outside in,” which Tilley describes as “very Austin,” and which was one of the specific requests made by the Austin City Council. The building’s outside curve, which opens onto airplanes and runways, is essentially a wall of glass. Because that wall faces south, architects used a computer simulation to plot the sun’s trajectory throughout the year; based on that information, the architects placed shading devices and frosted glass to mitigate the effects of the southern exposure.

Eliminating interior walls allows passengers to find their way around without having to depend on signage, what Tilley calls “intuitive wayfinding.” When a passenger arrives, the ticket counters and security checkpoints are in clear sight and the gates can be seen just beyond. A large central atrium, open from the bag­gage-claim level to the concourse level, provides passengers with even more instant information about the terminal layout.

The simplicity of the terminal’s design can be directly attributed to its status as an origin-and-

destination airport, rather than a hub. The low number of passengers changing planes simplifies everything about the design, Tilley says.

Beyond the atrium and just outside the gates is a large area that Tilley calls the marketplace, where almost all of the terminal’s concessions are located. The marketplace will be oriented around kiosks selling food and other retail items; a few permanent food-service areas will also be included.

The building’s exterior will be primarily clad in Texas pearl granite quarried in Marble Falls. The pinkish-white stone will also be used on walls and floors in high-traffic areas on the in-
terior. Further inside, walls will be covered with wood and fabric panels for what Tilley calls “a softer, warmer feeling.” Floors in the marketplace, the concourse walkway, and baggage-claim area will be terrazzo.

The new terminal will house a total of 20 gates, including 18 regular gates, one international gate, and one commuter gate. This is an increase of four gates over Robert Mueller Municipal Airport, but Tilley says the real change is in service areas—baggage claim, ticketing, and lobbies—where space has been doubled.

Although the new terminal is much larger, the distances passengers will have to travel once inside is considerably shorter. From the center point of the concourse to either end is 650 feet, Tilley says. At Mueller, a passenger would have to walk 1,200 feet to reach the furthest gate. And since 75 percent of flights at the new airport will be concentrated at the center gates, most passengers will walk no more than 200 to 300 feet.

The current design can be expanded to 38 gates by adding bays on either end; that level of expansion should carry the airport through the mid-21st century. The current plan also allows for tunnels to connect satellite terminals if more space is ever needed. The new airport is scheduled to open in October 1998. **Susan Williamson**

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![Diagram of new Austin airport](image)

1. Passengers on the concourse level of the passenger terminal at the new Austin airport will be able to look down at the baggage-claim area.
2. Streetside view of model of new Austin airport passenger terminal
3. Plan of the concourse level of passenger terminal

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**TEXASARCHITECT ON-LINE**

**AUSTIN Texas Architect** has taken a step into the electronic future. Portions of each issue of the magazine, including expanded versions of some feature stories along with additional photographs, are now available as part of *TA On-Line*, a site on the Internet’s World Wide Web. *TA On-Line’s* address is http://www.eden.com/taarch.

*TA On-Line* also includes a statewide calendar of events, updated weekly, that lists competitions, exhibitions, seminars, and TSA events. The *TA* editorial calendar and submission guidelines are also included.

One section of *TA On-Line* currently lists details about the TSA Annual Meeting (see “Calendar,” page 26), including a registration form that can be sent to TSA via electronic mail. Another section includes updates on TSALink, the on-line construction-information service.

Going on-line means you can send mail to the magazine electronically, including letters to the editor and other submissions. The general address is txarch@txarch.com; editor Vincent P. Hauser’s address is vhauser@txarch.com. **SW**

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**OF NOTE**

**Timme to leave UH deanship**

Robert H. Timme, FAIA, will leave his position as dean of the University of Houston College of Architecture at the end of the fall 1995 semester. Timme, a member of the UH faculty for 25 years and dean for three and a half years, will take over as dean of the University of Southern California School of Architecture in January, replacing Victor Regnier, FAIA.

**UT Austin master plan moves forward**

In late September, the University of Texas released the first details about its forthcoming master plan, the first undertaken by the university since the 1950s. The new plan is being prepared by a team led by Cesar Pelli & Associates of New Haven, Conn. Major points, as reported by the *Austin American-Statesman*, include doubling the amount of student housing; converting Speedway, a major campus artery, to a pedestrian mall; building up to three more student-union buildings; and building new campus entrances on the east and south. The completed plan is to be presented to the Board of Regents early next year.

**Downtown housing plans made**

In late August, City of Dallas staff recommended to the City Council that it approve three downtown-area housing projects, according to the *Dallas Morning News*. City staff recommended that the council approve the distribution of $3.48 million in federal low-interest loans to the private developers of the three projects, which would create 943 apartments, including approximately 350 classified as affordable, near downtown.

**TSA names public member of board**

The Texas Society of Architects has selected Houston City Council Member Eleanor Tinsley as the public member of its Board of Directors. Tinsley will be officially elected to the board at the TSA Annual Meeting in Dallas Nov. 3 (see “Calendar,” page 26).

**Austin firm wins international award**

Page Southerland Page of Austin was a winner in the 1995 International Interior Design Competition co-sponsored by the International Interior Design Association and Interior Design magazine. PSP’s interior renovation of Bank One Tower in Austin will be featured in the November 1995 issue of *Interior Design*. **SW**
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<td>Frequency of Issue</td>
<td>Bimonthly, additional issue in April</td>
</tr>
<tr>
<td>Annual Subscription Price</td>
<td>$21.00</td>
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TSA honors announced

AUSTIN Texas Society of Architects Honor Awards will be presented at the Society's Annual Meeting in Dallas, Nov. 2-4. The top honor, the Llewelyn W. Pitts Award for lifetime achievement by a TSA member, will be announced at the Annual Meeting.

Gabriel Durand-Hollis of San Antonio will receive the William W. Caudill, FAIA, Award for Young Professional Achievement. Durand-Hollis, a principal in the San Antonio firm Davis•Durand-Hollis•Rupe Architects, has served as director and president of the San Antonio chapter, and as a TSA vice president.

The Edward J. Romienie Award for Distinguished Achievement in Architectural Education will go to David G. Woodcock, FAIA, RIBA, of College Station. Woodcock, a professor of architecture at Texas A&M University, served as head of the department for 11 years and worked to implement the doctoral program and interdisciplinary emphasis in historic preservation.

The John G. Flowers Award for contributions to architecture by a member of the media will go to three persons: Craig D. Blackmon of Dallas, an architect and photographer whose work has appeared in Texas Architect and other publications; Lisa Germany of Austin, who has written about architecture for 15 years, including five books; and Gerald Moorhead, FAIA, of Houston, a writer and photographer who is a Texas Architect contributing editor, a member of the editorial board of Gute magazine, and regional correspondent for Architectural Record.

TSA Honorary Memberships will be awarded to four individuals for contributions to architecture and the built environment. Josephine Abercronbie of Houston was a member of the Rice University Board of Governors from 1974 to 1994. As chair of the Buildings and Grounds Committee from 1979 to 1994, she guided architectural development at Rice.

Dr. Patricia Cummings Loud of Fort Worth is curator of architecture at the Kimbell Art Museum and author of a history of the Kimbell as well as other books and articles on architecture.

Pitzer Garrison, a former mayor of Lufkin, has been influential in building a new city hall, civic center, three medical centers, the Museum of East Texas, and other civic projects.

As the mayor of Marshall, Audrey Kariel has influenced public and private historic preservation efforts and has supported policies affecting historic structures and sites.

TFAA moves downtown

AUSTIN The Texas Fine Arts Association has purchased a building in downtown Austin to house its offices and an exhibition space. TFAA hired Cunningham Architects of Dallas to renovate the long-vacant building at the northwest corner of Seventh Street and Congress Avenue.

TFAA, a statewide arts advocacy group, is currently housed in a 1,200-square-foot building at the Austin Museum of Art at Laguna Gloria (formerly Laguna Gloria Art Museum). The 15,000-square-foot downtown building will allow the group to organize more shows and to take on more curated shows, says TFAA Executive Director Sandra Gregor. Plans call for creation of 5,000 square feet of gallery space, including a second-floor space where the ceilings can be opened to 16 feet. Design development should be completed by the end of the year, with construction to start in early 1996 and completion scheduled for late next year.

After a state-wide search, TFAA selected Cunningham Architects because of the "individuality with which the firm approaches each of its projects," Gregor says. It will be the first Austin project for the firm, which has won TSA Design Awards for the Cistercian Abbey and the Addison Conference and Theatre Center (see TA, Nov/Dec 1992), among others.

The announcement of the TFAA facility is one more sign of the revitalization of Congress Avenue, which in the last year has seen the opening of sidewalk cafes (following the passage of a new city ordinance), as well as new restaurants, galleries, and performance spaces.
Design winners named

SAN ANTONIO Seven projects were selected as winners in the 1995 AIA San Antonio design-awards competition. Jurors for this year's competition were Elizabeth Danze of Austin, a partner in Danze + Blood Architects and a lecturing professor at the University of Texas at Austin; Jim Mayeux of Monterrey, Mexico, a partner in Rangel Mayeux Arquitectos; and Janet Marie Smith of Baltimore and Atlanta, vice president of sports facilities for Turner Properties, a division of Turner Broadcasting System. The jurors selected the winners from among 33 entries.

Two projects were selected to receive honor awards. The first went to the Texas State Capitol restoration in Austin by Ford, Powell & Carson (see TIl, Sept/Oct 1995, and story on pages 66–67). The second honor award was presented to the Great Northwest Branch Library in San Antonio by Lake/Flato Architects.

Merit awards were presented to the San Antonio City Council Chamber, an adaptive reuse of the first floor of the historic Main Plaza Building in San Antonio, by Beaty Saunders Architects, and to the Holt Companies Headquarters in San Antonio by Lake/Flato Architects (see story on pages 50–51).

Two projects were chosen to receive commendation awards. They are the Jump Start Performance Company performance space, gallery, and offices by Sprinkle Robey Architects and the Fitzgerald Residence in Indian Wells, Calif., by Lake/Flato Architects.

One project, the Alamo Heights Pool Shade Structure designed by Kell Muñoz Wigodsky, Inc., was selected by jurors to receive special recognition.

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Austin honors design

Twelve projects were selected as winners in the 1995 AIA Austin design-awards competition. Jurors Lars L eru, dean of the School of Architecture at Rice University; Natalie Appel of Natalie Appel Architects, Houston; and Rick Archer of Overland Partners, San Antonio, selected the winners from 74 entries.

Honor awards went to the Offices of Fuller, Dyal and Stamper in Austin by Steinbomer & Associates, and Fuller, Dyal and Stamper, both of Austin; and Frank Welch Architects of Dallas; and the New Meeting Hall addition to the Unitarian Fellowship in Ames, Iowa, by David Heymann and Michael Underhill, Architects.

Citation of honor awards were presented to Corporate Headquarters for Intermedics Orthopedics in Austin by Lawrence W. Speck Studio of Page Southerland Page; Watanabe House in Tokyo, Japan, by Jun Watanabe; and KVUE-TV newsroom addition and remodel in Austin by Robert Jackson Architects, AIA.

Merit-award-winning projects were May House in Austin by Sinclair Black and Andrew Vernooy, AIA, with Mell Lawrence; House at Wild Basin by Winn Winer; Harden/Montgomery Residence in Austin by Robert Jackson Architects; Texas Air National Guard Headquarters in Austin by Page Southerland Page; and Star Bar in Austin by Dick Clark Architecture.

