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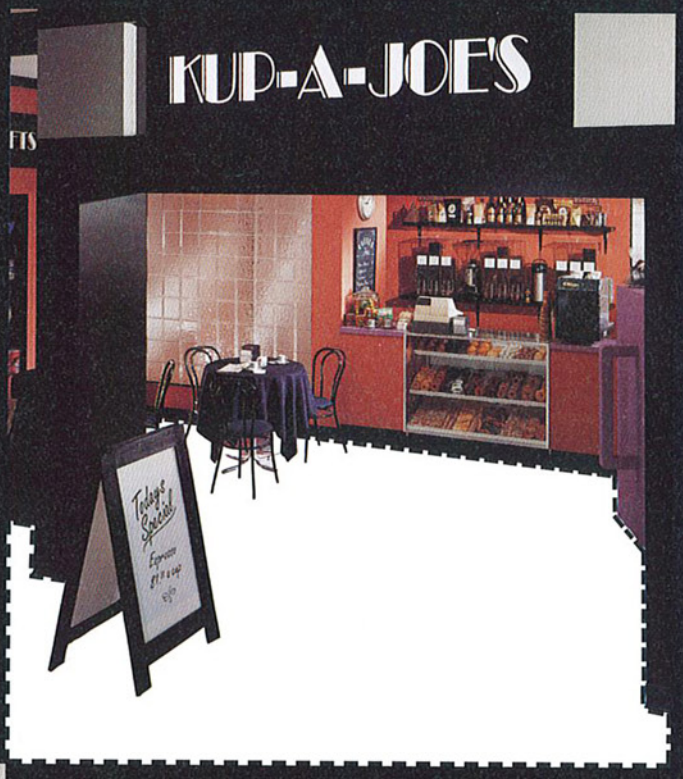

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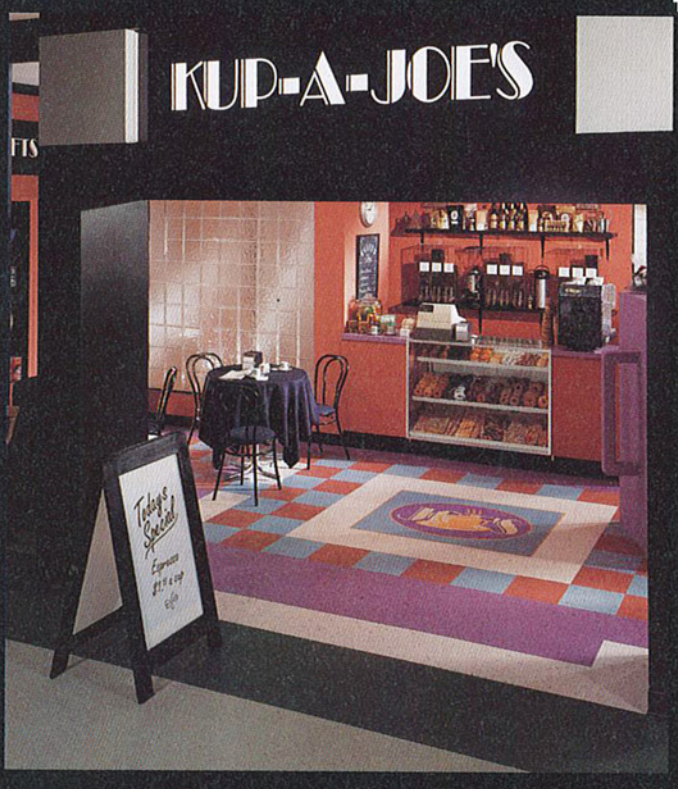

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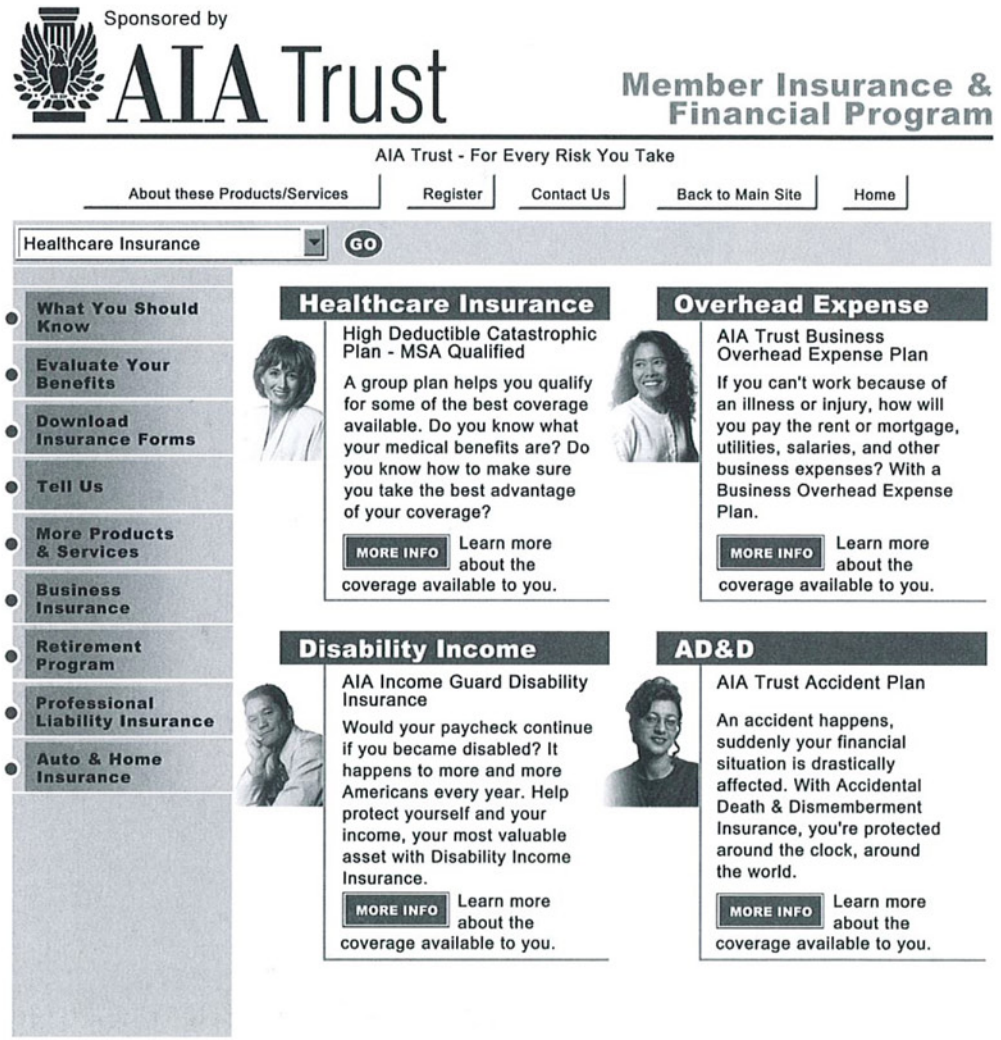

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(on the cover) Yupon Place Townhomes, Houston; photo by Hester + Hardaway. (above) Clear Channel Communications Corporate Headquarters, San Antonio; photo by Paul Bardagjy.

UPCOMING ISSUES

We invite submissions of project and story ideas for upcoming issues of *Texas Architect*.

November/December 2001–"Public Spaces" (deadline: June 4th)

If you have ideas for "News" call us at 512.478.7386, fax to 512.478.0528, or e-mail to ssharpe@texasarchitect.org.

www.texasarchitect.org

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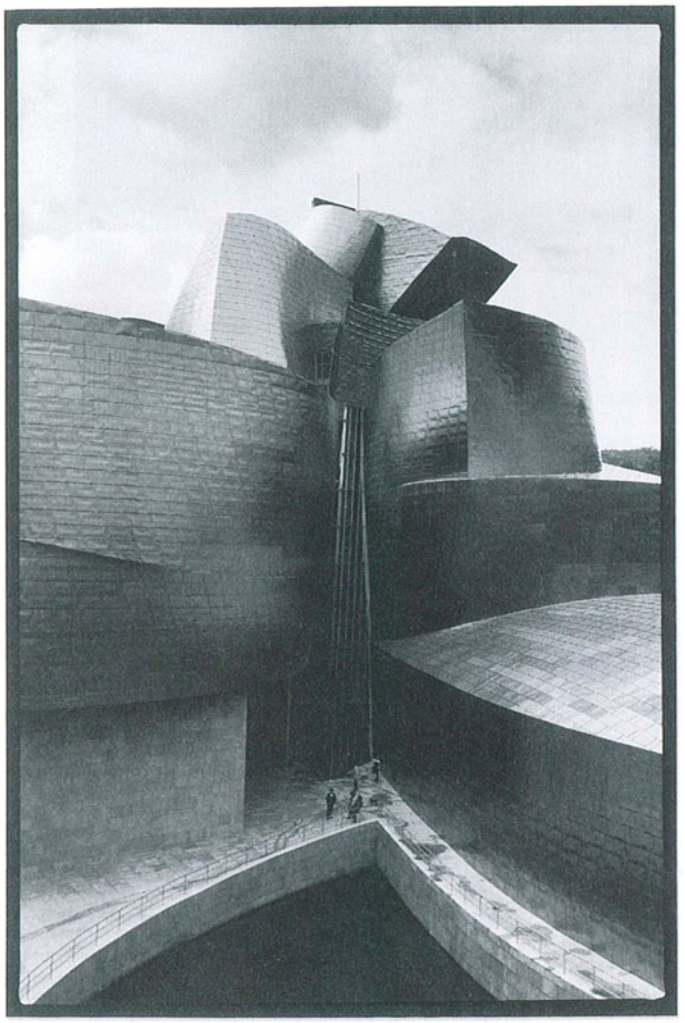
Material Quandary



Sheathed in titanium, Frank Gehry's Guggenheim Museum in Bilbao, Spain, illustrates the predicament architects face when specifying materials; photo by Frank D. Welch, FAIA.

A RECENT NEWS ITEM IN *THE NEW YORK TIMES*, "FACES TURN RED Over Guggenheim's Bilbao Blemishes," chronicled the finger-pointing provoked by brown stains that have unexpectedly appeared on the shimmering titanium skin of Frank Gehry's iconic art museum. The paper-thin titanium sheets are "absolutely immune to environmental attack," according to the manufacturer. But, to live up to that claim, the sheets must be properly cleaned at installation, and Gehry told the *Times* that some of the 42,875 sheets were not properly cleaned. Efforts are now underway to erase the blotches. Unfortunately for Gehry, the tarnish may spread to the architect if the cleansing proves less than successful.

For architects contemplating an excursion along the cutting edge, Gehry's Bilbao Guggenheim is suitably illustrative. Designers such as Gehry take the latest products of technical industry and push them to their limits, sometimes a risky undertaking made even riskier with a high-profile public project. The danger is that expectations may not match up with reality, that despite the architect's diligence to provide quality assurance, the finished project is not as charming as the model unveiled at the press conference or as comparable to the sample panel viewed in the field.

Innovative materials carry with them the inherent chance of possible failure; however, Gehry probably never considered that the titanium sheets, or their installers, would not perform satisfactorily. But, had Gehry specified a less exotic material rather than titanium, would he have achieved the same glimmering contours and sensuous drama? Or, had he opted for a less sumptuous material, would the museum have become the international sensation that today attracts design-savvy pilgrims the world over to visit such an out-of-the-way place?

The Guggenheim Museum in Bilbao, when opened in 1997, instantly captured the public's attention and its glamorous silhouette reinvigorated the popular debate of architecture's relevance to society. The essence of the new museum is sensed at one's first glimpse of its sleek skin. Gehry's choice of a titanium, blemished or not, has proven to be a real winner, and a striking example of how materials used to construct a building profoundly affect one's experience of architecture. Naturally, the architect's choice of materials is a long-lived decision, one that inevitably will revisit the designer as years pass and the structure's appearance changes over time. That decision will also remain with the architect as he or she plans future projects. In Gehry's case, the brouhaha resulting from the blemished titanium sheets on the Bilbao museum reportedly has changed his mind about cladding the proposed Solomon R. Guggenheim Museum in Manhattan with the same material. Having described the attention focused on the stains in Bilbao as "a tempest in a teapot," Gehry told the *Times* that his ideas for the skin no longer correspond with his architectural model, which depicts a structure clad mostly with titanium. "I don't think we'll ever use titanium," Gehry told the *Times*. "I don't think we'll have the money to use titanium, so don't worry about it."

STEPHEN SHARPE

"Masonry Success Stories"
Design Flexibility

Project: Arlington Memorial Hospital South

Location: Arlington, Texas

Principle Architect: HKS, Inc. - Norman Morgan, Architect

Masonry Contractor: DMG Masonry

Masonry Suppliers: Acme Brick Co., Palestine Concrete and Tile Co. and TXI, Inc.

Design Flexibility Challenge: Our challenges for this project were to bring the enormity of the building down to a more human scale, to use materials that made the building less institutional and to incorporate a material that counterbalanced the coldness of the glass used in the project. The building is also located in a more residential area and we needed to find materials that blended well with that environment.

Design Flexibility Solution: Brick has an advantage over other materials because of the wide variety of color and texture that it has. It provides an inviting atmosphere, whereas other materials create an environment of detachment and coldness. We used three different hues of red brick to create a warm, comforting and calm atmosphere. A more human environment was created through the relation between the senses and the texture and color of the material. The brick provided a certain level of comfort because it blended with the community and reduced the great size of the building to more human scale.

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Regional Focus an Inspiration

The East Texas issue (March/April 2001) of *Texas Architect* effectively captured the diversity of work going on here. More importantly, it focuses on projects that were successful regional interpretations of our area. In discussions with my colleagues, we've agreed that *TA* could become an important instrument for an architect to use to help move his or her clients toward a regional sensibility. I know that this issue will be a great resource for us. More importantly, it has inspired our firm to investigate our architecture more critically. Thanks.

Justin Paul Howard
Beaumont

CORRECTIONS Several items in the last issue of *TA* contained errors. Corrections follow.

The name of an architecture firm, Vidaud + Associates, Inc., listed as a consultant in the news story on Terminal D at Dallas/Fort Worth International Airport (p. 13) was misspelled, and the list was incomplete. To date, the firms contracted are:

Terminal D Building—HKS Inc.; HNTB Corp.; Corgan Associates, Inc.; Vidaud + Associates, Inc.; T.S. Orendain Associates, Inc.; Charles F. McAfee,FAIA; E. Evans Associates; Anthony C. Baker; Sunland Engineering Co.; and TransSolutions

Terminal D Hotel—HKS Inc.; HNTB Corp.; Corgan Associates, Inc.; and Vidaud + Associates, Inc.

Terminal D Parking Garage—Gresham Smith & Partners; Vidaud + Associates, Inc.; T.S. Orendain Associates, Inc.; and TransSolutions

Terminal D Skybridge—Vidaud + Associates, Inc.; HNTB Corp.; and Corgan Associates, Inc.

Central Utility Plant—AAE Architects

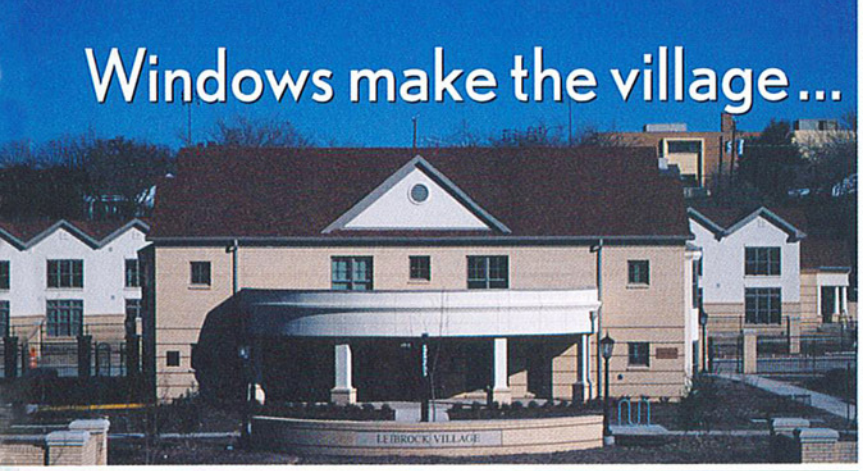
A juror listed in "Three Design Winners in Northeast Texas" (p. 17) was misidentified. The juror was Matt Morris, a partner at Lake/Flato Architects in San Antonio.

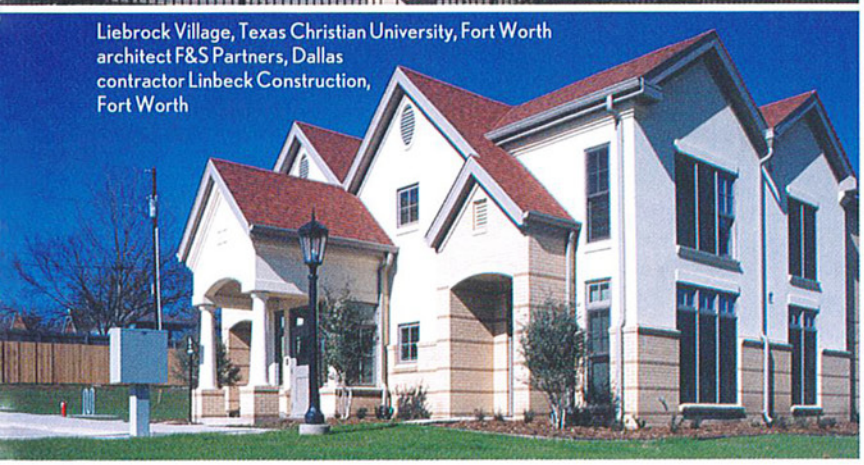
In "El Paso Recognizes Six Projects" (p. 20), the name of the architect for the El Paso County Juvenile Courts Facility was inadvertently omitted. It is Wiginton Hooker Jeffry Architects of Dallas.

The project team listed in "Rural Archetypes" (p. 26) for the Gilbert House in Lovelady was incomplete. Working with Val Glitsch, FAIA, was Roger Cooner and intern Emily Sing.

Texas Architect regrets these errors.

Windows make the village...





Liebrock Village, Texas Christian University, Fort Worth
architect F&S Partners, Dallas
contractor Linbeck Construction, Fort Worth

"We designed this student housing village to have a warm, residential ambiance. Marvin Windows answered that challenge with windows that balance aesthetics and quality. Painted wood frames inside complement the home feeling that we wanted, and clad exteriors with insulating low-E glass with argon met our university client's demanding performance needs. Marvin had a clean approach to putting its windows together in a bay motif on the outside stair towers. Marvin's window assemblies gave us the most open effect possible."

– G. Allen Atkinson Jr., Principal-in-Charge, F&S Partners Inc.

No ordinary window family could fulfill the diverse needs of Liebrock Village, an 11-building residential campus. Marvin Windows' pebble gray Clad Ultimate double hung and fixed casement windows allowed architects to express a wide-ranging assortment of scales and opening sizes in one cleanly integrated system. From individual units to towering three-story bay assemblies, Marvin simply delivered. For long-lasting, durable performance, and design excellence, it's Marvin Windows! Beautifully made to order, one at a time!

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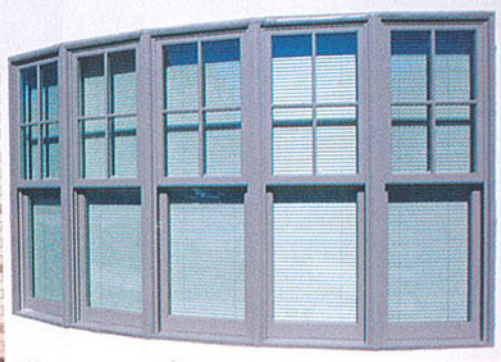


Abundance of Big Public Projects Alters Views of Corpus Christi

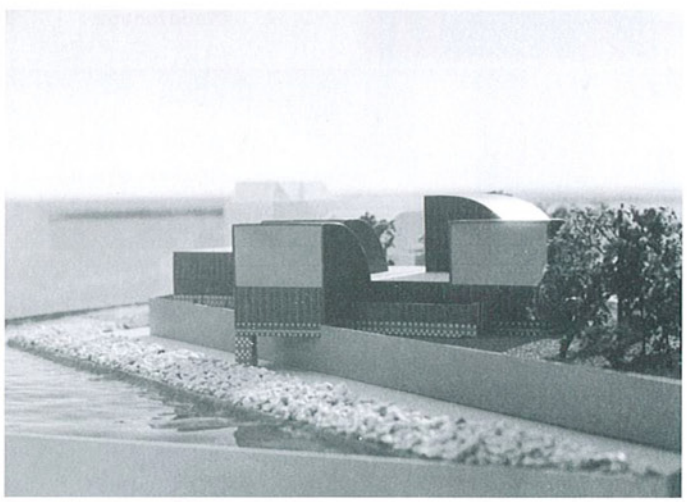
CORPUS CHRISTI The 2000 census figures showed that Corpus Christi, unlike other Texas cities up the road, such as Austin or San Antonio, had remained basically stagnant. Decades of slow and stunted growth have translated into a dearth of new construction, much less any exciting architecture for this relatively young city.

"Corpus Christi is a small town in many ways. It's not a place known for a history of great architecture," said local architect Bill Wilson, of WKMC Architects. "We don't have the same design awareness or appreciation for what architectural development can do."