Commendation awards went to Laguna Gloria Fiesta ticket box by Scott Stites and Chris Noack; and Texas House, an unbuilt project by Kevin Alter with Lisa Strausfeld. SW
57th TSA Annual Meeting
The Texas Society of Architects' Annual Meeting will feature a variety of professional-development seminars as well as a host of social events including the Awards Luncheon recognizing the winners of the 1995 TSA Design and Honors awards; the New Architects' Convocation; and the Presidents' Gala. Also included is the Design Products and Ideas Exposition featuring more than 100 exhibitors of architectural products and services. The Annual Meeting will be held at the Westin Galleria Hotel in Dallas. Texas Society of Architects (214/678-7386), Nov. 2-5

DAIA Retrospect 1995
A display of built and unbuilt architectural work by all sizes and types of firms will introduce architects and architecture to the general public; the exhibition will take place in Northpark Mall. Related activities include Lego City, an interactive event for children ages 4-12; a series of special exhibits focusing on Trinity River, Dallas Area Rapid Transit, and White Rock Lake projects; as well as an exhibition, "Architects+Architecture," displaying historically significant architecture. Dallas AIA (214/678-2788), THROUGH Nov. 5; LEGO CITY, OCT. 28

“The Red Hot Show”
Artworks based on the show's theme by 60 Texas artists, architects, and designers from 19 cities will be displayed and auctioned. The exhibition and auction will be held in the Texas Fine Arts Association's new headquarters building (see story, page 21). Texas Fine Arts Association, Austin (512/453-5312), EXHIBITION: Nov. 11-DEC. 2; PREVIEW PARTY AND SILENT AUCTION: Nov. 10; GALA AUCTION PARTY: DEC. 2

Twentieth-Century Decorative Arts
Examples of European and American decorative arts are the focus of Twentieth Century: Decorative Arts from the Permanent Collection. Included are luxury objects, machine-age tubular steel designs, and handcrafted furniture and glass in the American arts and crafts tradition. Museum of Fine Arts, Houston (713/639-7300), THROUGH Feb. 4, 1996

Design for Tomorrow
This residential-design competition, formerly known as Innovations in Housing, calls for plans for a residence of no more than 2,250 square feet, incorporating engineered-wood products and systems in aesthetic as well as structural applications. Top prize is $10,000 and a feature in Better Homes and Gardens. The competition is sponsored by Better Homes and Gardens, Builder, and Progressive Architecture magazines, APA-The Engineered Wood Association, and co-sponsored by the American Wood Council. Design for Tomorrow (206/665-6600, ext. 172), SUBMISSION DEADLINE: DEC. 8

Treasures from Assyria
This exhibition of nearly 250 works on loan from the British Museum includes 33 monumental low-relief stone carvings that once lined the walls of Assyrian palaces and temples; bronze, ivory, glass, and lapis lazuli palace furnishings; and clay tablets written in cuneiform. Kimbell Art Museum, Fort Worth (817/332-8451), THROUGH Feb. 4, 1996
A New Downtown

HOUSTON In August 1994, the Houston Downtown Management District released its Downtown Development Plan, described at that time as the basis for a revitalization of the central business district (see “News,” TA, March/April 1995).

When the HDMC released its plan, it asked for public comment and input. In response, AIA Houston put together teams of local architects to study the 13 central-city districts identified in the plan and to develop detailed proposals that, it is hoped, will “inspire new confidence in the possibilities for a renewed downtown.”

The architects realized immediately that the main perception about downtown is that there are no people on the streets. This realization led to a common goal of increasing the diversity of downtown, defining new and different kinds of uses that could be added to the downtown mix. A key component of that diversity is housing; people must live downtown to support a broad mix of businesses and activities, the architects concluded.

All but a few of the 13 area proposals include housing as a central feature, often focused on a new park that would act to create a sort of neighborhood identity. For example, the plan for the Theater District involves creation of a large water basin off of Buffalo Bayou that would provide a focus for new development like an aquarium, restaurants, and shops, with an area of high-density housing backing up to those attractions.

An exhibition of the results of the teams’ work will be on display in Houston through mid-November. The exhibition will include both a history of downtown Houston and the team proposals, including maps and renderings of suggested projects.

Although the year-long planning effort has no official status, AIA Houston plans to work to put its members’ ideas before city decision-makers. A slide show of the proposals has been assembled and personal presentations of the material will be made to the mayor, city council members, city agencies, business groups, and property owners.

“Designing for Change: A Renewable Future for Downtown Houston” will be on display at the Allen Center in downtown Houston through Nov. 17. For more information call AIA Houston at 713/622-2081.

A new park on Main Street would be the focus of a district of medium-density housing under the AIA Houston proposal; this and other renderings are part of an exhibition of that proposal.

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*Texas Architect 11/12 1995* 29
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— Neil Aussenberg, Trust Homes

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Beyond Competence

While conducting an undergraduate seminar for American architecture students in Versailles, France, we asked the students to take out their architecture textbooks; in response, we received only blank stares. They did not have a textbook. In the ensuing discussion, neither we nor the students were able to think of another field of study that did not have a textbook. Suppose we wrote a textbook, we suggested, including chapters on massing, context, scale, lighting, proportion, function, and circulation. If we wrote such a book, could it be followed in a traditional design studio? The response from the students was universally negative.

Contemporary architect Walter Gropius said that architects should strive to develop skills “beyond competence.” Most of us in architectural education would nod in assent to this ideal. But what has happened to competence in architectural education, and how do we measure it? If one assumes that our competence as architects is directly related to our architectural education, then we are in trouble, because one of the legs upon which competence stands is weak.

What is important to our clients? Expectations of our performance as professionals, as indicated in recent studies conducted by the American Institute of Architects, among others, found that competence in architectural technology is more important to clients than design skill. The gap between actual performance and the expectations of performance in the marketplace seems to be widening and is the gap through which the lawyers enter.

Very early in their design education, students learn that the competence to which we refer will be gained either in their support courses in the academic curriculum or as intern architects. The technical skills required to achieve professional competence include drawing, programming, estimating, specification writing, code compliance, and so on. However, architectural curricula in Texas and Illinois require only 23 credit hours of technical courses on average, compared with approximately 32 credit hours of design (4/3 programs were slightly higher, but the proportions remained the same). People outside of architectural education, such as clients, parents, and the public, would be astounded to see that the essential elements of architecture such as structural design, mechanical-systems design, materials and methods of construction, specifications writing, architectural programming, code analysis, project management, building forensics, chemistry, and other related support courses were relegated to minority status in the architect’s training.

The test for competence in an architectural practice is quite simple: Look for incompetence. Is the site compatible with the use? Is the foundation on the bottom and the roof on the top? Can you tell where the rainwater will go? Will the building resist wind, earthquakes, and snow? Does the front entry receive visitors from the outside and orient them once on the inside? Can the walls carry the floors? Can the users leave quickly in case of a fire? How long will the building components last, and what will go bad first? Can it be built? Can it come in at budget and on schedule?

A textbook of design could be written as a developed version of a “design checklist” based on the tests for competence outlined above. However, if academic design committees adopted a checklist, many design instructors would feel threatened. It is not very likely that any design faculty could achieve consensus on what would and would not be contained in the “checklist.” Given that difficulty, design checklists are not to be found.

Make Design an Elective

Closely allied with competence is common sense. Unfortunately, the experience of many students suggests that common sense gained from previous experience is often undermined in the academic design studio. Students are usually encouraged to investigate the consequences of a major design decision based on iconicographic, semiotic, stylistic, poetic, or other arbitrary reasons. The typical design critic’s attention is often attracted when common sense is turned on its head in the studio, when the design solution focuses instead on artistic impression or style. The result of this arbitrariness is that the jury system, and most students’ experience with it, reinforces the underlying assumption that design instructors are infallible. Design professors are not infallible. They are capable of both good and bad design decisions. Indeed, bad design decisions are quite common, in design education just as they are in design practice. If we begin with the assumption that a design faculty member is capable of making a mistake in design judgment, then many of the errors in design education can be addressed. However, to address these errors, we must agree on the fundamentals of what constitutes good design.

How do we begin to reach such closure concerning the fundamentals? First, we must agree that the art of architectural education need not be coddled at the expense of science.
Putting architecture on a rational basis will not smother art. However, strengthening the emphasis on scientific inquiry in architecture will greatly strengthen the profession, and the place to start making changes is in the curriculum. While we are not against the design studio as an educational tool, we reject the current design-studio paradigm, and its dominance of the curriculum. Make design an elective, and when it is taught, emphasize problem solving, science, and inquiry for new knowledge.

Making design an elective may not solve the problems of architectural education, but it opens the door to some very creative solutions. If design were an elective, students who were naturally curious would see the benefits of design and would take those classes as electives, and they would be able to more nearly balance the science with the art in their design education. This would be in keeping with the needs of the profession and our society, and would address the strong dissatisfaction currently expressed by the majority of our critics. Would not the reintroduction of competence and common sense into architectural education be refreshing? Vitruvius defined the essential elements of architecture to be durability, usefulness, and delight; let's be willing to put resource efficiency, building durability, life safety, and a healthy indoor environment at the same level of emphasis as the art of design.

We believe that design is becoming marginalized in the marketplace, and that science lies at the heart of architecture, and thus should lie at the heart of architectural education. If “science” is too frightening a term, perhaps it is sufficient to ask that architecture should work from a well-defined, systematic, and progressive knowledge base. Approached from this perspective, the benefits of making design an elective would be many.

First, design education itself may be improved. Design could become accountable and develop its own natural rigor, its own checklist. Or, design could continue an idiosyncratic and arbitrary course. In either case the direction of design education could be seen more clearly from the vantage point of the community, the students, and the marketplace. Second, courses based on science and technology would become central to the educational process. Third, the perception of architecture graduates by related disciplines would be greatly enhanced. And finally, better buildings would be built. What would be lost? Only the fiction of design faculty infallibility. Design itself would not be lost, because design always requires speculation and innovation, along with the application of known skills.

A New Curriculum in Architecture

As a response to the issues we have outlined, we would like to present a knowledge-based framework for architectural education.

Years 1–2: Focus on continuing the general education that began in high school, including the physical sciences, behavioral sciences, English composition, foreign languages, architectural and art history. Architecture coursework would include structures, manual and computerized drawing, principles of design, color and light theory.

Years 3–5: Focus on principles of building performance, materials use, and architectural design. The program would introduce specialized courses in management, computers, investigations, regulations, and public policy.

The Studios: Architectural design studios themselves would focus on problem solving, and incorporate business and project management issues, which may also be offered as separate courses.

Graduate education would prepare students for expertise in specialized options such as architectural design, construction management, preservation, research, housing and community development, urban design, or public policy.

Making design studios an elective would introduce a competitive nature to the university setting that would be healthy both to the educational process and to the profession. But replacement of a mandatory emphasis on design-studio coursework with an elective approach should only be done if the studio were replaced with something of greater value to our education, training, and experience. A science-based curriculum itself should pass muster.

We also recognize that everything about architecture cannot be learned in school. Much has to be learned during the internship period and later during practice. But two questions come to mind. First, what is society’s primary interest in architects’ services? Protecting health, safety, and welfare, or avoiding ugly buildings? If it is the latter, can architects really make the case that they have succeeded? Is the implied threat that without “design,” buildings would be even uglier? Would this be a threat that the majority of the society would take seriously? We think that the second question is more pertinent: What should be learned in an appropriate architectural program, and what should be learned from practical experience?

"Beyond Competence," continued on page 35
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When reviewing our proposal for the curriculum, consider several points. First, architects are participants in the construction industry. The fundamentals of their curriculum must be identical to the fundamentals in education and training for other major players such as contractors and construction managers. Architectural education should be a basis for a successful career in any aspect of the construction industry. If it cannot open doors throughout the entire range of opportunities in construction and related fields, then it is much less than it should be, and inappropriate. Students would be relieved to have an

education that opens many doors, and that would relieve them of the stigma of architectural-hotshot-contractor that is widely held in the other construction trades.

From a different perspective, architects in Italy are prepared by studying a wide range of subjects, and often practice in areas beyond architecture, such as landscape architecture and urban design. Some would say that contemporary building design, construction, and urban design in Italy exceeds much of the rest of the world. In Japan, architects and builders get essentially the same education, separating slightly only at the end of their studies. Most projects in Japan are fast-tracked, so the typical building's design is a shared activity between the builder and the architect. In Mexico, almost all architects become building contractors at some time in their careers. Construction experience does not appear to discourage good design.

The courses we have outlined would form the core curriculum for architecture and construction-science students where these programs exist in the same college. The main difference would be in the stronger self-acted interest in architectural design by the students who want to choose that path. Those who would prefer the construction emphasis would take more advanced coursework in project management, contracting, facility management, etc. The Intern Development Program for architects would continue to reinforce the educational process for the architects, but it would emphasize the competencies of architects as building designers and building scientists more equally.

Finally, one might ask what the outcome of this new orientation in architectural education should be?

We believe we should be answerable to the students who would ask: “What did we learn today that we can expect to be true tomorrow? Did you teach us about the laws, principles, codes and knowledge bases that are going to remain true forever?” Our society is paying the price for a misguided curriculum and the educational objectives driving it. Can anyone really deny that architects are not paying a dear price for the current incompetencies? We are capable of doing better. Charles W. Graham, Ph.D. William B. Rose

Charles W. Graham, Ph.D., is an associate professor in the College of Architecture at Texas A&M University. William B. Rose is a Research Architect at the School of Architecture-Building Research Council, University of Illinois, Champaign-Urbana.

A Successful Intern

As an architect, and as one of the partners who meets architectural graduates interviewing for a position with our firm, I am continuously reviewing the skills and qualities necessary for a young practitioner to be successful.