But that may be changing: this city on the Gulf of Mexico is finally breaking out of its shell with an explosive increase in the number of large-scale public buildings either being planned or under construction near downtown. Several high-profile projects in the vicinity of the Art Museum of South Texas – itself a striking waterfront presence designed by renowned modernist Philip Johnson – alone are estimated to total about $50 million. In all, these projects are catching the attention of nationally and internationally known architects, and giving the local architectural community confidence that relief from the city's cultural drought may soon arrive.

"It's just been delayed for so long," said John Dykema, another local architect. "We happen to have some architectural momentum. Given all that, hopefully there will be an impact on the overall impression people have of the town."

The current batch of projects also is expected to have a transformative effect on the city, not only in the physical impact on its skyline, but in how the local populace views the importance of good design. "Cities are built one project at a time," Wilson said. "The aggregate of that will ultimately decide what the place is. We can be a different place, a better place, if we pay more attention to our buildings."



A model depicts Ricardo Legoretta's addition to the Art Museum of South Texas; photo courtesy of AMST.

Arguably the greatest coup for the city is the hiring of Mexican architect Ricardo Legoretta, last year's AIA Gold Medalist, to design a 22,000-square-foot addition to the Art Museum of South Texas. "In terms of the art museum, I expect it to have a tremendous impact on the city's architectural reputation," said Dykema, whose firm Bright and Dykemas Architects is representing Legoretta. Legoretta is a perfect fit for Corpus Christi—his use of bold colors, courtyards, and transition spaces match the city's Mexican-influenced culture and semi-tropical climate.

Most recently, the city has completed a $26 million federal courthouse that combines state-of-the-art courtroom technology with a traditional look. The 172,000-square-foot courthouse replaces its 13,000-square-foot, 84-year-old predecessor. Designed and built by Hartman-Cox Architects and WKMC Architects of Corpus Christi, the courthouse is located on Shoreline Boulevard, site of most of the city's architectural renaissance.

Another recent large public project, opened in September, is the Congressman Solomon P. Ortiz International Center, a 60,000-square-foot cruise ship terminal and conference center located at the mouth of the inner harbor. Designed by Richter Architects of Corpus Christi, the project for the Port of Corpus Christi is an adaptive reuse and addition to a circa-1920 cargo warehouse.

Other projects now underway include:

• An 8,000- to 10,000-seat multipurpose arena and enlarged convention center by Arquitectonica of Miami on the downtown waterfront. Arquitectonica brings major league credentials to the city, having designed arenas for the Miami Heat and Atlanta Hawks. The firm is working with Atlanta-based Thompson Ventulett Stainback & Associates. The $35 million arena, which officials hope will lure major events here, was part of a bond package passed last year and is expected to be finished in 2003. "Aesthetically it will be connected to the water," said Raymond Gignac whose local firm, Raymond Gignac and Associates, is also working on the project.

• A 1,500-seat performing arts center for Texas A&M University Corpus Christi with Cotten Landreth Kramer Architects and Associates as architects of record. The local firm's Jerry Kramer said the project, now in the early stages of design development, will also respond to its waterfront setting. The project's design architect is New York-based Hardy Holzman Pfeiffer Associates. Construction is expected to be completed by early 2004.

• A $26 million airport terminal to replace the city's existing dinosaur, which doesn't even have electronic monitors. The new terminal, designed by Gensler's Houston office, co-creators of the Austin-Bergstrom International Airport terminal, will feature open space for artwork, a lounge overlooking the runways, and a business center for meetings and computer access. When completed next spring, officials hope the airport will become the city's signature building.

• An addition to the Corpus Christi Museum of Science and History, neighboring Johnson's AMST, that includes a sixteenth-century Spanish ceiling.

JEREMY SCHWARTZ

One Less Deanship to Fill

ARLINGTON The recent selection of a new dean of architecture for the University of Texas at Arlington somewhat settles the current shuffling of deanships at the state's architecture schools. Martha Ellen LaGess, a Rice University graduate and partner of LaGess McNamara Architects in London, takes the helm of UT Arlington's School of Architecture in September. Her hiring leaves three other schools searching for new leadership, the latest being Texas Tech University's College of Architecture which joins Texas A&M University's Department of Architecture (part of A&M's College of Architecture) and the University of Texas at Austin's School of Architecture.

LaGess, one of four finalists for the dean position, is currently Unit Master with the Architectural Association, an internationally known private architecture school in London. A lecturer and visiting critic for many organizations and universities in Europe, Asia, and North America, she has 10 years experience as an educator. Her 16-year career as a professional architect includes working with James Stirling, Michael Wilford and Associates, and Kohn Pederson Fox. Upon joining UT Arlington, LaGess will take over administrative duties from Interim Dean C. Lee Wright who plans to remain on the school's faculty.

Dean James White of Texas Tech notified the provost early this year that he would step down from the top post at the College of Architecture, saying he would stay on until the end of the 2002 spring semester to allow enough time to find a successor. White, who will return to teaching architecture at Tech, will have been dean five years at the time of his departure.

In College Station, a new department head at A&M is expected to be named soon. Dean J. Thomas Regan of the College of Architecture is scheduled to make an announcement this spring, following a vote by faculty members for their favorite among seven finalists. The new department head may start before the beginning of the fall semester. Interim Department Head Thomas L. McKittrick, FAIA, took the temporary assignment last fall after Department Head Julius Gribou left to become director of the University of Texas at San Antonio's nascent School of Architecture. McKittrick said he plans to return to teaching at A&M once a permanent replacement is hired.

At UT Austin, the search continues for a new dean to replace Lawrence Speck, FAIA, who announced his departure in late 1999 pending the securing of a successor. In April that search reportedly had been narrowed to a short list of candidates, with officials still planning to have a permanent replacement on staff by the start of classes in the fall. Speck held the dean's job since 1992 and plans to return to teaching.

STEPHEN SHARPE

UT Austin Conference Explores Technology

AUSTIN A technology conference in July at the University of Texas at Austin will emphasize the skins of buildings—that critical zone that often defines the fundamental character of the architecture. Scheduled July 13-16, "Skins: Where Design and Technology Meet" is sponsored by the Association of Collegiate Schools of Architecture (ACSA) with support from the Society of Building Science Educators (SBSE).

The keynote speaker will be Billie Tsien, principal of Tod Williams and Billie Tsien Architects in New York. In all, more than 20 speakers are slated to lecture on topics ranging from new thermal performance technology to life-cycle costs of building envelopes. Organizers of the conference expect attendees from a broad range of disciplines, including historians, theorists, engineers, and designers.

Complex and often taken for granted, building skins are designed to respond to a host of technical, functional, constructional, and visual criteria. The conference will extend the range of discussion beyond those criteria to explore technology's impact on cultural, operational, and aesthetic issues. Sessions during the four-day event will be split among three topics – Performance and Logic, Aesthetic Desire and Material Fact; and Configuration and Cultures of Production – with additional sessions to be scheduled for presentations outside those themes.

For more information, visit *www.acsa-arch.org* or call the UT Austin School of Architecture at (512) 471-1922.

briefs

Two years after failing to win over University of Texas regents with a preliminary design for the Jack S. Blanton Museum of Art in Austin, Swiss architects **Jacques Herzog** and **Pierre de Meuron** have been honored with the Pritzker Prize, architecture's most prestigious honor.

The AIA College of Fellows elected only one Texan to their ranks this year. **Donald Williams, FAIA**, principal and co-owner of DwyerWilliams in Houston, is among 72 newly minted Fellows.

Spanish engineer and architect **Santiago Calatrava**, whose works recently inaugurated the new Meadows Museum at Southern Methodist University, is designing a dynamic water fountain for the Dallas museum. "Wave" will feature rocking steel arms that will transfer water from one end of a large pool to the other in a continuous movement.

Celebrity architect **Frank Gehry** has yet to design a natural history museum, but in June will begin developing ideas for the Dallas Museum of Natural History. The $100 million new museum will be built in the downtown Arts District.

Sustainable Design is the latest publication by the National Council of Architectural Registration Boards (NCARB) in its professional development series. Written by architect Jonee Kulman and real estate developer Joel Schurke, the book may be ordered through *www.ncarb.org/publications*.

Colorful.

Big city architect. Lover of nature. Massimo Fucci is a study in contrasts. Taking inspiration from walks in the Italian countryside, Massimo transformed a typical corporate office outside Milan into a sophisticated, yet playful environment. He mixed the bold colors and easy workability of DuPont Corian® solid surfaces with other materials to create sweeping curves, wide open spaces and an overall sense of vitality. Massimo says his goal is to interrupt monotony. It appears he's on the right path. To find out more about the Colors of Corian®, contact your local Authorized Distributor of Corian® at (800) 392-5131 ext. 400.

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New Owners Renovate Trost's El Paisano

MARFA El Paisano Hotel is undergoing renovation by new owners who plan to return the late 1920's Spanish baroque landmark to its original grandeur. Designed by Henry Trost of El Paso and built by the Gateway Hotel Company, El Paisano is listed in the National Register of Historic Places and as a Texas Historical Landmark.

El Paisano, designed by Trost in 1927 and opened in 1930, quickly became social headquarters for wealthy ranchers in and around Marfa until the Great Depression stifled the town's prosperity. Trost also designed the Gage Hotel in Marathon and an addition to the Holland Hotel in Alpine, and both played similar roles as centers for their towns' activities. Framed photographs in the lobby of El Paisano still recall its main claim to fame—temporary home in the mid-1950s for Hollywood luminaries Elizabeth Taylor, Rock Hudson, and James Dean when "Giant" was filmed nearby.

Joe and Lanna Duncan, owners of the historic Hotel Limpia in Fort Davis, bought El Paisano in March at auction after local officials foreclosed on the property, most recently remodeled as time-share condominiums, for back taxes. Joe Duncan said he will operate El Paisano as a hotel, and plans to re-open its restaurant and bar which for many years have been closed.