Much like searching for the ideal spouse, personal qualities far outrank other considerations in importance, since they reflect the essential character of the person. These skills and qualities are difficult, if not impossible to teach. The most important skill that I look for is whether he or she is a good thinker. If a young architect is smart, quick, aware of a broad range of issues, and interesting, then he will be interesting to us. We rely on our staff to be responsible and to solve all sorts of problems, so everyone must know how to approach clients, contractors, designers, construction documents and each other in an effective and creative manner. They must be able to express ideas clearly, to listen, and to respond productively.

A well-rounded technical knowledge is important. Our most successful interns know something of almost every aspect of architecture. They understand the basics of structures, how loads are transmitted, and how framing is done. On the other hand, they certainly do not size bolts to resist a specific shear load. While they must understand the components of mechanical systems, they do not size air handlers. Most importantly, they must be able to understand broadly how buildings go together, how they get built. Many have special skills and interests that make them better architects, such as landscaping and carpentry. Not all of our interns have CAD experience, but they must know how to draw well. We still draw many of our details by hand. It is always helpful to have a business sense, and to understand that time is money, and that schedules and deadlines are of principal importance to our clients. But this is learned well only with experience, and is part of the problem-solving process.

Finally, we consider ourselves a design firm, so design is central to our thinking, and to the quality of our buildings in planning and detail. It is integrated into the service we provide our clients, and is part of our attitude toward success. We look for interns who share our rigorous design awareness, and who will grow.

Dan Wigodsky

Dan Wigodsky is a principal in the firm Kell Munoz Wigodsky Architects, San Antonio, and a member of TS&A’s Publications Committee.
PURPOSE 

This program has been created to promote public interest in health-related architecture, and to recognize excellence in design.

ELIGIBILITY AND AUTHORSHIP

All entries shall be a health-related architectural or interior architecture project designed by a TSA member. Projects shall be located in Texas and/or designed by a Texas firm. Eligible projects must have been designed or under construction after January 1, 1991. Projects that completed construction prior to January 1, 1991 are not eligible.

Entries are eligible even though the submitting architect or interior designer may not be the sole participant in the design. All participants substantially contributing to the design shall be given full credit for their role as part of the submission.

CATEGORIES

Awards may be given in any or all of the following categories. Each category has a separate Architecture or Interior Architecture subcategory. A single project may be entered in more than one category and/or subcategory upon payment of separate entry fees. Entrant shall clearly identify the category of facility design and subcategory.

HOSPITAL DESIGN: to include any type of acute care, sub-acute or inpatient care projects located in a hospital; or the design of a hospital.

MEDICAL SPECIALTY DESIGN: to include projects with a very specialized focus, such as pediatric, psychiatric, research, or medical technology designs.

LONG TERM CARE: to include long term rehabilitation and mental health facilities (nursing facilities, skilled nursing, extended care facilities, hospices, etc.)

AMBULATORY CARE: to include projects with no licensed beds, such as medical office buildings, physician’s offices, surgicenters, imaging centers, clinics, HMOs and primary care centers.

HEALTH AND WELLNESS: to include any preventive medicine facility, health clubs, aerobics centers, athletic clubs, and other projects whose principal focus is the maintenance of health.

SUBMISSION

Upon payment of the entry fee and receipt of completed entry form received no later than January 29, 1996, each entrant shall receive a packet with the submission requirements and a data sheet to be returned with the submission. All necessary forms will be provided.

The data sheet will ask for information relating to the project, program, schedule, cost and square footage. It shall be returned, in a black three ring vinyl binder with no visible means of identity, containing no more than 14 other 8 1/2” x 11” pages of information on the project in clear acetate sleeves (using only the front of each page). A narrative describing the problem and its solution, will be limited to one of those pages, using 11 point, single-spaced typing (no photo reduction) with at least 1” margins.

The other pages shall include photographs (in color or black and white) sufficient to clearly show the full scope of the project, with no more than two images per page. Plans and drawings reduced to 8 1/2” x 11” sufficient to fully describe the project must also be included. North shall be indicated on all plans. A graphic scale should be included on all drawings.

Renderings will not be accepted as a substitute for photographs of a completed project, but may be included if the entrant feels they provide useful additional information.

Any project may be subject to disqualification, at the sole discretion of the jury. If it feels the submission does not completely or accurately describe the project.

Finally, the concealed identification form (provided in the submission requirements packet), which will include the identity of the architect, owner, consultants, location, and person to notify, will be placed in a sealed envelope with no exterior marking and will be taped inside another acetate sleeve at the back of the binder. The entrant’s identification shall not be revealed in any way on the binder or within the submission.

All entries shall be sent to the Texas Society of Architects — Committee on Architecture for Health, c/o Ken L. Ross, AIA, 6575 West Loop South, Suite 300, Bellaire, Texas 77401.

AWARDS AND AWARD WINNERS

The winners will be notified in April 1996. Certificates will be presented to the designers and owners of the winning projects at an awards ceremony during the 1996 THA convention in San Antonio.

To defray display and publicity costs, the winners will be assessed $250 for each award winning project and must submit 8 copies of a 8” x 10” black and white glossy photo of the project, no later than June 1, 1996. In addition each winner will need to provide one set of color slides representative of the winning project for use at the awards ceremony. Slides will become the property of the Texas Society of Architects — Committee on Architecture for Health.

Winners will prepare 10” x 40” boards to be exhibited at the 1996 THA convention, and information will be released to hometown newspapers and publications. The award winners will be published in the Texas Architect magazine in the summer of 1996.

ENTRY FEE

An entry fee of $100 is required for each category/subcategory submitted. Submission of one project in more than one category/subcategory requires a separate entry fee. Fees and entry form must be received no later than January 29, 1996. Checks or money orders shall be made payable to the Texas Society of Architects — Committee on Architecture for Health, and sent to Ken L. Ross, AIA, 6575 West Loop South, Suite 300, Bellaire, Texas 77401. No entry fee(s) will be refunded.

The Texas Society of Architects, in cooperation with the Texas Hospital Association, is issuing a CALL FOR ENTRIES.

SCHEDULE

January 29, 1996 Entry fees and forms must be received
February 29, 1996 Submissions must be received
March 7, 1996 Jury review
April 15, 1996 Notification of winners
June 1, 1996 Publicity photos, slides & assessment checks due

Announcement of winners to coincide with the THA Convention in San Antonio, June 2-4, 1996.

ENTRY FORM

Firm Name
Contact
Telephone
Mailing Address
City State Zip

CATEGORIES/Subcategories of Submissions

HOSPITAL DESIGN

Number of Entries: □ Architecture □ Interior Architecture

MEDICAL SPECIALTY DESIGN

Number of Entries: □ Architecture □ Interior Architecture

LONG TERM CARE

Number of Entries: □ Architecture □ Interior Architecture

OUTPATIENT CARE

Number of Entries: □ Architecture □ Interior Architecture

HEALTH AND WELLNESS

Number of Entries: □ Architecture □ Interior Architecture

Amount Enclosed $ (Total number of submittals x $100)
Make checks payable to Texas Society of Architects – Committee on Architecture for Health.

Fee(s) and entry form must be received no later than January 29, 1996 and sent to Texas Society of Architects – Committee on Architecture for Health, c/o Ken L. Ross, AIA, 6575 West Loop South, Suite 300, Bellaire, Texas 77401. No entry fee(s) will be refunded.

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- Complete necessary worksheet(s) as prescribed by the TDLR noting acceptable and unacceptable conditions found during the review.

- Review of all applicable sets of construction documents; results reported to the party making the submittal within 30 days from receipt.

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1995 TSA Design Awards

This year's jury for the TSA Design Awards selected 13 projects to be recognized from among 152 entries submitted, which we present on the following pages. The winning projects shared an ability to appeal to the jury's sensibility regarding place-making, attention to detail, and the use of materials. We were privileged again to host a thoughtful jury, which carefully considered each project. Our thanks go to this year's Design Awards Committee, chaired by Corpus Christi architect David Richter, FAIA.

Enrique Norten, Mexico City

Norten, principal of Taller de Enrique Norten, practices in Mexico City, where he studied architecture at the Universidad Iberoamericana. Since receiving his graduate degree at Cornell University in 1980, he has taught widely in the U.S. and Mexico including visiting professorships at Sci-Arc in Los Angeles, Rice University, and Pratt Institute, among others. He has been nominated to the O'Neil Ford Chair in Architecture at the University of Texas at Austin for the spring 1996 semester.

Bruce Kuwabara, Toronto

Kuwabara is an award-winning architect who studied architecture at the University of Toronto. His projects range from exhibit and museum design to the design of interiors and public buildings, including the recently published Kitchener City Hall. Formerly associated with Barton Myers, he formed Kuwabara Payne McKenna Blumberg in 1987. He has taught at the Graduate School of Design at Harvard and at the University of Toronto and is currently designing a virtual reality playground for SEGA.

William Turnbull, FAIA, San Francisco

Turnbull studied architecture at Princeton University, where he received a Master of Fine Arts degree in 1959. It was in his Princeton thesis studio with Louis I. Kahn that he met the late Charles Moore, FAIA, with whom he formed the partnership, with Donlyn Lyndon, that designed the numerous, well-known projects at Sea Ranch on the northern California coast. He has taught studios at Yale and the University of California at Berkeley, among others. Mr. Turnbull's architecture and planning firm recently completed an award-winning residence located at the Teviot Springs Vineyard north of San Francisco.
Hoosier Engines

By Mark Forsyth

In converting a dilapidated warehouse into a new fuel-systems plant, Hellmuth, Obata + Kassabaum, Inc., of Houston integrated a variety of services, including manufacturing, research and development, marketing, and customer relations, under one roof. Located in Columbus, Ind. (the Midwestern town famous for its numerous buildings designed by well-known modern architects, such as the Cleo Rogers Memorial Library designed by I.M. Pei and the Irwin Union Bank and Trust designed by Eero Saarinen) the 540,800-square-foot plant houses the fuel-systems division of Cummins Engine Company, which invented the pressure-time fuel-injection system in 1954.

The $62.3 million spent consolidating Cummins's injector and pump businesses at this site provided 243,000 square feet of manufacturing space, 43,000 square feet of laboratories, and 91,000 square feet of office space. In addition, a master plan, which was developed by HOK in 1991, calls for future construction of additional support space, a cafeteria, and a service yard.

Designed to accommodate the company's new integrated work system, the building features a clean, light, barrier-free environment. Skylights placed along exterior walls and above the main hallway bring in natural light, and an open office plan organized around communication centers and conferencing clusters promotes interaction among all groups at the plant. The importance of customer service to the company is also reflected in the design: Production areas are typically kept hidden from visitors in similar facilities, but here assembly areas and laboratories are visible and directly adjacent to the main lobby, and technology and information displays describe work processes.

1 Glass walls separate public spaces and technical areas, allowing visitors to view production activities.

2 Open office planning is used to promote interaction between workers, creating a team environment.
A run-down warehouse was retrofitted with a new concrete floor to support manufacturing and laboratory research equipment.

A stairway joins an upstairs office area with the main production and assembly level.
Metamorphosis

By Mark Forsyth

The Cockrell Butterfly Center and Donor Wing Expansion at the Houston Museum of Natural Science (see T.A., March/April 1995) is home, literally, to the city’s most popular bugs. Thousands of live butterflies greet up to 3,000 visitors per day in the 70-foot-tall glass cone, which is part of an expansion that adds exhibition, support, and lobby space to the museum.

Designed by Hoover Architects, a 3D/International Group, of Houston, the butterfly and tropical-rain-forest pavilion is a 105-foot-diameter glazed cone that is entered through an underground cave-like tunnel. Meandering paths and a stairway leading to the museum’s third level allow visitors to view the butterflies from a variety of vantage points. On the third level, a hatchery gives visitors the opportunity to view the final stage of metamorphosis. Also included in the simulated-rain-forest environment is a waterfall that drops 42 feet to a pool below.

In addition to the live butterfly center, the $19-million addition includes a 65,000-square-foot wing that will house both traveling and permanent exhibitions. On permanent display in this wing is the Brown Hall of Entomology, which displays a portion of the museum’s 100,000-specimen collection of preserved butterflies, moths, and beetles.

The expansion is linked to the existing building, located in Houston’s museum district, by an extension of the entrance lobby, including a new entrance adjacent to the butterfly center. The new wing is also joined to the existing exhibition space internally by a major, visual feature, a three-story-high Foucault pendulum that knocks over pegs to tell time throughout the day.
1 At night, the butterfly center is illuminated from the inside and provides a new landmark along the Main Street corridor.