Henry Trost's El Paisano Hotel in downtown Marfa; photo courtesy Joe Duncan

Dallas Architecture Forum Presents Cunningham

The Dallas Architecture Forum ends this season's programs with a tour of the new house that local architect Gary Cunningham has built for his family. A work in progress, the house is both the location (4404 Greenbriar) and the subject of the talk. The Cunningham firm has received numerous design awards for such projects as the "Power House," the Addison Conference Center, and the Cistercian Academy Chapel. Call 214/740-0644. MAY 5

Chinati Foundation Symposium on Flavin

The Chinati Foundation in Marfa hosts a symposium titled "Light in Architecture and Art: The Work of Dan Flavin." Speakers include Tiffany Bell, project director of Dan Flavin Catalogue Raisonné: Kurt W. Forster, director of the Canadian Center for Architecture; Michael Govan, director of the Dia Center for the Arts; and Roberta Smith, art critic for *The New York Times*. The event will be moderated by Brydon Smith, former curator of twentieth-century art at the National Gallery of Canada. Visit *www.chinati.org* for more information. MAY 5-6

Design of Our Time at MFAH

This new exhibition at The Museum of Fine Arts in Houston, surveys significant works of the past decade to highlight the influences defining contemporary design. Drawn mostly from MFAH's permanent collection of objects and furniture, designers such as Frank Gehry, Ron Arad, Phillipe Starck, Droog Design, and Gaetano Pesce will be represented. Visit *www.mfah.org* or call 713/639-7540 for more information. THROUGH MAY 13

Final Month for Henry Moore Works at DMA

Henry Moore, Sculpting the 20th Century, a traveling retrospective featuring more than 200 pieces, ends its run at the Dallas Museum of Art in late May. The exhibit – including works on paper, plasters, maquettes, carvings, and finished bronze sculpture – follows Moore's career from his youthful abstract leanings to his later embrace of more mainstream artistic expression, and examines his interaction with the architects of his day. THROUGH MAY 27

TFAA Focuses on San Antonio and Austin Artists

The Texas Fine Arts Association in downtown Austin presents the third in a series of exhibitions featuring emerging artists based in a particular region in Texas. Having presented Houston/Galveston and Dallas/Fort Worth, TFAA now presents *Artistic Centers in Texas: South Texas*. For information, visit www.tfaa.org or call 512/453-5312. JUNE 9 THROUGH JULY 29

CRS Veterans Recall Glory Days

COLLEGE STATION For Texas architects the initials "CRS" represent a phenomenon as much as an architectural firm. The legends that surround Bill Caudill and John Rowlett, professors in the architecture school in the A&M College of Texas in the immediate Post WWII era, are a legion. The firm began over a grocery store on the south side of the campus, and grew to an international giant. Its early work in College Station remains in houses on South Knoll, and in one remaining building that was the College Station High School. Its later works spread the globe, and the individuals who made them are equally dispersed. The signature names, Caudill, Rowlett and Wallie Scott, have gone to a greater glory, as has the younger lead designer Paul Kennon. The senior members of the firm are now retired, and CRSS-Architects was bought by HOK in 1994.

That the name CRS lives on is a result of the magic of the ideas that were generated by this remarkable group of people, and of the generosity of spirit that endowed the CRS Center in the College of Architecture and the John Miles Rowlett Lecture Series. CRS Center Director and the Blue Ribbon panel that created the events of the day deserved the heartfelt rounds of applause that echoed throughout the day.

Rowlett 2001 was billed as an examination of the CRS Legacy, and as a reunion of the hundreds of young architects who began their careers, and in some cases completed their careers, in the firm. CRS had a reputation for building people as well as buildings, and was, as the late Jonathan King wrote, "only half-jokingly referred to as the largest graduate school of architecture in the country."

February 16 was a reunion in every sense of the word. Tom Bullock, Willie Peña, Herb Paseur, Frank Lawyer, Charles "Tiny" Lawrence, and Jim Gatton, giants who had been with the firm since its Bryan/College Station days, were joined by a host of architects from across the nation to celebrate the unique contributions that CRS made to architectural practice, many of which are now taken for granted.

The basic belief that good architecture grew out of a serious examination of the needs of the client and the users, and that it was the architect's responsibility to undertake basic research, is now accepted in the mantra of "knowledge-based design." For Caudill this work began with experimental research at A&M, wind studies with landscape architect Robert White, and daylight experiments with Ben Evans and others. His concept of the "open classroom" was before its time, but educational design remained a mainstay of the firm for its entire life.

Innovation was the hallmark of CRS practice, as illustrated by the firm's use of "squatters," where a troika of designers, managers and technologists spent intense days with the client group to establish the schematic design on site. "Squatters" grew out of the necessity of reducing travel time in the days before interstates and flying were commonplace.

"Programming" began with the notion that before becoming problem solvers, the design team had to seek out the true nature of the problem. Peña, and many of his now famous protégés, discussed the history and development of "Problem Seeking," still the bible of the programmer.

The pressures to create buildings and whole towns "on time, and in budget" across the globe spawned new approaches to project delivery. "Fast Track" design, where the foundations and frame was going up as the superstructure was still being refined and specified. Construction Management, now a whole profession, had its start in CRS/CM, and Chuck Thomsen was at A&M to tell the story.

The CRS organization of the project team, indeed the whole notion of "Design by Team," has become standard operating procedure. Leading executives from nationally known firms, including Ron Skaggs, the 2000 President of AIA and himself a former CRSer, described the sense of cross-disciplinary respect and interdependence that was the essence of CRS. The respect extended to all members of the team, and in the words of Jonathan King, "mentorship was not an option; it was a responsibility . . . and the best way of passing down the corporate culture."

Perhaps the most emotional and revealing panel concluded the afternoon-long event. Tom Bullock asked some of the most senior members of CRS to "Rationalize Mistakes." Willie Peña's identification of the act of "going public" and the acquisition of firms with differing cultures, as two of the most serious "mistakes," provoked a stirring discussion that was frank and open. Herb Paseur suggested that Bill Caudill had always lived with risk and change, and noted that CRS was threatened with acquisition itself, and that becoming a public company was the only way to preserve the culture of the firm. The issue of growth causing the firm to "lose focus" and "erode the concentration on design," was countered by Tom Bullock's reminder that diversification was a pattern in the firm from its earliest days. Bruce Wilkinson suggested that "leadership was more important than the form of ownership." The exchanges gave us all a taste of the genius that was CRS and the willingness to debate and discuss in an atmosphere of trust and respect.

In 1973 Bill Caudill wrote in one of his famous "This I Believe" (TIB) memos to the firm, "To fully understand CRS, one must know and understand the values we place on people and things. Given enough time, the inequities, overstresses, underemphasis and failures to recognize talent will be rectified because of CRS's deep-seated values. Values are the slow-moving, powerful forces which shape CRS. Values support the entire CRS structure. The uniqueness of CRS lies in its values."

The audience of students, faculty, professionals and CRSers of many generations continued their reminiscences on those values, and on the remarkable life of CRS, and the reasons for its strengths, weaknesses, and ultimate acquisition by HOK. They agreed that the innovations and products of CRS will live on. They also agreed, with an emotion that was palpable throughout the George Bush Conference Center, that Bill and John and Wallie and Paul would have enjoyed Rowlett 2001 as much as anybody. For those of us that knew them, even a little, we sensed that they did.

DAVID WOODCOCK

Of Note: TxDOT Letters of Interest

AUSTIN Texas Department of Transportation officials will post requests for letters of interest (LOI) in late May or early June from firms seeking two-year contracts for work on capital program and rest area projects throughout the state.

Firms must be pre-certified prior to the LOI submittal deadline date. Notices regarding the submittal of LOI will be on the TxDOT Web site (*www.dot.state.tx.us*) under "Business," the Texas Marketplace bulletin board and the state's major newspapers. Bill von Rosenberg of TxDOT's Capital Improvement Programs said architects should not wait for the notice posting before completing the pre-certification process.

For more information, visit the Web site or call von Rosenberg at (512) 416-2382 or Paula McGinley; the program's pre-certification manager at (512) 416-2218.

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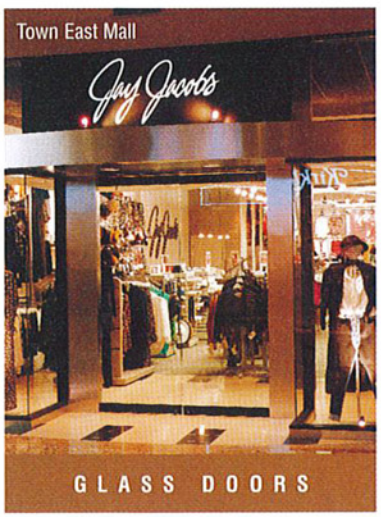

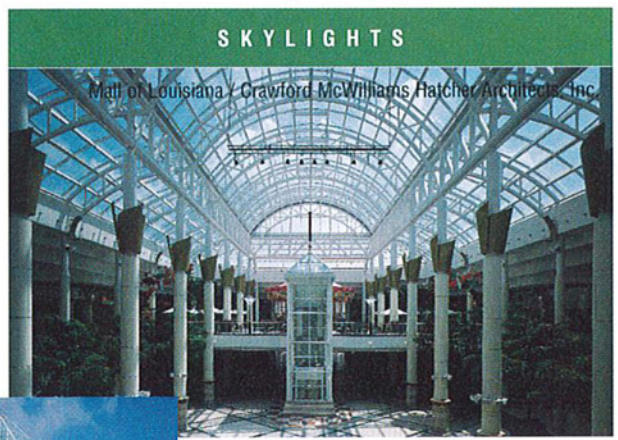

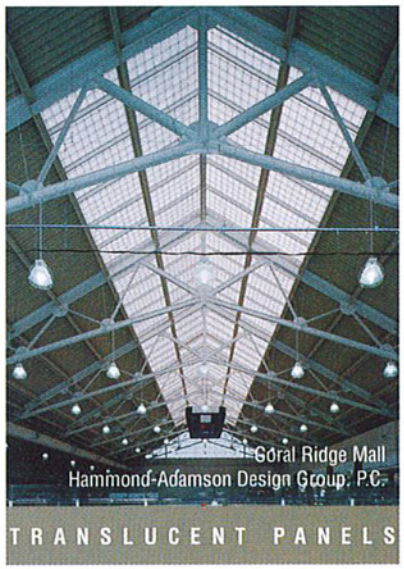

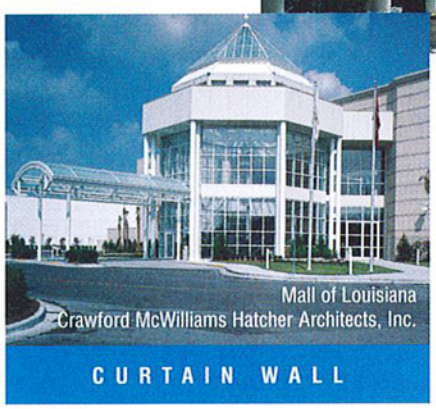

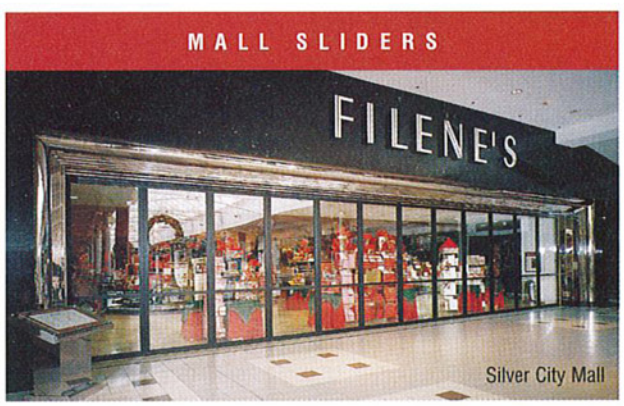

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by BARBARA KOERBLE

Historians Rescue 150-Year-Old Kiln

Denton County's Wilson Pottery, abandoned over a century ago, set for exhibit as cultural relic

AS DEVELOPMENT SWEEPS ACROSS DENTON County, preservationists have rescued one vestige of local history—a rare kiln dating back to the 1840s. The office of James R. Kirkpatrick Architect in Denton recently completed a study for an exhibition building to house the reconstruction and restoration of the historic Wilson Pottery kiln. The firm is collaborating with the Denton County Historical Commission and the Denton County Archaeological Society on the project. The kiln, abandoned over a century ago, was threatened by ongoing development before it was disassembled and removed from a site in the town of Corinth in south central Denton County. One of the first non-agricultural industries in the area, the Wilson Pottery site was listed on the National Register of Historic Places.