2 Visitors enter the live butterfly exhibit through a cave-like grotto on the lower level.

3 The new wing, including both the rainforest and other exhibition spaces, connects to the museum’s central lobby.

PROJECT Coeckrell Butterfly Center and Donor Wing Expansion, Houston Museum of Natural Science, Houston

CLIENT Houston Museum of Natural Science (Truett Latimer, president)

ARCHITECT Hoover Architects, a 3D/International Group, Houston (G. Norman Hoover, FAIA, design principal; Charlie Brooksby, project manager; Mark Lange, designer)

CONTRACTOR S/4E/Sglass Construction, Inc. (Jose Gonzales, president)

CONSULTANTS Walter P. Moore & Associates, Houston (structural and civil engineering); Bunan, DeLattie & McCoy, Inc., Houston (mechanical, electrical, and plumbing engineering); Studio of Richard Jeter, Houston (lighting); Rolf Jensen & Associates, Houston (code compliance and life safety); Southwest Laboratories, Houston (material testing); Charles M. Salter & Associates, San Francisco, Calif. (acoustical); Butterfly Sales, Cytanod, Ga. (butterfly consultant); The Larson Company, Houston, Ariz. (exhibit design); Howard Fields & Associates, Walnut, Calif. (water feature design); McCain Design, St. Paul, Minn. (interior landscape); Wild Sanctuary Communications, San Francisco, Calif. (sound); Negeard, Houston (catering); Mee Industries, Ed Monte, Calif. (fog); H.S. Fisher Engineering, Orange, Calif. (scaffolding)

PHOTOGRAPHER Richard Payson, FAIA, Houston

Hoover Arquitectos diseñó el Ala Donor y el Centro de Mariposas Coeckrell en el Museo de Ciencias Naturales de Houston. El Centro de Mariposas es un pabellón que simula un ambiente de selva tropical, encerrado por una estructura cónica de cristal de 105 pies de diámetro. El proyecto además incluye un espacio dedicado para la Sala de Entomología Brown y exhibiciones temporales. El cono cristalino es visible desde el distrito de museos de Houston.
Color in Las Colinas

By Joel Warren Barna

Good, Fulton and Farrell Architects of Dallas won a 1995 TSA Design Award for the Laser Tech Corporate Headquarters in the Dallas suburb of Las Colinas. There the architects overcame a difficult existing floor plan and a tight budget in creating an evocative 55,000-square-foot space for the administrative functions and production areas of a high-tech service company.

Laser Tech is a young, fast-growing company, producing color separations for clients in publishing and advertising. Most of its capital is tied up in equipment. So when Laser Tech moved into an A-shaped warehouse space (actually corner spaces in two adjacent but unlinked buildings), the architects were charged with creating an environment that would please Laser Tech’s visually discerning customers, and do it within a budget of $15 per square foot.

The architects began by zoning functions. Customer-contact areas were clustered near the entry. Zoned on one side (to the right on the accompanying plan) was equipment for conventional color processing, often bathed in amber-colored light, which protects imaging media that would be ruined in full-spee-

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1. The "main street" corridor is lined with a low panel in bright red; ahead are the computer-imaging suites.
2. Theatrical curtains provided a low-cost way to carve a waiting area out of the 30-foot-tall lobby space.
trum light. On the other leg of the A, the architects zoned equipment for computer scanning and digital negative output, a process that permits the use of red-spectrum light. To tie these areas together, they created two main axes.

The first begins at the curved reception desk in the lobby, which faces two trapezoidal waiting areas carved out of the high-ceilinged space with theater curtains. Beyond are the digital-imaging viewing suites, glassed-in booths with very low ambient light, where clients inspect works in progress. Further back are the computer rooms and negative-making equipment—the red-light area. The architects created a second axis—a “main street” corridor—linking the digital-processing areas with the amber-light, conventional-processing spaces.

Red and yellow are used throughout to punctuate and link these spaces. Turning walls and junctions into planes and volumes of bright, forceful color creates orientation points in a potentially confusing plan and cavernous volume, while alluding to the ways Laser Tech combines technologies to create images for its clients.

3 The Laser Tech headquarters and production facilities are housed in a high-bayed warehouse complex; color is used to delineate the functions in different enclosed areas.

4 The area for conventional processing of color separations is often bathed in amber-spectrum light.
La Oficina Principales de las Compañías a Holt es mucho más que un edificio de oficinas típicos y tradicional. Los diseñadores, Lake/Flato Arquitectos, combinaron en una planta las patios interiores con una forma típica de los edificios de metal prefabricados. El edificio no solo consiste de oficinas ejecutivas, sino también incluye una galería de arte y exhibición de antigüedades. Estas dos funciones se integran para crear un ambiente ameno para sus ocupantes.

The basic metal barn-like design refers to the general vocabulary of other machine sheds on the site.

A new corporate headquarters building for the Holt Companies, located on a tree-covered corner of a 15-acre site in San Antonio, was a winner of a 1995 TSA Design Award. Lake/Flato Architects of San Antonio combined a familiar courtyard-plan organization with a reinterpretation of the prefabricated metal building form, thus providing for the utilitarian needs of the construction-equipment company, as well as for the owner's collections of art and antique construction equipment. The detailing, materials, and configuration of the lobby and meeting spaces in the compound indicate that the clients required much more from their headquarters than a traditional office environment.

Commenting on the design, TSA Design Award juror William Turnbull says that “the building is strong and industrial, like the tractors.” Suggestive of early international-style pavilions, the placement and treatment of the lobby stairs and the square-gridded floor treatment complement the metal building vocabulary, as well as the machinery-as-art theme.
Using the prefabricated steel frame as a starting point, the offices and galleries are organized to take advantage of the oak trees on the site.

The approach to the design of the reception area suggests early international-style pavilions.
Courting New Patients

By Mark Forsyth

The Centro Médico de la Mujer-Hospital Los Ángeles, located on a four-and-a-half acre site in the desert outside Torreón, Coahuila, Mexico, was awarded a 1995 TSA Design Award. With thick masonry walls to provide a thermal-mass buffer and trellis-covered patios with fountains, the design responds to the local climate, and the aqua- and terra cotta-toned exteriors reflect a traditional color palette. Designed by Henningson, Durham & Richardson, Inc., of Dallas, the complex integrates a 30-bed women’s hospital with a medical office building that includes 46 suites for physicians.

The hospital segment of the project includes surgery, radiology, and birthing rooms; laboratory and inpatient nursing areas; and spaces for support services, such as food service, a nursery, and a pharmacy. The entrance to the hospital is identified by two stone towers that mark a drop-off area; once inside, visitors pass beneath a translucent vault and trellis. Inside, a central, clerestory-lit mall leading to the outpatient rooms is articulated by a series of Catalanian vaults. The waiting areas located along the mall were made larger than usual in response to the needs of large Mexican families who gather to celebrate a new birth. Inpatient rooms are grouped in clusters on the opposite side of the building, promoting efficient staff circulation.

Giving the complex a visual identity in its high-plain desert surroundings, the office building rises three stories above the ground-level hospital. In addition to offices for 46 physicians, the building, which is arc-shaped to maximize the view of mountains to the south and west, also houses a medical library, administrative offices, and other services.

1 A tower extending above a three-story medical office building gives the complex a visual identity within its desert surroundings.
2 Clerestory windows bring natural light to the main lobby space.
3 Aqua- and terra cotta-colored exteriors reflect a familiar decorative motif.
SECOND FLOOR PLAN

KEY TO PLANS
1. EMERGENCY
2. RADIOLOGY
3. LABORATORY
4. PHARMACY
5. CHAPEL
6. ENTRY
7. OUTPATIENT MALL
8. SURGERY AND RECOVERY
9. CENTRAL STERILE
10. ELDERS
11. NURSES
12. COURTYARD
13. FOOD SERVICE
14. CENTRAL PLANT
15. WAREHOUSE
16. SERVICE ENTRY
17. NURSING SUPPORT
18. PATIENT ROOMS
19. EMERGENCY ENTRY
20. DOCTOR'S OFFICE
21. ADMINISTRATION
22. PRE-NATAL CARE
23. MULTI-PURPOSE
24. RECORDS/LIBRARY
25. IN-VITRO

PROJECT
Centro Medico De La Mujer Hospital Los Angeles,
Torreon, Coahuila, Mexico

CLIENT
ABM/Manucho S.A. De C.V.

ARCHITECT
Henninger,
Durham & Richardson, Inc.,

ADVICE

CONTRACTOR
Planagin

CONSULTANTS
Mitchell (equipment planning); System Design International (food service, laundry); Fernand0 Siller (associate architect)

PHOTOGRAPHER
Mark Trew

Texas Architect 11/12 1995 53
Sound Design

By Mark Forsyth

Designed for five-time Grammy award-winning entertainer Whitney Houston by Russ Berger Design Group of Dallas, this 2,400-square-foot recording studio integrates architecture and acoustical engineering. Though much of the interior design concentrated on fulfilling the critical demands of recording, the architects also produced a high-quality environment for listening to music and relaxing between recordings. The actual recording studio is joined by a piano room, a control room, and a listening room, all of which are located on Houston's 11-acre estate in Mendham, N.J.

While the listening and control rooms were retrofitted into an existing building on the site, the recording area was housed in an entirely new structure, deemed necessary by the acoustical requirements. These requirements also informed the selection of materials based on their sound-absorption qualities: Hardwood maple was used in combination with slate flooring and acoustical wall and ceiling panels to create the optimal recording environment. Studying the relationship of geometry to acoustics also helped to shape the space: “Low-end” control was enhanced by stepping down the ceiling in a chevron pattern.

In addition to responding to the technical demands of the recording effort, the architects worked to create a comfortable, relaxed environment. Skylights in the voice room provide natural light, and mechanical-shading devices allow Houston to control the brightness of her work space. Also, the studio features a luxurious use of millwork, mullionless glass, and specialty task and cable lighting.

1 Purple slate and hardwood maple flooring provides optimal conditions in the recording and piano rooms.

2 The control room houses state-of-the-art equipment, which was designed for the space by Houston production engineer Jim Zumpano.
A separate structure was added to an existing building to house the recording and piano rooms.

A listening room supplements the recording and control rooms.

PROJECT Whitney Houston's
Project Studio, Mendham,
N.J.

CLIENT Whitney Houston and
Nippy, Inc.

ARCHITECT Russ Berger Design
Group, Dallas (Russ Berger,
Robert Truax, Johnson
Knaazle, Richard Schrag)

CONTRACTOR Consolidated Con-
tracting Corporation

CONSULTANTS Brad Silver-
Smith, H.D.A. (project con-
struction manager); Jim
Wile, Comprehensive Technical
Group (technical equipment
and wiring); Barbara
O'Toole, A.E.C. (acoustical
finishes)

PHOTOGRAPHER Doug
Thomilensou
Home on the River

By Vincent P. Hauser

As the architects and developers of the restoration of the historic Exchange and Greengate Buildings (see T/I, March/April 1994), Lake/Flato Architects of San Antonio faced a two-part challenge. As developers, how could they best determine the market for downtown housing, and as architects, how could they best respond to the resulting budget? By combining local financing incentives and tax credits available for historic buildings with a restrained approach to design, they were able to build 42 new apartments and add specialty retail and restaurant space along a relatively neglected portion of the Riverwalk. By restoring the historic loggia entrance to the Greengate Building, which is connected to the Exchange, and by adding river-facing decks to both buildings, the architects add to the urban identity of the project as well as providing amenities for residents, downtown workers, and tourists.

The structure was originally constructed in 1925 as the Builder’s Exchange, and was designed by San Antonio architect George Willis (1879–1960) in association with Emmett T. Jackson. George Willis was born in

1 The Exchange Building, located on San Antonio’s Riverwalk, was originally designed by George Willis.

2 The restored loggia provides a sheltered entrance to the Greengate Building.
Chicago, and was a draftsman in Frank Lloyd Wright’s studio from 1898 to 1902 prior to joining the office of Arlee B. Ayers in San Antonio. The subtle Chicago-school rhythms of the masonry piers and and the more exuberant detailing of the cast-stone cornice reflect his early training in both studios, and provide a counterpoint to the more simply detailed apartments. Commenting on the urban-design issues raised by this award-winning project, 1995 TSA Design Award juror Bruce Kawabara states, “What is being done here (as an investment) is probably more important than any single design element.” Providing a mix of affordable and market-rate housing, the Exchange and Greengate Buildings demonstrate what can be accomplished with a relatively limited budget.