Excavation of the original site of Wilson Pottery took place in 1998. A new structure will house the reconstructed kiln; photo courtesy James R. Kirkpatrick.

Barry Vermillion, chairman of the Archaeology Committee of the Denton County Historical Commission, undertook the rescue operation to document and salvage the historic kiln. The kiln had to be disassembled and moved to preserve it from destruction. Fortunately, for the future of this proposed educational exhibit, Lake Sharon Limited Partners, Inc., and Zena Development Corporation of Southlake, Texas, permitted the salvage operation to take place. Vermillion contends, "The kiln is unlike any other nineteenth-century pottery kiln in not only Denton County, but in North America." Its uniqueness results from its combination of two traditional kiln types, the beehive and the groundhog kilns. The groundhog is an underground, tunnel-like kiln, while the beehive is a circular kiln built above ground. Vermillion describes Wilson's kiln as a modified groundhog/beehive kiln, because it is circular, but partially buried in the ground. For unknown reasons, the kiln was double-sided and had a double fireplace. The kiln originally was used to produce salt and slip-glazed pottery until operations ceased around 1865.

Kirkpatrick observed that two goals for the project design were to emphasize the original location and atmosphere of the kiln, and to ensure that the building would not be intrusive in its new surroundings, particularly if the new site is a historic park. Kirkpatrick took his cue for the form of the kiln exhibition building from the appearance of the kiln in its original location, partially buried in the ground and overgrown with vegetation. Kirkpatrick's proposal for an elliptical domed structure constructed of thin shell concrete is similarly conceived as a partially sunken, earth-sheltered design. To evoke the original appearance of the kiln, its surface will be covered with earth and planted with native plants. The interior of the facility will contain the reconstructed kiln positioned next to an amphitheater to seat visitors during program presentations. A walkway around the perimeter of the room will be elevated to permit views from above the kiln. A projecting side window, mimicking the positioning of the kiln firebox, will reinforce the feeling of an underground space. The building will also house artifacts retrieved from the site during salvage operations.

Part of Kirkpatrick Architects' charge was to plan the developmental phases of the Wilson Pottery Kiln Reconstruction project. In the project's first phase, a site for the reconstructed kiln will be determined; the criteria as stated by the proposal is that the new site "must be respectful and cognizant of the original location." So far, four sites have been proposed. According to Kirkpatrick, the two most likely sites are the Historic Park of Denton County, located near Denton's historic downtown square, and the Cross Timbers Park, located in the southeast corner of the city. While the Cross Timbers Park site is close to an elementary school – convenient educational programming – the Historic Park site has the advantage of already containing a relocated 100-year-old Victorian home—the Bayless/Selby House. This house, currently being restored by Kirkpatrick Architects, is proposed as the support/staff facility. If another site is chosen, the study proposes either to move an historic structure to the site and restore it, or to build a vernacular style building indigenous to Denton County as the support space. The construction or relocation of a support facility would occur during phase two of the project, and the kiln display facility would be constructed during phase three. During phase four, site improvements will be completed, with support staff hired during a fifth, and final, phase. Preliminary cost for the entire project, excluding possible site acquisition, is estimated at $1.4 million. Ultimately, the Denton County Historical Commission will select the site for the facility and will raise funds for the project.

Of Kirkpatrick's design, Vermillion states, "he achieved the look we wanted—it's amazing for them not having seen the original site." As development rapidly escalates south of Denton and north of Fort Worth in the Alliance Airport corridor, the last remaining vestiges of Native American villages and indigenous structures may disappear without a trace. The rescue operation that saved the historic pottery kiln may serve to draw Denton County residents' attention to the loss of their history, and provide a precedent for saving what's left for posterity.

by M.G. MONTRY

Teahouse Reinterpreted

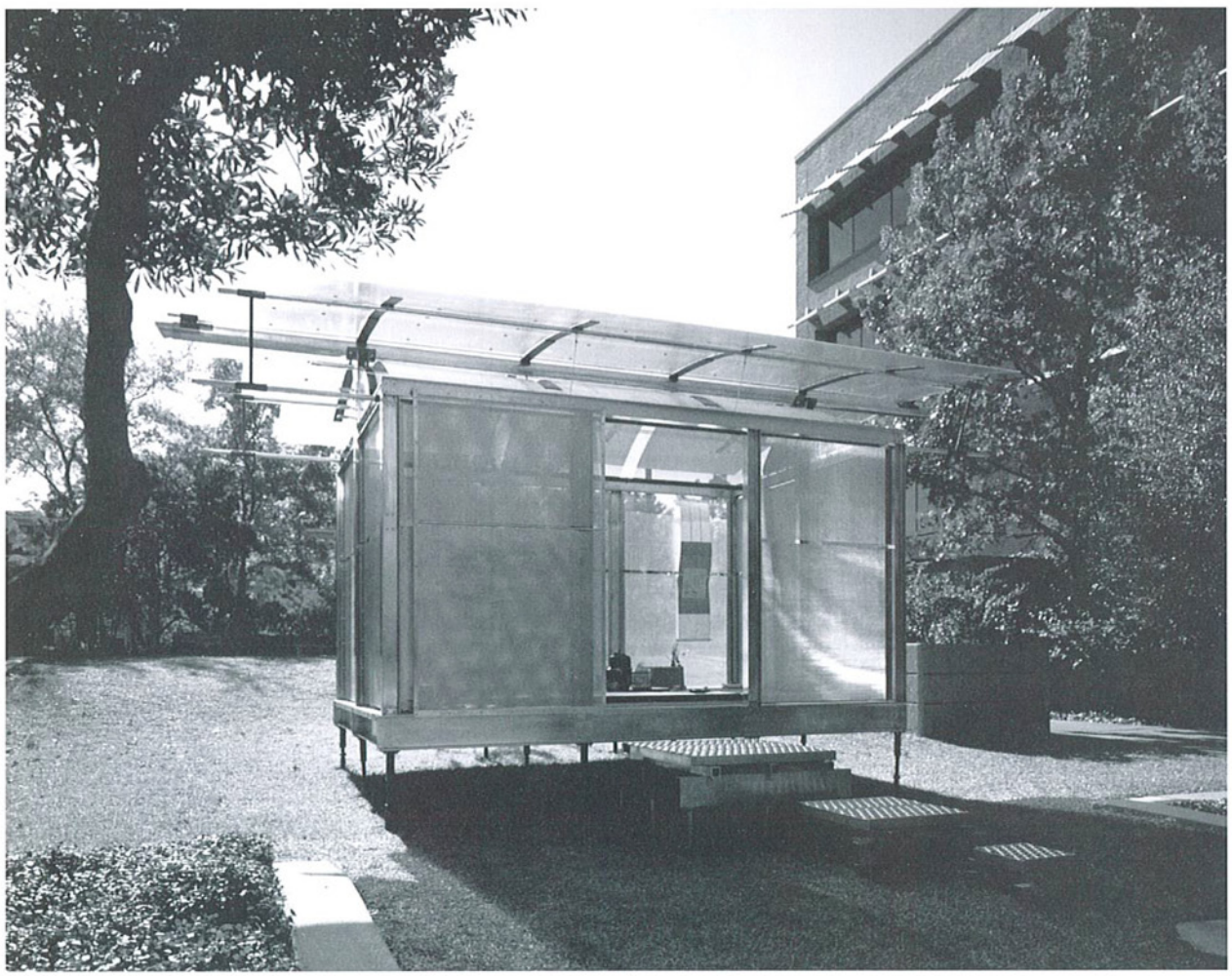
UT Arlington class updates design of traditional Japanese structure using lightweight industrial materials

CHANOYU, THE TRADITIONAL JAPANESE TEA ceremony, celebrates and reveres the unique and fleeting qualities of each human encounter. The ceremony is governed by an extremely disciplined study of respect, utility, and grace. Therein lies its relation to architecture: being rooted in human interaction, it is disposed to purity in its use of materials and aspires toward beauty in precision. A sober study, but one illuminated by a silent joy and color. How fitting, therefore, for the tea ceremony, and the structure in which it occurs, to serve as a means of better understanding the discipline of architecture.

A teahouse, quite literally, embraces the ceremony sheltered within. Reciprocally, it is appropriate that the structure should reflect the precision and nature of the ceremony. This is in fact the tradition of teahouses in Japan, and the kernel of the study documented here. Our fourth-year design studio at the University of Texas at Arlington began the semester with a brief study of lightweight industrial materials, and moved into more detailed resolutions of materials, connections, and symbolism appropriate to a teahouse. In our interpretation of the form we also attempted to celebrate the beauty of the ceremony by placing it behind a transparent curtain, thus perching it on a previously unseen stage. This veil, in addition, filters the landscape for the participants in an arguably Japanese way, but unknown to the traditional form.

The project documented here grew out of a desire to introduce my students to the harmony and tranquility embodied in Japanese architecture and the culture at large. As constructed by the studio within a period of eight weeks, the teahouse served as an intimate - albeit accelerated - study of connection, materials, and minimalist space.

We have also filtered our interpretation through the use of industrial materials. This, of course, is a nod to current practices in contemporary Japanese architecture, but more importantly, recognizes a subtler observation related to the tea ceremony. These materials, at first blush seemingly incongruous with the notion of a teahouse, have intensely beautiful properties of precision and are of obvious complement to the ceremony. But the technology involved in their manufacture has also sharpened an enduring edge. This may impart a serenity more crisply than traditional materials, serving as a foil for the transience and delicacy of the human condition *Chanoyu* celebrates.



Set in a courtyard outside the School of Architecture, the freestanding teahouse is on display through the summer; photo by Craig Kuhner.

Scope and Materials

Given the constraints of a 15-week summer semester, and with 13 students, we could not have undertaken a teahouse complete with grounds and landscape. For this reason we decided to concentrate on a simplified form of the structure. We also narrowed the scope of the project, particularly in consideration of affordability, workability, and availability of

"Teahouse Reninterpreted" continued on page 24

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Modern, hard-edged materials contrast with the artistic delicacy of the Japanese tea ceremony; photo by Craig Kuhner.

"Teahouse Reninterpreted" continued from page 21

materials, as well as the logistical transport of materials and assemblies from the studio to the selected site. This final constraint informed almost all aspects of the project. Indeed, the production phase of the project would have been much simpler had we had the luxury of constructing the teahouse only once, and upon a foundation in a fixed location. Yet, because the structure was designed to be temporary, very few permanent connections were possible. But this mutability, and the attendant thought required for appropriate detail, only served to underscore those aspects of the ceremony we wished to reflect.

Lightweight industrial materials were available from a number of local sources, including several Texas-based suppliers for the oil industry. This made for some interesting finds, such as an impervious flooring available in "safety yellow." Ironically, materials used on oil rigs performed suitably for our teahouse, many of the requirements for petroleum exploration being almost identical to those governing our project. The precision and purity of those products lend a subtle beauty which is often overlooked and generally unappreciated. But this subtlety parallels the discipline of the ceremony that served as inspiration.

The primary material selected for the project was aluminum. Where deviation from this material was necessary for reasons of strength, workability, or utility, we have, as homage to the celebrated demarcations in *Chanoyu*, emphasized the change in material with a very deliberate contrast, noticeably in red for steel, yellow for fiberglass, and in an overall translucence which blends structure with sky.

In our desire create a serene environment we were helped immeasurably by Soyu Nabeta Sensei, who contributed the Way of Tea for the structure's inauguration. Her presence and her art illuminated the teahouse and reminded us that such human activity moves art from the realm of theory into the realm of life.

The teahouse is located in the courtyard adjacent to the University of Texas at Arlington's School of Architecture, and will be on display through the summer.

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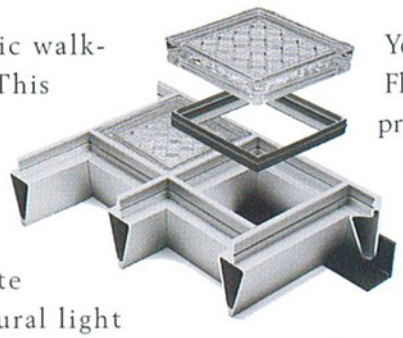

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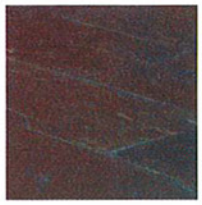
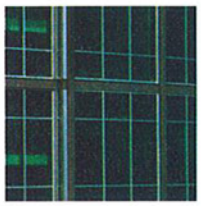
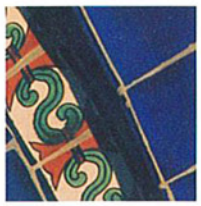
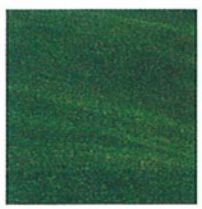














by W. MARK GUNDERSON

MATERIAL CONCERNS

"Brick is the ground you tread upon turned by fire into something to use to build."

Frank Lloyd Wright

IN THE INTRODUCTION TO HIS 1995 BOOK, *Studies in Tectonic Culture*, architecture critic Kenneth Frampton establishes a fundamental distinction between two modes of building—one derived from earthwork and masonry, both which utilize compressive mass, and another that evolved from timber tensile frames which he traces to textiles, basketry, and woven surfaces. The first mode arose conceptually and chronologically from stonework and the hearth to brickwork and on to reinforced concrete. The second mode is represented by archaic Japanese wooden structures and by such infill as wattle and daub walls. By way of explaining the distinction, Frampton refers to Gottfried Semper's *Four Elements of Architecture* (1851) and Semper's distinction between the "stereotomic," or load-bearing masonry construction techniques, and the "tectonic," or wood and carpentry-based joining of spatial enclosures with sheathing.

The etymology of language related to construction in large part has roots in weaving, and while Frampton shows the relationship between brick coursing and weaving, tying both back conceptually to strictly textile roots, one could argue that the opposition proposed is actually one of the history of construction being developed from both textiles *and* ceramics. One might argue that brickwork and its laid rows is more closely related to the rudimentary coiling techniques employed in the construction of ceramic pots throughout history. And if the ceramic metaphor were carried a bit further, glass, a transparent ceramic with its silicate base, would be the next logical step in the progression from stone to brick to concrete. Glass's translucency and now its structural qualities move it into a realm not possible for its opaque lineage.

One could posit from this that we have evolved to a present system of largely trabeated frames clad with layered skins, ideally removable for replacement and, more importantly resisting flexure and dynamics of movement by the integral and multiple jointure of such cladding. Some structures resist with a few large joints and others by tessellated surface materials which operate in principal, to give an exaggerated example, very much like the heat-shield tiles of the NASA space shuttles which respond in small increments to extremes changes in temperature. Concrete shear cores and steel framing, as well, can be thought of as a contemporary hybrid of these two basic ceramic/textile tendencies.

Aside from fundamental tectonic arrangements and more subtle structural implications, other aspects of materials are obviously important to architecture. Information informs form. Technology is the vocabulary of processes available to a given culture, and as tools develop so do techniques and vice-versa. Technology is colored by the materials available and the knowledge available in a particular place at a given time. Evolving means of communication and transportation extended the palette of possible materials. Until a few decades ago the earth as a source of literal material seemed limitless.

Materials and their resultant form accrue and carry meaning over time and across civilizations. The ancient Incas termed gold to be "sweat of the sun" and silver to be "tears of the moon." These characterizations were real to them and their cosmology could not be divorced from their literal existence. Donald Judd's disavowment of any and all such qualities extrinsic to a material became a kind of benchmark for art in the 1970s: "What you see is what you see." Judd's position attempted to divorce art

from the symbol-laden and metaphorical qualities of what Judd termed the "European art" tradition. His "specific objects" are intended to carry nothing other than themselves into a rapport with the observer.

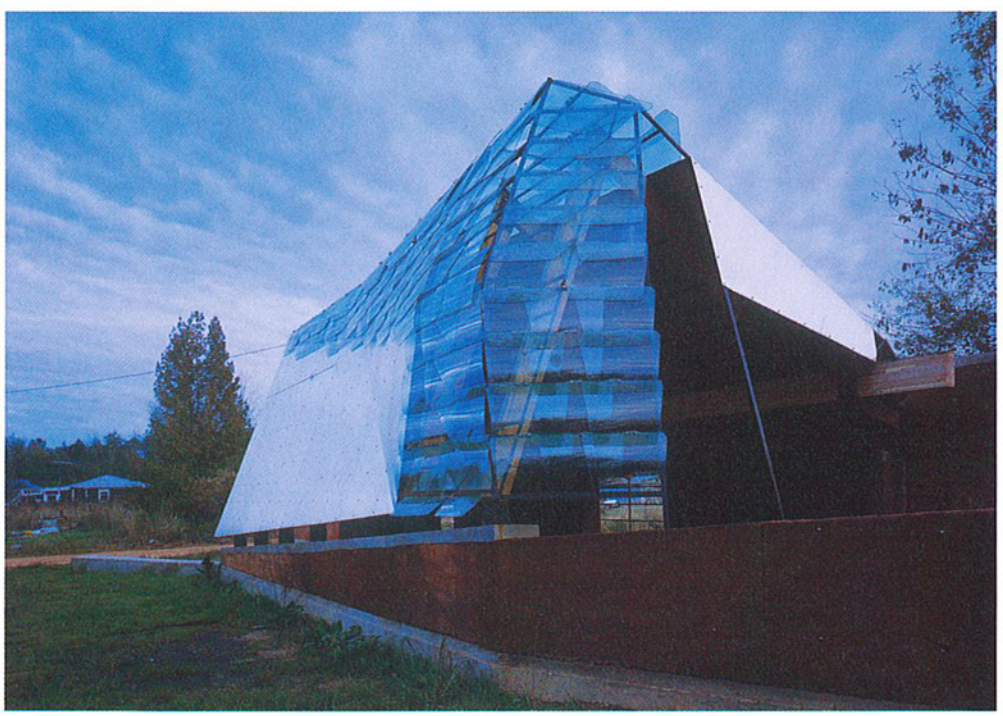
An intention, or idea, and the material employed in its realization are ideally inseparable. Clear examples of this reciprocity are Italo Calvino's "arch and stones" dialogue in *Invisible Cities* or perhaps a reputed conversation between Picasso and Braque as to what caused the invention of nails—the idea of a nail or the availability of iron. Materials in this sense need not be real or even tangible. It is not uncommon for architects to refer to light, or time, or memory as their primary working material. Louis Kahn believed that all material was "spent light." A more prosaic, and ironic, rendering of the place of materials in human work is painter Philip Guston's quote that painting is the use of "colored dirt."

Alchemists sought the *prima materia*, the substance which underlay all other materials, and concerned themselves with the attempt to transform one material into another. Their research delved into material families and other forms of mystical relationships for centuries before science established its categories. Aristotle believed that this prima materia, brought together in various proportions with the four "qualities" – dryness, coldness, moisture, and heat – created the elements of which the world is constituted.

Manufacturers devoid of a larger view and arguing "consumer demand" continue to introduce products into the marketplace in which one material is made to "look like" another. These counterfeit materials such as plastic laminate made to look like granite or wood or whatever rob architecture of its intrinsic meaning and contribute to the breakdown of its set of values. Faux finishes and trompe l'oeil work behave as a kind of ironic "veneer," and their proliferation – due to not wanting to invest in the genuine material itself – says something quite negative about the state of things.

And lastly, most materials require care. Aging and patina seem to be anathema to American culture but have been intrinsic and valuable to others. Warranties and legal issues relating to buildings as "products" lean precariously toward weathering being considered as some form of failure. In America today the term "low maintenance" is a euphemism for not wanting to care for something. In other cultures, care of the built environment is an ongoing endeavor, a rich and reinforcing investment and reinvestment. This wholistic sense of man and environment becomes increasingly important as distance is no longer a physical barrier, and as available resources and virgin materials diminish.

The author is principal of W. Mark Gunderson Architect in Fort Worth.



Mason's Bend Community Center; photo by Timothy Hursley

RECYCLED WORKS

by JOYCE SELINA MOMBERGER

Hay, cardboard, tires, car windows, license plates, and road signs aren't typical building materials. But Samuel Mockbee's Rural Studio at the Auburn University School of Architecture is not a typical design studio. Mockbee set up the program in Greensboro, Alabama to give students hands-on construction experience while also benefiting the area's low-income families and their communities.