PROJECT The Exchange and Greengate Buildings, San Antonio
CLIENT The Exchange Group 1993 Ltd.
ARCHITECT Lake/Flato Architects, San Antonio
CONTRACTOR Stokely Construction, San Antonio
CONSULTANTS Reynolds, Sibla, Hatter, Chetter & Roll, Inc. (structural engineering)
PHOTOGRAPHER Lake/Flato Architects
Home Sweet Fortress

By Joel Warren Bara

Ford, Powell & Carson restauraron y reconstruyeron La Ciénega, una hacienda fortificada en las montañas Chinati. La Ciénega parece un fuerte, por sus torres y patio interior. La construcción consiste de paredes de adobe y techos de vigas. La estructura, de 120 años, ha sufrido cambios a través su existencia, pero los arquitectos, en su renovación, retornaron el edificio a su forma original. La acequia de la hacienda también fue restablecida.

1. The fortified residence has been in continuous use since the 1870s.
2. Cottonwood vigas were used in the restoration of La Ciénega.

FORD, POWELL & CARSON won a 1995 TSA Design Award for its work in restoring and reconstructing La Ciénega, a fortified ranch residence near Marfa, in the foothills of the Chinati Mountains. Constructed in the 1870s, when warfare between European settlers and indigenous Indian peoples was a constant threat throughout West Texas, La Ciénega is one of three fortified residences built by pioneer Milton Favor. Ford, Powell & Carson restored another of Favor's projects, El Fortín de Cibolo, several years ago. Rechristened the Cibolo Creek Ranch, it won a TSA Design Award in 1994.

La Ciénega looks like a fort, with its hollow-square footprint, single salleyport, and two corner towers. Constructed in the historic Spanish-Mexican vernacular of adobe walls and ceilings of cottonwood vigas, its residential spaces line the eastern and southern walls, opening onto the sheltered courtyard. The property passed into the the hands of the Greenwoods, a ranching family, in the 1920s; family members later patched fallen adobe walls with wood and added a school house and other structures.

In restoring the project, the architects removed these additions and alterations, taking the structure back to the form shown in Historic American Building Survey (HABS) drawings created in the 1930s. The HABS drawings also allowed them to recreate the project’s period doors and windows. The acequia—the stonelined water canal that had been La Ciénega's lifeline for over a century—was also restored, along with the labyrinthine four-foot-high dry-stacked stone walls built over the years as goat pens and storage areas.

Now La Ciénega serves as a guesthouse for a nearby ranch headquarters.
Two-story towers mark the southeast and northwest corners of the house.

An outdoor dining area has been set up outside the walls on a stone patio.
Lofty Transformation

By Mark Forsyth

Using the existing shell structure of three separate buildings and one abandoned foundation, the renovation of the Parkwood Lofts transformed a garden-apartment complex built in the 1960s into modern, loft-style apartments. Designed by Ron Wommack, Architect of Dallas, the 23-unit complex was constructed by gutting the existing one-bedroom units, reorienting the front doors to face the street, and enclosing walkways and porches to add rentable area to the property. The project, which is located near downtown Dallas, received praise from TSA Design Award juror Enrique Norten who said, “It is important to recognize the role that developers can play in increasing the downtown housing stock by putting money back into the city.”

The reorganization created units featuring an upstairs bedroom area with a bathroom, and a living room, kitchen, and powder room on the lower level. The simple rectangular building was decorated with glass-and-metal canopies to redefine the visual identity of the dark grey brick and white stucco exteriors.
The adobe brick exteriors were painted dark grey, and the newly enclosed areas and south building were covered in white stucco.

The interiors of each apartment offer open space and volume as the primary luxuries.

Three existing structures and one new building were joined to create the 23-unit complex.

PROJECT Parkwood Lofts, Dallas
CLIENT Alan McDonald, Parkwood Development
ARCHITECT Ron Womack, Architect, Dallas
CONTRACTOR Parkwood Development, Dallas
CONSULTANTS McHale Consulting Engineering (structural engineering)
PHOTOGRAPHER James F. Wilson, Dallas
Botanical Garage

By Susan Williamson

A carport and greenhouse addition to a 1920s cottage in Dallas was the winner of a 1995 TSA Design Award. The 300-square-foot project, by Max Levy, Architect of Dallas, involved inserting two new structures onto a very tight site dominated by a mature flower garden. Because of the restrictions imposed by the site and to avoid a major impact to the garden, the owners asked that the carport and greenhouse functions be consolidated into one structure. To make the project even more challenging, they asked that the architect avoid the typically utilitarian form of such building types; instead they asked for a garden pavilion.

The architect responded with a pair of simple structures anchored by a stuccoed concrete-block wall. A “lean-to” greenhouse is attached to the side of the wall facing the house and garden. On that side, a flagstone terrace separates the addition from the garden. On the driveway side of the wall is a canvas-roofed, tent-like shelter for one car. The roof is supported by a frame of custom-fabricated, galvanized steel. Redwood slats, spaced to

1 A greenhouse is attached to the garden side of the stuccoed wall; a flagstone terrace separates the addition from the garden.
2 Galvanized-steel watering cans attached to the stuccoed wall are used to collect rainwater from the garage roof.
allow light to enter, enclose the garage on three sides (the fourth side is the stuccoed wall). A ten-foot panel of redwood slats, framed by more galvanized steel, hinges open to serve as the garage door.

The whimsical centerpiece of the project is a row of watering cans hung on brackets mounted on the stuccoed wall next to the greenhouse. From a practical point of view, the cans collect rainwater from the garage roof for use in the garden and greenhouse. On a less practical note, the row of cans provides a sculptural element of metal and shadow, the focal point of a project otherwise marked by simplicity and restraint.

The details were what caught the TSA Design Awards jurors' attention; Enrique Norten called them "wonderfully executed."

TA

PROJECT Carport and Greenhouse, Dallas
CLIENT R.S. Adams
ARCHITECT Max Levy, Architect, Dallas (Max Levy, architect; Susan Markey, project manager)
CONTRACTOR Lakeside Remodeling
CONSULTANTS Walker Structural Engineering (structural engineering)
PHOTOGRAPHER Max Levy
Pavilions and Stone

By Vincent P. Hauser

Lake/Flato Arquitectos diseñaron la residencia para la Familia Lasater, la cual fue construida en en una colina con vista a un bello paisaje natural. La casa está compuesta de varias unidades residenciales organizadas alrededor de patios con aspectos japoneses. Estos unos patios fueron diseñados antes que las viviendas, con el propósito de que promuevan la máxima ventilación natural. Los dormitorios y áreas privadas fueron integradas a la pendiente del terreno, y a su vez forman las espacios exteriores habitables.

1 Sealed and waxed sandstone floors complement the white oak wall panels and limestone-block wall at the entrance.
2 Limestone-block walls and trellises provide edges and frame views from the north courtyard of the Lasater Residence.

Taking advantage of a sloping site overlooking a wide river valley, Lake/Flato Architects of San Antonio has designed a 1995 TSA Design Award-winning residence for the Lasater family of Fort Worth. Beginning at the highest part of the site, the path from the garage leads through the house to a series of courtyards, around which the residential pavilions are organized. “Most of the exterior rooms were designed prior to the living areas themselves, which were then designed to catch the prevailing breezes,” says architect Ted Flato. The gardens themselves, created with the help of landscape architect Rosa Finsley, were designed with a Japanese sensibility, and incorporate native plants from Texas and the Southwest.

The design of the interiors, as well as the relationship of the living areas to the ground plane, originates from this point of view as well. “The bedrooms and the private areas of the house are recessed into the sloping site and appear as low-scaled stone walls that cut the site into a series of courtyards and streets,” says Flato.
3 Copper-roofed pavilions are arranged around outdoor rooms that open to the ravine at the lower part of the site, overlooking a wide river valley in Fort Worth.

4 The living area ceiling and wall panels installed by craftsman Mike Reznikoff are made of white oak finished with natural oils.

5 Site and floor plan.
The restoration and expansion of the 100-year-old Texas State Capitol was the winner of a 1995 TSA Design Award. The project, undertaken by a joint venture of 3D/International, Inc., of Houston, and Ford, Powell & Carson, Inc., of San Antonio, involved both the $84-million interior and exterior preservation of the historic 360,000-square-foot State Capitol building (see TA, Sept/Oct 1995) and the $69-million construction of a 661,000-square-foot underground extension (see TA, March/April 1993).

The Capitol's exterior was extensively repaired and restored, while interior spaces were returned to their original configurations by removing infilling and mezzanines, and by integrating mechanical systems into floors, ceilings, and walls. To relieve overcrowding in the historic building, new legislative offices, and meeting and hearing rooms, as well as support facilities and parking, were created in an underground extension on the north side of the Capitol. The extension, organized around a skylighted central gallery, is connected to the Capitol by an underground tunnel.
Where spaces had to be subdivided, a partition system integrating cabinetry, air conditioning, and glass panels was used to preserve the visual image of the historic spaces.

As shown on the site plan, the new underground extension is located to the north of the historic Capitol building.

The below-grade extension is connected to the Capitol through a system of pedestrian and service tunnels.
Flowering Procession

By Mark Forsyth

Awarded a 1995 TSA Design Award, the National Wildflower Research Center (see TA, July/August 1995) has created a new study and visitor’s center on its 40-acre site southwest of Austin, with the purpose of promoting the knowledge and use of native plant life. The 54,000-square-foot complex, designed by Overland Partners of San Antonio, includes research and education laboratories, a variety of gardens, a botanical library, exhibit space including an auditorium, and a gift shop. While the visitor’s complex opened only last April, the site was purchased in 1982 by the Center’s founder, Lady Bird Johnson.

The buildings are organized around a central courtyard and an observation tower that also serves as a large cistern. Semi-formal beds of native plants surround the buildings, while a nature trail leads visitors into the undisturbed landscape around the main complex.

Demonstrating an ecologically sensitive approach to the site, which sits within the restricted development confines of the Edwards Aquifer, the center operates an extensive system of rainwater-gathering devices, which collect approximately 450,000 gallons annually; this water is used for on-site irrigation. In addition, the buildings were positioned to minimize their impact on the existing landscape; only one tree was lost during construction.

Both the gardens and the buildings were designed to blend in with the surrounding environment. Native plants that dominate the Center’s landscaping and the indigenous stone, wood, and galvanized metal of the buildings reflect the Hill Country landscape.

1. Stone arches marking the entrance carry water to a round cistern; a pond collects water draining from the gift shop’s roof.
2. The National Wildflower Research Center is surrounded by plants indigenous to the Texas Hill Country.
3 The complex is organized around a central courtyard reminiscent of the San Antonio missions.

4 Arches constructed from native stone mark the entrance to the Center's auditorium.

**PROJECT**
National Wildflower Research Center, Austin

**CLIENT**
National Wildflower Research Center

**ARCHITECT**
Overland Partners, San Antonio

**CONTRACTOR**
Bartlett Cocke/Austin Commercial, Austin

**CONSULTANTS**
Dundie-Lundy & Associates (structural engineering), Barton Engineering, Inc. (mechanical and electrical engineering), Darrel Morrison (environmental consulting), Barry & Pittman (civil engineering), Abdullian Lighting design, J. Robert Anderson, Eleanor McKinney (landscape architecture), Donato Museum Services (exhibit design)

**PHOTOGRAPHER**
Greg Hurstley
From Jefferson to Wright

TRAVEL When I was in the fifth grade I looked up the term "modern architecture" in the encyclopedia. The definition was accompanied by just two photographs, both classic views of Fallingwater. The definition I did not understand, but the astonishing images I have never forgotten. My awareness of Monticello, on the other hand, did not begin with the same spontaneous combustion. More like an acquired taste, it has fermented slowly from about college on. Both buildings are houses, withdrawn far into the countryside to establish their rarified atmosphere. Fallingwater, in Bear Run, Penn., was designed in 1935 by Frank Lloyd Wright for Edgar Kaufman. Monticello, near Charlottesville, Va., was designed and built from 1769 to 1823 by Thomas Jefferson for his own use. Having carried on long-distance relationships with these two mythic buildings for years, I resolved last fall to make them the sole destinations of a trip taken alone.

I was soon reminded that the pleasure of firsthand architectural encounters lies not in confirming the familiar images and facts absorbed over the years from books, but in the unexpected details and nuances, the warm pulse of reality that evades capture by a thousand cameras. What I sought on this trip was not the view of the window, but finally, the view from the window.

Early on a beautiful, cloudless morning I arrived at the foot of Jefferson’s beloved mountain, and boarded one of the buses that shuttles visitors up to the house at the top. As the bus spiraled upwards through the primeval woods, I thought about the wilderness in which this sophisticated outpost was created. In Jefferson’s time the 130-mile trip from Washington, D.C., to Monticello took at least four days and required the fording of several rivers. Suddenly, swinging around the last incline to the mountaintop, I caught a fleeting glimpse of the top half of Monticello’s dome above the treetops. In the autumn sunlight the dome was the color of bone, suggesting a vast cranium.

The bus left me at the garden gate that stands on axis with Monticello’s front door. Surprisingly, one is not greeted by the familiar domed west elevation that we all know from the tail side of a nickel. Here instead is a simpler east facade, a symmetrical architectural remembrance of a golden classical past. Attracting attention atop the ridge of the entry portico is a unique tin wind vane that pivots on a cross-braced wooden frame painted white. The rod of the vane extends down through the roof to a dial on the ceiling so the wind direction can be read from the portico’s shelter. It is quite revealing of the American character that this relatively small utilitarian device is of equal power in our mind’s eye to the entire formal facade of the building—pediments, columns, bricks, and all. From the garden gate one can see a dual theme that is to be repeated everywhere, outside the house and in: a lofty idealism of pure form and calculated proportion, brought down to earth through intimate, inventive human details. Not a bad architectural formula, even for us today.

Touring through the house, one sees at every turn the evidence of a probing architectural intellect. Each room is an experiment in classical form and ornamentation, and Yankee improvisation. Although Monticello’s classicism does convey a timelessness, it is Jefferson’s boyish tinkering that gives this antique building its eternal youth: the double French doors that open in unison when one is pushed; the rotating dining room door with serving shelves mounted on one side; the ladder that converts to an unobtrusive pole by folding one side into the other—the domestic contrivances are numerous and well known.

Less well known is the fact that all of the bedrooms in the house are unobstructed by beds. Jefferson tucked the beds into wall alcoves, trundle-style, leaving the square, rectangular, or octagonal shape of each bedroom clear. The resulting sensation of geometry is intensified by the fact that the bedrooms are small, they are sparsely furnished, and their dark oak floors pop out visually against plain
light walls. To the modern eye the crisp effect is marvelous.

Jefferson tinkered not only with domestic gizmos and spatial strategies, but also with the scale of various architectural details. I was amused, for example, by his treatment of moldings made large and muntins made small. Most of the door casings and base trim are dramatically overscaled for the doors and rooms they frame. The result is a playful expressiveness, implying that each door is a ceremonial passageway, and that each room is of a stature far beyond its actual size. Charles Moore and Robert Venturi come to mind. By contrast, the rails, stiles, and muntins of the

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hills, bordered by vast dark woods that heave

up at dizzy angles, and there's even an occa-

The dome at Monticello is crowned by an oculus that is glazed with a single pane of glass, a four-foot disk thicker in the middle and thinner on the edges. windows and doors have been honed down to stunningly delicate proportions. This is apparently the result of a mind fascinated by the tug-of-war between refinement and physical performance. When I compare Jefferson's very appealing minimalist muntins to the beefy dimensional imperatives of today's millwork shops, and when I consider that these muntins have been happily doing their job for 200 years, my skepticism surrounding some aspects of "progress" moves up a notch.

Before this trip I had always regarded American colonial architecture as a rather dry style, withdrawn from nature by a preoccupation with its own rigid rules. This prejudice left me unprepared for Monticello's pervasive earth-

iness. First, there are the building's reddish bricks rising from the mountain's reddish soil. Although brick made on-site was once commonplace, the sight of such directness today has a penetrating effect upon the viewer.

Secondly, there are the famous triple-hung windows. Present in every ground-floor room, their sills are at floor level, and with their sashes slid up overhead, they transform into doorway-size openings. In its day, with all its gridded panes retracted, the building must have resembled an enormous open-air garden pavilion, an occasional bird flying clear through.

Thirdly, there is the way the building is sited. It does not merely sit on the land, but is imbedded into it in such a way as to suggest another famous building dear to most of us. When the Kimbell Art Museum was completed, I was amazed to discover that Kahn had sculpted a split-level situation out of a seemingly flat site. This brilliant strategy served artistic effect: By collecting cars and "servant spaces" at the lower level, he freed the galleries above to celebrate in the light. Likewise, Monticello at first appears to be a one-story structure resting on a level site. But along the north and south sides of the house, Jefferson fanned the grades to fall away with the hillsides, opening up a lower level to accommodate stables and numerous other support functions. As at the Kimbell, the upper level is released to glory in a seemingly uncumbered existence.

A sizable portion of this glory is possessed by the building's remarkable promenades, which roof two-thirds of the utilitarian spaces below, the remaining third being covered by the house itself. They extend out from Jefferson's study on the south and the dining room on the north like great spindly L-shaped arms, embracing the mountain top with a passion. I noticed that the tourists seemed to linger on these promenades longer than anywhere else on the site. This tendency is no doubt invited by the fact that the promenades' long, narrow proportions and wood decking have a carefree, nautical quality, and one is irresistibly drawn to lean upon the railing and lose oneself in the rise and fall of the landscape to the horizon. Incidentally, the wood decking rides atop a unique "pleated" metal roof that is entirely concealed from view. Rainwater trickles through the decking joints and is shed by the metal roof below.

Crowning the mountain is the building, and crowning the building is the dome, and crowning the dome is an oculus that is glazed boldly by a single pane of glass. To determine the diameter of the oculus, Jefferson apparently worked backward from the largest piece of glass available in his day. This would have been a four-foot-diameter disk formed by spinning molten glass on the end of the glass blower's tube. In cross section the disk was thicker in the middle and thinner at the edges, making it ideal for the shedding of rain water when installed flat over the opening. This remarkable detail is the only instance where Monticello's dual themes of ideal form and human ingenuity merge seamlessly into a single compelling moment.

Beneath the oculus is what Jefferson called his Sky Room, a faceted hemispherical volume buoyant with light. Through the oculus a shaft of sunlight traces the sun's journey across the floor, while around the exterior wall, enormous round pivoting windows frame views of trees tops. It is the most pure and powerful and mysterious room of the house. Its function has been debated for years: billiard room, library, playroom, guest room, or perhaps even just the resulting interior space of an exterior form needed to visually unify the building. However, after touring all of Monticello, a 50-year built record of Jefferson's tireless intensity, I was not so much troubled by the Sky Room's lost function as I was struck by its transcendent sense of calm. It is like the last paragraph of a great autobiography. How fitting that the room's principal view is up.

About six hours' drive northwest from Monticello is the rolling terrain of western Pennsylvania. It reminded me of the toy-like countryside found in Grant Wood's heartland paintings of the 1930s. Here are cornfields of corduroy perfection coursing over volupitous hills, bordered by vast dark woods that heave up at dizzy angles, and there's even an occa-
Today one aspect of the initial shock of Fallingwater is how old it is. We forget that this icon of modernism is a 60-year-old version of the future. If anything, its age heightens one’s sense of wonder. After walking through the woods, it’s like coming upon some technological treasure from a Jules Verne novel.

The effect of the initial shock of this building is how old it is. We forget that this icon of modernism is a 60-year-old version of the future. I do not mean this negatively in any way. If anything, its age heightens one’s sense of wonder about the place. After walking through the woods, it’s like coming upon some technological treasure from a Jules Verne novel: You know the object has a compelling air of the future about it, yet it is rendered in warm, old-fashioned materials. There is something irresistible about this architectural blending of the 19th and the 21st centuries. Perhaps we would do well to consider this recipe if modernism is ever truly to win over the public’s sensibilities.

There is a dramatic contrast between the building’s bold overall design and the intimate entry that one quietly discovers around on the side. In our own era, a building’s entry is often overemphasized, pretentiously pumped up beyond any other experience that the building has to offer. Fallingwater’s front door, by comparison, is preceded by a calm space, enfolded by thick stone walls, its dimensions admitting only one visitor at a time. It is as though the building has just performed to a standing ovation, and now it is welcoming us individually, backstage, in the most personable manner. The effect is far more dramatic than an overtly dramatic entry would have been.

Fallingwater’s floor plan has always struck me as an enormous abstracted fireplace, big enough to live in. How ironic when I first set foot inside the entry to be greeted by the smell of a fireplace. In person, the spreading masonry forms of the house’s three fireplaces do seem to embrace all the living spaces and harbor the built-in cabinetry and seating.

The wood grain of all the cabinetry is run horizontally, visually extending the horizontal ledgestone’s reach around the spaces. The entire house, including the terraces, is paved in flagstone, and because this stone runs straight into the fireplaces without a change of level or material, one seems to be standing upon the hearth wherever one goes.

Touring the house, inside and out, one can detect a faint drop in several cantilevers, but generally the building appears to be in beautiful condition. Having read for years of battles waged against the building’s deterioration, this was a welcome discovery. I witnessed an example of the curatorial zeal that keeps the place pristine when I was admitted to the mechanical room. This room lies at the base of the vertical stone mass that visually anchors the thrusting cantilevers. There I came upon two attendants, attired in kelly-green golf shirts (complete with Fallingwater “designer” logo).
Armed with feather dusters, they were studiously dusting each pipe and duct leading to and from the furnace.

Paul Rudolph once observed that the entire house, including its spreading terraces, could all fit within a typical 50-by-150-foot suburban lot. So large does this building loom in our collective architectural consciousness, that this assignment of overall dimensions gives us pause. Even when visiting the building, one is never sure of the size of the place. The entry sequence through the woods is like viewing an architectural Cheshire Cat, appearing, disappearing. Standing across the stream from the house you think you have an idea of its scale, then someone walks out onto a terrace and your estimate shrinks by 50 percent. Your perceptions are deceived by the terrace railings, which are only about 16 inches tall. This low height contributes markedly to the exhilaration of being on the terraces (building officials please note: 100,000 people visit this place each year, and nobody has ever fallen overboard). In terms of scale inside, I noticed the smallest rooms carried the biggest impact. They possess all the characteristics of the larger spaces, only more concentrated. Had they been formed conventionally with four walls meeting at four corners, their limited dimensions would have felt discouraging. Instead, they are loosely formed by shifting planes of stone, plaster, and glass, some of the planes extending on outside beyond the glass line. By holding the ceilings unusually low, these exploded compositions are held together, and the compression of the spaces arouse an almost primal pleasure of being sheltered. My guess is this involuntary stirring arises from some animal instinct, lying dormant in us all under tons of blank sheetrock.

After a day of absorbing exploration, it suddenly dawned on me that I had not seen The entire house, including the terraces, is paved in flagstone, and because this stone runs straight into the fireplaces without a change of level or material, one seems to be standing upon the hearth wherever one goes.

the famous view from below the falls. I followed the proper path downstream and, nearing the hallowed vantage point, was halted by a sign that read, “Trail Closed Due to Erosion by Foot Traffic.” I thought of the saint’s statue whose toe has been worn away by the kisses of loyal pilgrims. And then I recalled a detail at Fallingwater’s entry. Just outside the front door there is a small square pool with a single jet of water. Dangling from a chain above the pool is a bar of soap. The docent told me the Kaufmans enjoyed barefoot walks in the woods, and could wash off their feet here before returning indoors. This explanation notwithstanding, the sacred overtones are inescapable. At some point Wright designed a small mediation chapel intended for the grounds nearby, but it was never built. Perhaps after a few seasons on their terraces above the falls, the Kaufmans realized that a chapel would not be required after all.

Bear Run flows into the Youghiogheny River, which feeds the Monongahela, which empties into the Ohio, which merges with the Mississippi, which flows all the way down to the Gulf of Mexico. On the flight back to Dallas, I dwelled upon these facts, a stream of consciousness, you might say. Somehow this speeded the journey home. As we prepared for landing, I happened to notice for the first time the stains of Monticello’s red soil on the cuffs of my khaki slacks. I am happy to say that the stains have not come out at the cleaner.     

Max Levy

Max Levy, winner of a 1995 TSA Design Award (see page 62), is an architect practicing in Dallas.

Since the early 1970s, Mexican architects have developed something of a “coastal style” in sympathy with this natural and man-made environment. The style has apparent affinities with the planar colorism of Barragan and Legoretta but otherwise rejects any modernist reference in favor of the vernacular. The brief text gives a little background on this development, but the book is mostly about the pictures. The luscious photography captures romantic vignettes from over 30 homes, although none are fully described with plans or comprehensive photos. The book is essentially a visual feast of color, conveying the feeling rather than the knowledge of these places. It’s not hard to imagine languorous days spent in shady arbors overlooking the sea, fruit drink in hand, an inspiration to simplicity of space, form, and life.

Gerald Moorhead, FAIA

Gerald Moorhead, FAIA, a TSA contributing editor, is an architect practicing in Houston.
Garden Gateway

CRAFT A new entrance gate to the Zilker Botanical Gardens in Austin was installed this summer, consummating a two-year effort by local garden clubs and the City of Austin. Designed by Austin architect Lars Stanley, the new gate blends the spirit of the art nouveau style and the botanical sensibility of Charles Rennie Mackintosh with designs of familiar Texas flora and fauna. The result is very satisfying, and well-suited to the gate’s setting.