One of the more famous Rural Studio projects is the Yancy Chapel which makes use of scores of discarded tires in retaining walls. The Hay Bale House is also well known for its hay-filled stucco walls. The Sanders House, now being designed and built, is a first for the Rural Studio because its eight-foot-high, one-and-a-half-foot-thick rammed-earth walls are planned to support a roof that rises almost 18 feet above the ground.

Then there's the Mason's Bend Community Center with its glass wall made of overlapping side windows taken from 1989 and 1990 General Motor cars. The view of the building from the outside is pretty nice, but the experience from the inside is spectacular.

Most recently the studio is exploring ways to build with materials discarded at the end of manufacturing processes, including half-ton bales of cardboard. (About 50 tons of non-biodegradable wax-covered cardboard is thrown into landfills each year.) Also, the Lucy House is now being built using one-ton bales of carpet remnants.

Joyce Selina Momberger is a second-year architecture student at Auburn University.

FAVORITE MATERIALS

The materials they choose help explain these architects' signature styles

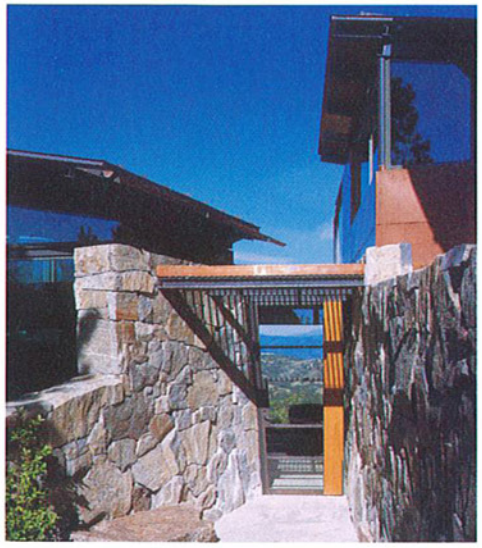
Using Local Stone

DAVID LAKE, FAIA & TED FLATO, FAIA

We are inspired by vernacular stone buildings, especially when stone's massive quality is combined with the lightness of steel. The two reinforce each other by being opposites—one smooth and thin, the other heavy and textural. They are a great team.

For the Bartlit Residence in Colorado we used a variety of granite to create organic walls that simulate the rock cliffs of the site. Telluride granite and Empire granite both are found in large screes on the mountain face—a large jumble of boulders and jagged rock. Lake/Flato's "Boulder" Bill Aylor chose sculptural boulders to place into the walls of the house, integrating their mass into the wall and anchoring the stone walls to the site. The tight joints are dry-stacked and represent the angular manner in which the stone breaks—very different from the sedimentary limestone we love to use in Texas.

Using local stone grounds the building to its place. The great variety of stone and how it is used tells a rich story of any region, its geology, and culture.



Lake/Flato Architects; photo by Hester + Hardaway

Inspired by Brick

FRANK D. WELCH, FAIA

Soon after meeting O'Neil Ford in 1956, I visited San Antonio and saw the many houses and buildings that Ford had done using a soft, buff-colored Mexican brick laid up with flush, sacked joints. It became an integral element in my "kit of parts" which I employed from the beginning. At the start of my practice, the first house I designed in West Texas, in Odessa, employed that soft brick along with other materials I found south of the border, guided there by Ford.

I used the Mexican brick for 10 or 15 years in West Texas and Dallas until its occasional tendency to "melt" or spall became controversial with clients. Before departing Dallas for the west, I discovered the pinkish, soft-looking St. Joe brick (cast in wood moulds and fired in old-fashioned kilns in Slidell, Louisiana). Except for its "iron spots," its appearance is close to Mexican brick, and when brick masonry is the thing to use these days, it is my choice. However, I still like the Mexican brick best.

Craft is involved in the laying of brick—I think it was Mies who said, "You can hold it in your hand." It is a most ancient, honorable building material, yet there is a multitude of buildings out there with its uninspired use. But think of ancient Rome and the pueblos and the Robie House and Rice University.

Frank Welch & Associates; photo by Charles Davis Smith

Wood in Domestic Building

WILLIAM F. STERN, FAIA

From my earliest interest in domestic architecture, I have had a particular preference for wood—not just as a framing material but especially as a material for cladding and structural expression and as a finish material for cabinets and furniture.

The South has a tradition of building with cypress. Unlike softer pines or fir, cypress has a tighter grain pattern, and as it matures achieves greater hardness which makes it more resistant to the effects of moisture. Our firm's O'Connor House, completed last year, is clad in cypress and we have another cypress-clad house in construction. Because of the density and hardness of the wood, we finish the cypress with semi-transparent stains, revealing the patterning of the wood grain.

We also favor natural wood veneers (particularly lighter woods such as birch, maple, and ash) for cabinets and custom furniture. Indeed, I am as excited with the possibilities of wood and the expression of its particular qualities in all forms—from rough and finished carpentry to custom millwork and furniture.

Stern & Bucek Architects; photo by Hester + Hardaway

by LAWRENCE SPECK, FAIA

Stately and Sustainable

PROJECT Robert E. Johnson Legislative Office Building, Austin
CLIENT General Services Commission, State of Texas
ARCHITECT Page Southerland Page
CONTRACTOR SpawGlass Contractors
CONSULTANTS Jaster-Quintanilla & Associates (structural); Berkebile Nelson Immerrschuh McDowell (sustainability); The Landscape Collaborative (landscape); OTM Engineering (communications); fd2s (graphics)
PHOTOGRAPHERS Paul Bardagjy

HISTORICALLY, THE ESSENTIAL ARCHITECTURAL character of a building has often been derived predominantly from the materials used to construct it. Great structures over time, from the Pyramids to the Kimbell Art Museum, are architectural essays about materiality, where shape, scale, texture, color, and virtually all other architectural qualities are profoundly affected by the materials employed. Architects as diverse as H. H. Richardson and Mies van der Rohe have invented entire architectural genres rooted in the hearty robustness of stone (in Richardson's case) or the delicacy and elegance of the steel frame (in the case of Mies) wherein materials are the seminal architectural thread from which

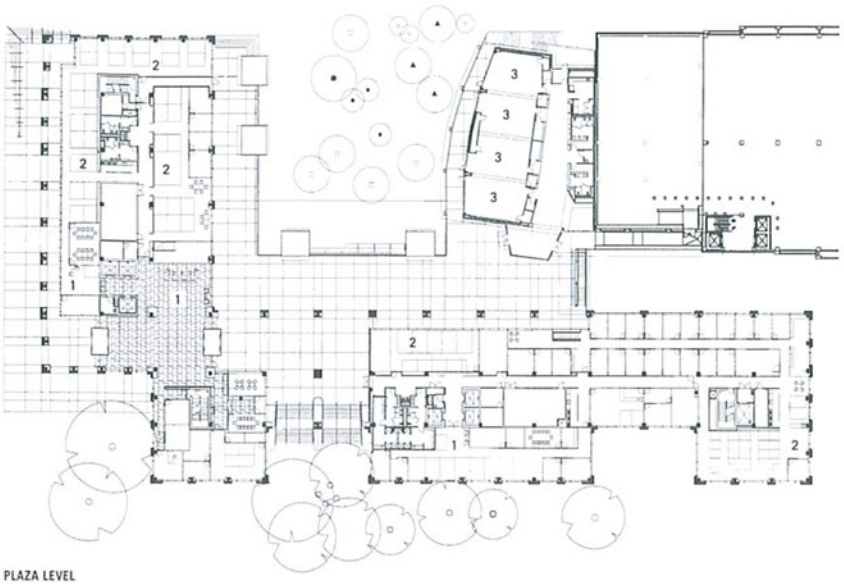
Chosen by state officials as a model for sustainable architecture, the REJ building opened in 2000 as the new home of the State Legislative Service agencies. Natural materials, including interior wood finishes and flooring, were researched for recyclability, non-toxicity, and overall environmental sensitivity.

all other design decisions emanate. In an era where facile digital imagery and monochromatic physical models dominate the design process, it is sometimes easy to lose sight of the power of real, tangible material character to shape architectural form.

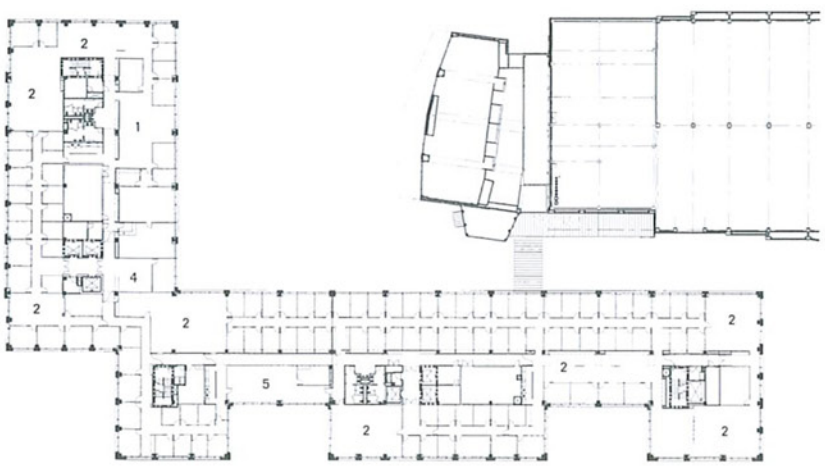
Building costs and performance, no less than building imagery, are strongly affected by material selection and deployment. Energy consumption, durability, ease of maintenance, longevity, and virtually every other element of the life-cycle costs are impacted by the strength, finish, ease of assembly, and performance standards of the materials employed. Environmental costs, as well, are inextricably linked to material selection where raw material removal, resource depletion, recyclability, energy consumption of the manufacturing process, toxicity/hazardous waste production, and embodied energy in transportation all became critical issues.

Design of the Robert E. Johnson Legislative Office Building in Austin began with materials as an overriding theme intended to generate both architectural character and high performance standards for a 320,000-square-foot building on a prominent site near the State Capitol. Inspired by the powerful materiality of its dominant neighbor down the street, the REJ building was conceived as an architecture based equally in technology and in an appropriate expression of purpose and place. The building's materials became the essential common denominator addressing a broad range of issues from contextuality to sustainability.