The Zilker Botanical Gardens feature native plant and xeriscape gardens, water gardens designed by Isabu Taniguchi, and an extensive rose garden. The entry-gate project was funded by a substantial grant from the Austin Area Garden Council, the City of Austin Art in Public Places Program, and funds from the Austin Parks and Recreation Department (PARD). The design, fabrication, and installation of the gate is the result of a lengthy collaboration between ironsmiths Stanley and Louis Herrera, also of Austin.

Beginning with a concept initially proposed by Tom Randall of PARD featuring only desert plants, Stanley and Herrera, both well-known locally for their metalworking and fabricating expertise, were asked to collaborate on the completion of the project. At the suggestion of the Garden Council, they eventually expanded the theme of the design to include representations of a diverse range of plants, centered around a representation of a live oak tree. Under the shade of the tree, English ivy and cast iron plants are represented. Moving away from the symbolic shade of the tree, a variety of native grasses are represented, until one reaches the edge of the gate with its prickly pear plants. The design is intended to suggest a range of ecosystems, as well as some of the favorite plants at the Gardens, according to City of Austin horticulturist Valeri Edelbrock. Upon close inspection, one finds leaves of red oak, Spanish oak, and mountain laurel trees attached to the live oak tree branches; identifying the leaves will undoubtedly become a part of the many educational programs offered at the Gardens.

The completed gate was installed on stone piers, built as part of a separate contract, that unfortunately compete with the subtle rhythms and line of the gate itself. Taken as a whole, the new gate makes the most of a good opportunity, and is another successful effort on the part of the Art in Public Places Program. Coordinating the many interested garden clubs, political entities, collaborating artists, and the multiple funding sources and contracts has become an art form itself. Zilker Gardens are operated by the city of Austin, and a consortium of 40 local garden clubs organized as the Austin Area Garden Council.

Vincent P. Hanser
Products and Information

The companies listed in "Products and Information" are exhibitors in the 56th Annual TSA Design Products & Ideas Exposition in Dallas, Nov. 2-4.

Acordia Benefit Services, booth 4: Acordia offers TSA-endorsed, health-insurance programs and TSA-endorsed, workers' compensation plans.
Circle 11 on reader inquiry card

Acme Brick, booths 81 and 88: Acme, the world's largest U.S.-owned brick company, is also the exclusive agent for the BIP Grid System used in mortarless-glass-block installations.
Circle 16 on reader inquiry card

Acoustics & Specialty Systems, booth 54: Acoustics & Specialty Systems represents manufacturers of commercial finishing systems. They represent Polygal U.S.A., Inc., a manufacturer of polycarbonate, structurally-sheet glazing; Apro Acoustics, producers of metal acoustical panels with a durable and environmentally-friendly, powder-coating finish; and Triarch Industries, suppliers of Duroplex-acrylic wall coatings that provide a durable finish with combinations of textures and colors.
Circle 170 on reader inquiry card

Alenco, booth 26: Alenco is a Texas-based manufacturer of commercial, aluminum window systems. They offer both commercial- and heavy-commercial-rated products.
Circle 179 on reader inquiry card

Circle 223 on reader inquiry card

Alloy Casting, booth 73: Alloy Casting provides custom architectural-aluminum castings, turn-key service from drawings through creation of master patterns, and fabrication of tooling and casting of final products. Sizes range from 1"-by-1"-by-1" to 48"-by-48"-by-5", and from 0.1 pounds to 3.0 pounds. Other services provided include wood carving, tooling, powder coating, and finishing. Alloy offers free catalogs and brochures.
Circle 232 on reader inquiry card

American Marazzi Tile, booth 113: American Marazzi Tile is a manufacturer and distributor of ceramic tile. It produces and sells a full line of ceramic floor and wall tiles, natural-stone tiles, marble, granite, slate and limestone, and also sells handpainted and decorative tile, mosaic, and glass block.
Circle 171 on reader inquiry card

American Tile, booths 89 and 96: American Tile carries a large inventory of quality ceramic tile, marble, and granite.
Circle 172 on reader inquiry card

Ameristar Fence Products, booth 65: Ameristar is a manufacturer of Aegis residential and industrial ornamental-steel fencing and gates as well as aluminum transport-canoe-liver and estate-entry gates.
Circle 173 on reader inquiry card

AMICO, booth 35: Alabama Metal Industries Corporation has served the building-products industry for over 55 years. The company offers metal lath and accessories, vinyl-head accessories, vinyl custom extrusions, security mesh, Secura-Lath, Ornamental Light-gauge steel framing, Stay-Form, PVC Waterstop, and Screen-Joint.
Circle 174 on reader inquiry card

APCO Graphics, Inc., booth E: APCO has been a manufacturer of architectural-sign systems since 1966. The company presents SignTrack, a unique system with countless applications, and can create sign holders, directories, poster holders, directional signs, score guides, and suspended-ceiling signs. This system assures the interchangeability and fit of replacement-sign inserts.
Circle 175 on reader inquiry card

Azrock Industries, Inc., booth 77: Azrock is a top-quality, resilient-flooring product available in a wide array of colors and patterns. The Houston warehouse contains the largest inventory of VCT in North America.
Circle 176 on reader inquiry card

Brock Manufacturing, booth C: Brock is a full-service supplier of domestically-quarried granite for building facing (interior and exterior), paving, landscape areas, and industrial uses. The company's product line also includes slabs and thin tile.
Circle 177 on reader inquiry card

Chemical Specialties, Inc./CSI, booth 92: The new ACQ Preserve pressure-treated wood attracts environmentally conscious customers and repels rot and decay. It contains no arsenic or chromium preservatives and is accepted by the ICBO and AWPA. The guaranteed product weather to a pleasing brown color, not a gray tint.
Circle 178 on reader inquiry card

Chempro Technologies, Inc., booth 40: Chempro offers advanced coatings for concrete, brick, and masonry, as well as water repellents and stains for above-grade walls and decks.
Circle 179 on reader inquiry card

Cold Spring Granite Co., booth 1: Cold Spring is a full-service supplier of domestically-quarried granite for building facing (interior and exterior), paving, landscape areas, and industrial uses. The company's product line also includes slabs and thin tile.
Circle 180 on reader inquiry card
Collins & Aikman Floorcovering, booth 64: Collins & Aikman specializes in manufacturing carpet tiles and six-foot roll goods for the commercial market. The products are noted for their superb style and design features. These flooring systems provide long-term appearance retention.
Circle 45 on reader inquiry card

Crossville Ceramics, booth 97: Crossville Ceramics is a manufacturer of fine porcelain tile. Circle 180 on reader inquiry card

Drive-By-Plotting, booth 115: Drive-By-Plotting provides CAD plots and blueprints, scanning, drawing conversions, and fast, efficient CAD service. Circle 76 on reader inquiry card

Elgin-Butler Brick Co., booth 57: Elgin-Butler offers structural, ceramic-glazed facing brick and tile, featuring a new architectural trim system in Stonetile-Ultramatt glazes. Circle 18 on reader inquiry card


Eternit, Inc., booth 37: Eternit Slatex, a mineral-fiber-cement roofing slate, is an affordable option to natural slate. Eternit Siding, a fiber-cement siding, offers a cedar appearance. Circle 182 on reader inquiry card

Eurolac Trading Co., booth 43: An import company specializing in high-quality building stone, Eurolac represents Quartzile and Sandstone from around the world. Eurolac's products can be used for roofs, floor cladding, land sloping, swimming pools, or patios. Circle 183 on reader inquiry card

Featherlite Building Products, booths 59 and 60: Featherlite is a leading manufacturer of concrete masonry units in various sizes, textures, and colors. Products include Astra-Glaze and Burnished masonry units, Texas Quarries Limestone, Stonewall Select mortarcless retaining-wall systems, and American Polymer's Graffiti Solution System. Circle 6 on reader inquiry card

Guardian Industries Corp., booth 114: A leading international manufacturer of flat-glass and fabricated-glass products used in architectural and automotive applications, Guardian supports the development of innovative solutions for architectural and automotive needs. Circle 185 on reader inquiry card

Hoover Brothers, Inc., booth 47: Hoover Brothers is a distributor of auditorium seating, lecture-room seating, telescopic bleachers, science casework, library furniture, and computer furniture. Circle 184 on reader inquiry card

Jewell Concrete Products, Inc., booth 98: Jewell provides concrete-masonry products including the Keystone Retaining-Wall System, which features a secure, interlocking fiberglass-pin system and efficient installation; Decro-Face exposed-aggregate units and complementary split-face units; and Aurora fencing for both privacy and long-term value. Circle 7 on reader inquiry card

Johnson-Kelley Associates, booth 102: Johnson-Kelley offers plan-review services for the Texas Department of Licensing and Regulation for compliance with the State of Texas Architectural Barriers Act and Technical Requirement Sheets. Circle 187 on reader inquiry card

Johnsonite, booth 29: Johnsonite features rubber and vinyl flooring and flooring accessories, cove base, stair treads, and moldings with Safe-T-First products. The company has won various awards for product innovation and excellence including the ASID Interior Design Product Award, the IBD/Contract Product Design Award, and the IFMA Award. Circle 188 on reader inquiry card

KETIV Technologies, booth 13: KETIV is a leading developer of architectural software for AutoCAD. ARCHIT is a user-friendly, object-oriented architectural program based on the "Draw-Its-Own" concept, which includes an extensive library of 2D and 3D symbols along with utilities and routines for commercial, institutional, and residential architecture. The system is user-customizable and flexible. Circle 56 on reader inquiry card

Kohler Company, booth 3: Kohler provides plumbing fixtures, faucets, stand-by generators, and air-cooled engines. Circle 189 on reader inquiry card

Lawton Reprographic Centers, booth 2: Lawton Reprographics offers a variety of services including Diazo printing, high-speed plotting, digital printing, color CADD plotting, color PostScript printing, color photography, mounting, and laminating. Circle 58 on reader inquiry card

IPC Door and Wall Protection Systems, booth 52: IPC is a manufacturer of wallguards, handrails, corner guards, and kick plates. Circle 186 on reader inquiry card

International Conference of Building Officials, booth 71: ICBO is the publisher of the Uniform Building Code and the Uniform Mechanical Code and co-publisher of the International Plumbing Code, International Private Sewage Disposal Code, and the Uniform Fire Code. Membership, design-evaluation/consulting services, and seminar information is available. Circle 31 on reader inquiry card

IPC Door and Wall Protection Systems, booth 52: IPC is a manufacturer of wallguards, handrails, corner guards, and kick plates. Circle 186 on reader inquiry card
LIFETILE Texas/Boral Brick Co., booths 78 and 79: Lifetile offers a selection of concrete roof tiles featuring distinctive profiles in a range of architecturally compatible colors. The roof tiles are fully warranted, fire resistant, and engineered to provide maintenance-free protection. Boral is America's largest manufacturer of face brick in a large variety of colors, sizes, and textures.
Circle 15 on reader inquiry card

Ludowici Roof Tile, Inc., booth 27: Ludowici features clay roofing, free protection. Circle 19 on reader inquiry card

Maxxon Southwest, Inc., booth 34: Maxxon offers a complete line of quality underlayment for new construction, renovation, and repair. Products include Gyp-Crete, Gyp-Crete 2000, Dura-Cap, Level-Right, and Acousti-Mat. The company also features a complete line of in-floors radiant floor-heating systems for residential and commercial applications.
Circle 191 on reader inquiry card

Mohawk Commercial Carpet, booth 41: Mohawk manufactures woven and tufted carpet, wall covering, and indoor/outdoor mats. The company features creative design and styling as well as reliable performance, quality carpets. A new introduction to the line is a non-adhesive carpet-installation system called Hookloop.
Circle 192 on reader inquiry card

North American Tile & Stone, booth 85: This company is an importer and distributor of ceramic tiles, marble, limestone, granite, and glass block. Brands offered include Buchtal, Caesar, ICI-Nova, Exceed, Bisazza, Empress Green Marbles, Juira Limestone, Halquist Limestone, and Week Glass Block.
Circle 73 on reader inquiry card

OMC Industries, Inc., booth 37: OMC provides cast-bronze, brass, and aluminum architectural signage, plaques, letters, and logos for a variety of uses including building identification, dedication, and recognition, and ADA-compliance. Cast-engraved signage, municipal seals up to 6 feet in diameter, sculpted bas-relief castings, and reproductions of historic hardware are available.
Circle 22 on reader inquiry card

Pavestone Company, booth 83: This precast, modnite-concrete producer is dedicated to the production of segmental-pavers and retaining-wall units. Six regional manufacturing facilities distribute to 23 states making Pavestone the largest supplier of modular-concrete products in the U.S. The company utilizes state-of-the-art manufacturing equipment, civil engineers, and landscape architects to maintain a high level of product quality and technical expertise.
Circle 17 on reader inquiry card

Pioneer Plastics Corp., booth 32: Pioneer Decorative Laminates from Pioneer are a complete line of laminates featuring innovative designs and rich colors.
Circle 193 on reader inquiry card

Premier Specialty Distributing, Inc., booth 55: This company is the distributor for Avonite Solid-Surface products in Texas.
Circle 194 on reader inquiry card

PyroTherm, booth 15: PyroTherm features a unique blend of optimum-density mix for use in high-performance concrete masonry units. The product weighs less than ASTM "lightweight" units and offers reduced chipping, improved fire, thermal, and noise reduction performance, and high compressive/tensile strength-to-weight ratios.
Circle 24 on reader inquiry card

Security Manufacturing Corp., booth 18: This company is a manufacturer of multi-mail mailboxes with exclusive state-of-the-art, baked-on, polyester-powder coatings, a five-year warranty, front or rear load, all-aluminum construction, and USPS approval.
Circle 195 on reader inquiry card

Simpson Strong-Tie Co., Inc., booth 8: Founded in 1914, Simpson is a manufacturer of wood-to-wood and wood-to-concrete connectors. With manufacturing facilities located in McKinney; San Leandro, Calif.; Brea, Calif.; and Columbus, Ohio, field representatives throughout the U.S. are available to answer product-application questions and to participate in seminars dealing with structural-constructor requirements in wood-to-wood and wood-to-concrete construction.
Circle 244 on reader inquiry card

Southern Building Code Congress, booth 5: Southern Building Code Congress is now a contract provider for the Texas Department of Licensing & Regulation, providing barrier-free plan review, public-safety testing, and evaluation services.
Circle 29 on reader inquiry card

Southwest Terrazzo Association, booth 93: This association is composed of terrazzo contractors and suppliers specializing in the installation of poured-in-place terrazzo.
Circle 99 on reader inquiry card

Stone Products Corp., booth 10: Cultured Stone features the look of natural stone, but is less expensive. Over 50 colors and textures are available. The product is lightweight and requires no additional foundations.
Circle 245 on reader inquiry card

Texas Kiln Products, Inc., booth A: Texas Kiln Products offers flooring, molding, and lumber from diverse native Texas woods, including richly colored, hard, stable native pines; mesquite; consistent white-heart pecan and Texas red pecan; dense lobolly pine; patterned, outdoor-ready tidewater red cypress; and rare, 100-year-old longleaf pine. The resources are conserved with computer-controlled cutting and the use of otherwise-destroyed woods.
Circle 196 on reader inquiry card

(continued on page 78)
Resources

FUEL SYSTEMS PLANT
(pages 44–45)
Reinforced concrete:
Lehigh; steel box columns; Paden; precast concrete
walls: Hoosier Precest; flooring: Master Builders
Colorchron; steel decking:
Vulcan; fabric tackboard:
Snap-Tex, Knoll; masonry
units: Devering, Trewnyth;
gypsum board: USG; windows:
Kawnee; skylights:
Linex; doors: Kawnee,
Steelcraft; acoustical doors:
Kieger; steel treads:
Lorsel; carpet: Prince
Street Technologies; ceramic
tile: American Olean; carpet
tile: Milliken & Company; tile
pavers: Fiandre; ceiling surfacing:
USG; insulation:
Owens Corning; roof drainage:
J.R. Smith; acoustic-concrete
units: Proudfloor; paint:
Sherwin Williams; hardware:
Hager, Yale; Norton, Caucasian;
raised-floor system: USG; elevators:
Amcor; stair treads: Paden;
handrails: Livers Bronze;
lighting: Halophane, Columbia;
bacocular; electric distribution:
B-Line, Walker, Siemens; lavatories;
water closets: American Standard; floor drains:
J.R. Smith; plumbing fittings:
T&S Brass; flush valves:
 Sloan; toilet stalls:
Accurate Partitions; bathroom
accessories: American Specialties;
water fountains:
Sunvox; sprinklers: Grinnell;
boiler: Cleaver-Brooks; heat
exchangers: Bell and Gossett;
chiller: Trane; pumps:
Aurora; air-handling units:
Air Enterprise; environmental
control: Andover; furniture: Knoll; blinds:
Lavelor

BUTTERFLY CENTER
(pages 46–47)
Roof decking: Vulcan; roof
membrane: Chamberlin;
ostonework: Cangesei; curtain
wall: FRC/Facade, Inc.;
window coating: Velvac;
skylights: Plastics; entrance
doors: Door Pro; concrete
pavers: PaveX; expansion
joints: Belco; terrazzo: Ameri-
can Marble Mosaic; lay-in
ceiling: Armstrong; metal
ceiling: Gordon; waterproofing/sealsants:
Pecora, Tremco, Hydroyzo/Jeene;
paint:
Gleden, Polyvinyl; hardware:
Sargent; Slagle, Hager,
Tremco; emergency doors:
Total Door; window-washing
system: Swingstage; elevators:
Schindler; stairs/doors:
Ropp; handrails: Quality
Woodwork; stage lighting:
Alman; dimming and controls:
Electronic Theater Controls;
fiber optics: Fibretech; toilet-
stall partitions: Mill
Company; bathroom accessories:
ASI, Paul Allen Company;
air-conditioning systems:
Trane; entrance mats:
R.M. Leach (Athen); carpet:
Bentley, Mohawk

LASER TECH COLOR
(pages 48–49)
Doors: Timely; VCT:
Armstrong, Excellon; insulation:
Owens-Corning; gypsum
board: USG; paint:

What Its Worth, booth 51: This company features
antique longleaf heart-pine flooring, stair parts,
and dimensional lumber. Specialists in new and historical
restoration projects, What Its Worth provided antique
materials for a variety of projects including the National
Wildflower Research Center in Austin.
Circle 87 on reader inquiry card

William Stalter & Associates, Inc., booth 16: Wil-
liam Stalter is under contract with the State of Texas
Department of Licensing and Regulation to provide
(for privately funded projects) plan-review services for
Texas Accessibility Standards Compliance and inspections
for Texas Accessibility Standards Compliance.
Circle 249 on reader inquiry card

The Wiremold Company, booth 46: Wiremold is a
leading manufacturer of premise wire-management systems
for power, voice, data, video, and cable distribution,
as well as power-conditioning and surge-protection
systems. Wiremold systems provide flexible, accessible,
and cost-effective wire-management solutions.
Circle 250 on reader inquiry card

kitchen equipment: Hobart;
laundry equipment:
Wascomat; communication
system: Dukane; security sys-
tem: Westinghouse; lockers:
Medart; elevators: Dover;
lighting: Kim, Daybright;
electric distribution: Square D;
tubs, lavatories, water closets:
American Standard;
plumbing fittings: Speakman;
flush valves: Sloan; toilet
stalls: Sanymetal; bathroom
accessories: American Special-
ties; sprinklers: Reliable;
HVAC system: Trane;
carpet systems: Collins & Aimkan; portable lighting:
Nessen; furniture: Steelcase;
Vado; blinds: Vescon; door
hardware: Tal Tile

RECORDING STUDIO
(pages 50–51)
Aluminium wall surfacing:
RPG; maple veneer: RBGD,
Inc.; stretch-fabric track sys-
tem: AEC; fabric wall cover-
ings: Arc Comb, Design-Tex,
Momentum, Jack L. Larson,
Knoll, Maharam; noise-lock
acoustical doors: IAC; slate
flooring: Kiko’s Marble &
Granite; ceiling surfacing:
AEC, RPG; paint: Benjamin
Moore; hardware: Vesco;
Plmko, LCN; technical sys-
tems: Solid State Logic,
Studer, Quedest; lighting:
Leucos, Boyd, Modular, Ligh-
tology, LOB, Pathway; furni-
ture: RBGD, Inc.,
Neinenkemper; upholstery:
Spinneybeck; diffusers: RPG;
LMTs: RBGD, Inc.

EXCHANGE/GREEFAGATE
(pages 55–57)
Windows: Marvin Windows/
Fisher Millwork;
storefront windows:
Samuels; doors: Timely;
roofing: Mule-Hide; insulation:
Atlas; paint: Sherwin-
Williams; hardware: PBB,
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Circle 81 on the reader inquiry card
Toys for Christmas

As the holiday season approaches, our thoughts turn to fantasy and frivolity. What could be more fun than a movie that combines these virtues with some of our favorite visual references? Toys (1992, Barry Levinson, director, and Ferdinando Scarlottt, production designer) is such a film, our idea of a visual holiday. With intelligent architectural sets, object puns, and references to several early-20th-century art movements, Toys is reminiscent of those 1920s and 1930s movies where sophisticated film design and architecture converged. Every set is a well-considered design that fits into an overall unity of style with recurring themes.

Toys opens with the Zevo Toys Christmas pageant, a peaceful chorus set within a big cut-out model of Manhattan skyscrapers. Zevo Toys is a light-hearted operation where the manufacture of toys has merged into an overall condition of imagination, creativity, amusement, and merriment where work is play and play is work.

Situated amid rolling hills and waving bright-green grass, the Zevo Toys factory is an Architectonica-like composition of primary forms and colors with Bauhaus references: a blue, cylindrical tower, a yellow pyramid, and a red cube. Once inside, the fun begins with visual puns such as rolling stairs with trompe l'oeil stairs painted on the floor and a hill-like hallway with walls painted like the sky. The factory assembly lines hum with Euro-punk music and colored-plastic machinery, cinematic references to Metropolis (1926, Fritz Lang) and Modern Times (1936, Charlie Chaplin).

Our favorite space is the employee cafeteria, modeled closely after the Cinema-Ballroom at the Cafe Aubette (1926–28, Strasbourg, France) designed by Theo van Doesburg. The two-story space features a mezzanine balcony, side-aisle booths and diagonal graphics on the walls in a pale, primary-color scheme. Multi-colored tile work in the employee washrooms extends over the floor, walls, and ceiling, obscuring the volume and edges with eye-fluttering color. Both spaces are exemplary of De Stijl manipulation of spatial perception.

With Robin Williams playing Leslie Zevo, the late-owner's son, the light-hearted atmosphere is irrepressible. His uncle, frustrated General Leland Zevo (Michael Gambon), has been brought in by his dying father (whose beanie propeller is an indicator connected to his heart) to manage the factory. The General is intent on converting Zevo Toys to war (toy) manufacture. An internal hostile takeover ensues, and the fun turns serious.

Leslie and his sister, Alsatia (Jean Cusack), reside inside a toy, pop-up house. Rooms within rooms and inversions of indoor/outdoor space are recurring themes. Alsatia's office at the factory is a shadow-box set in a larger space, inside which she wears tabbed, paper doll clothes and molded-plastic wigs to test new designs. Her bedroom is located inside a larger room painted with sky and clouds and she sleeps under a huge mallard duck canopy. Their Grandfather's room is an army tent pitched within a large, paneled room with a fireplace.

In a white lab composed of large tiles covering the floor, walls, ceiling, and counter, "research" on joke items takes place. Gradually, the space implodes on Leslie and his colleagues as they examine blobs of fake vomit and they themselves are squeezed to make room for General Zevo's new war division. As the walls, in irregular groups of tiles, start to converge, Leslie exclaims, "We are being attacked by a crossword puzzle." General Zevo usurps the factory, expanding into other rooms to recreate the floor plan of the Pentagon inside Zevo Toys.

Dada influences are subtly pervasive in the movie, like Leslie's smoking jacket that actually smokes and his "body of sound" coat that emits different sounds with each movement. There are constant references to Rene Magritte throughout the film, culminating in Bowler-hatted Leslie and his sister performing a rock-music video featuring some of Magritte's object images such as the eye, the painted sky with clouds, and raining men in bowler hats.

"There is no reality it's just an illusion," sings Leslie and Alsatia. In the end, whimsical wind-up toys fight and win a pitched battle against miniaturized weaponry.

We have only touched on a part of the uniqueness and some of the architectural references in Toys; there is much more to be uncovered. Toys unfolds a design wonder world. We were surprised to find such an architectural film. Our holiday wish is to see more films with this caliber of design.

Yolita Schmidt and Gerald Moorhead, FAIA
Houston architects Yolita Schmidt and Gerald Moorhead, FAIA, write about movies in every other issue of Texas Architect.
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