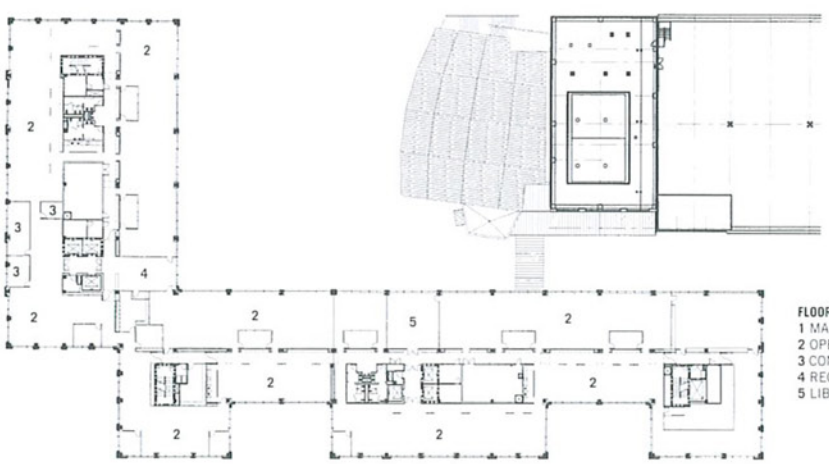
Design decisions at every level – from the frame, to the skin, to interior finishes – were shaped by a constant consciousness of how appropriate materials usage could guide and inspire the design process. A robust concrete structural system composed of rectangular columns and flat slabs thickened at concentrations of structural loads was conceived, not only to be economical and long-lived, but also to give the building a feeling of heft and permanence appropriate for its public purpose. Concrete,



PLAZA LEVEL



SECOND FLOOR



FOURTH FLOOR

FLOOR PLAN
1 MAIN RECEPTION
2 OPEN OFFICE
3 CONFERENCE
4 RECEPTION
5 LIBRARY

Strategic use of efficient glazing technology provided interior work spaces with maximum solar light yet minimized heat gain. The project team reviewed the state's guidelines for light quality, employee health, and energy efficiency before recommending updated standards which ultimately were incorporated into the building's design.

SpecNote: Sustainability

PSP devised a matrix to analyze the sustainability of chosen materials. Criteria included the origin of a material (where it was extracted and how it was transported to the site), the material's toxicity (during manufacture and after installation) its recycled content, and its future recyclability. Life-cycle cost analysis is also an important selection criteria because budget and payback periods are strictly set in government projects.

One of the more daunting tasks was specifying "green" materials to furnish interior workspaces. Laurie Smith, with Laurie Smith Design Associates, said "at the time the REJ building was being planned, major suppliers of contract furniture and fabrics were not using recycled materials and had just recently begun attempts to make their manufacturing processes more environmentally friendly." Notable exceptions were a Grammer Enviro chair and fabrics by DesignTex. The chair, placed throughout the building for guest seating, is 100-percent recyclable and uses CFC-free foam and low VOC finishes. The approximately 600 open-office workstations Smith's firm planned were covered with almost 13,000 yards of a fabric made from recycled polyester and plastic bottles. Tackboards were covered with another fabric (made from wool shorn from free-range sheep and ramie grown without pesticides or synthetic fertilizers) resulting from manufacturing protocols (developed by sustainable architect William McDonough) that create zero pollutants.

as opposed to steel, offered the opportunity to expose the structural system inside and reveal the strong, durable nature of the building even in office environments which are so often dominated by a feeling of transience and impermanence. Exposing the concrete frame also accomplished the sustainability goal of reducing redundant systems with their wasteful duplication of materials. Avoiding hung ceilings wherever possible resulted in a reduction of initial resource consumption as well as elimination of one of the elements of building assembly which deteriorates most rapidly. The concrete flat slabs also facilitated accomplishment of other sustainability goals by reducing structural depths at the building edges allowing greater daylighting opportunities.

The concrete itself was made more "earth-friendly" by replacing part of the cement (35 percent in some portions of the building, 28 percent in others) with fly ash. A finely divided inorganic residue which is a waste byproduct of coal combustion, fly ash offers the opportunity to find a very useful and economical purpose for a material which otherwise ends up in unsightly ash dams dominating the industrial landscape. (In 1998 the U.S. produced 44.9 million tons of fly ash.) Replacing cement with fly ash not only helps alleviate a serious waste disposal problem, but also reduces consumption of cement and all of the energy resources required to process it.

The building's skin, like its frame, grew out of a careful investigation of the rich potential contribution of materials to both building character and performance. Granite was selected as the predominate exterior material for reasons both visual and symbolic: the pink native Texas stone ties the REJ building aesthetically to the adjacent State Capitol complex, and also appropriately bestows the attributes of dignity and durability on a structure housing government offices. The granite was quarried about 50 miles from the site.

The actual configuration of the stone is very unusual for a contemporary building. The granite is load-bearing, carrying its own weight rather than being hung from the concrete frame. Stone thickness tapers from 14 inches on the ground floor to 8 inches at its highest point. This reinvigoration of a time-tested construction method was employed both to exploit the inherent strength, mass, and weight of the granite and to reduce dependency on vulnerable metal hangers concealed in moisture-laden cavity spaces. Stone finishes are either cleft or sawn, techniques chosen over more energy-consuming processes like polishing or flame-finishing.

The granite is stacked in vertical piers with spanning elements made of precast concrete–a more contemporary, local material reliant on abundant Central Texas aggregate supplies. An aluminum curtain wall system was selected after careful analysis of energy performance, location of source materials, durability, and finish properties. Spandrels in the curtain wall are zinc, chosen for its longevity and non-toxicity as well as for its color and texture, which complements the gray-flecked granite.

Inside the REJ building, a similar set of concerns prevailed for the generative role of materials in creating a healthy, supportive, and responsible environment. Wood, which is employed in both ceilings and walls of public spaces for its richness and warmth, was specified to be from sustainably managed sources that are "smart wood certified." Wood products throughout the building, including medium density fiberboard (MDF) employed in extensive cabinet work, use no urea formaldehyde. Metal studs in partitions have 65 percent recycled content. Gypsum drywall has 100 percent recycled paper on

"Stately and Sustainable" continued on page 59

RESOURCES UNIT PAVERS: Pavestone; CONCRETE: Texas-Lehigh Cement Co.; FLY ASH: Boral Materials Technologies (Monex Resources); PRECAST ARCHITECTURAL CONCRETE: Precast Concrete Services; CONCRETE FORMWORK: BoMetals, Inc., Spiral Cor, W.R. Meadows (Duogard); ARCHITECTURAL CONCRETE: Sunbelt Cement; CAST-IN-PLACE CONCRETE: W.R. Meadows, Green Line Environmentally Responsible Products; MASONRY UNITS: Featherlite Building Products; STONE: Texas Rose Granite, quarrier; (New England Stone Industries, supplier; Georgia Structural Stone, fabricator); STEEL DECK: Vulcraft; METAL ROOF AND WALL PANELS: Kovach, Inc.; LIGHT GAUGE METAL FRAMING: Dietrich Industries, Inc.; STRUCTURAL STEEL FABRICATOR: Wilborn Steel Co.; LAMINATES: Nevamar, Formica, Pionite; WATERPROOFING AND DAMPPROOFING: Mirafi, Neogard, Sonneborn; BUILDING INSULATION: Owens Corning, Guardian Fiberglass, Manville Commercial Building Insulation; MEMBRANE ROOFING: GAF Materials Corp.; MODIFIED BITUMEN ROOFING: Ruberoid; METAL DOORS AND FRAMES: Door Pro Systems; WOOD DOOR VENEER: Heritage Hardwoods of Kentucky; WOOD DOORS: Buell Door Co.; AUTOMATIC SLIDING DOOR SYSTEM: Stanley Magic Door; GLAZING: Viracon, CURTAINWALL FABRICATOR: Proclad Enterprises; ZINC SPANDRELS: V.M. Zinc (Wade Architectural Systems, dist.); METAL DOOR FRAMES: International Extrusion Corp., Ragland Manufacturing; ACCORDION DOORS AND PARTITIONS: Hufcor; GYPSUM BOARD FRAMING AND ACCESSORIES: National Gypsum Co., Temple-Inland, Dietrich Industries; CERAMIC TILE: GranitiFiandre by Trans Ceramica; ACOUSTICAL TREATMENT: Armstrong; PAINT: Polomyx, Porter Paints; RESILIENT FLOORING: Azrock Industries, Roppe Corp.; CARPET: Interface Flooring Systems, Resource Americas; BLINDS, SHUTTERS AND SHADES: Hunter Douglas; WINDOW SHADES: MechoShade Systems; LIGHT SHELF ASSEMBLY UNITS: Arakawa Hanging Systems, Alanod Aluminum; STRUCTURAL GLASS DOORS:Blumcraft of Pittsburgh; CURVED LIGHT BAFFLE: Decoustics, Inc. (Specified Interiors, Inc., dist.); STAIRS AND HANDRAILS: Wilborn Steel Co.; GATE FOR STAIRS: Wilborn Steel Co.; ALUMINUM CURTAINWALL/WINDOW WALL: Skyfab,Sonneborn

Three in a Row

by GERALD MOORHEAD, FAIA

PROJECT Yupon Place Townhomes, Houston
CLIENT Parra Design Group, LTD.
ARCHITECT Parra Design Group, LTD.
CONTRACTOR Catama Builders, LTD.
CONSULTANTS Chaffin Associates (structural engineer); Karen Rose Engineering & Surveying (civil engineer)
PHOTOGRAPHER Hester + Hardaway

THE DEVELOPMENT MODEL FOR TOWNHOUSES in inner city Houston has become rote by now: Buy a corner lot, usually 50 by 100 feet, build three attached townhouses, and sell each for well over $300,000. Lacking zoning, Chapter 42 of the city code of ordinances imposes the few regulations there are: density and setbacks (the building code still applies). The three townhouses on Yupon Street in the Montrose neighborhood were designed more than a year ago while Chapter 42 was being revised and they are three dimensional diagrams of those updated regulations.

With some uncertainty at the time about the anticipated requirements, architect Camilo Parra chose a safe course by making the units freestanding rather

(opposite page, top) In the second-floor family room, the open stair and inset balcony define the circulation zone which is expressed on the exterior with the cement panels. (opposite page, bottom) The large space of the formal living/dining area has walls for art display and minimal windows on the south exposure. (this page, above) Contrasting materials and large windows help relieve the visual weight of the projecting upper floors. (this page, left) Finish materials, such as granite countertops and natural wood cabinets, are not typical for new urban town houses.

(clockwise from top left) Ochre stucco and gray cement panels complement the dark foliage of live oaks. The steel stair with wood treads and open risers slices through a light-filled volume. The family room opens to mature trees. Interior materials (wood floors and cabinets, white walls and ceilings) are elegantly restrained.

than connected by a fire wall. The 6-foot space between each unit allows all sides of each house to have windows, greatly improving the amount of light and the sense of openness over the typical townhouse arrangement (with windows only at the two end walls). The garage doors are set back 17 feet from the street – a new Chapter 42 proviso – while the upper floors project to the 10-foot setback required of the house itself. The garage setback is intended to keep parked cars from blocking the sidewalk and reduces the impact of gaping garage doors on the streetscape. An unfortunate side effect to the new regulation is a two-story mass hovering over the sidewalk.

Parra's composition of the front facade, rendered in ochre stucco, gray cement-composition panels, and large windows, works to visually break up this hovering mass. Contrasts between planar and volumetric elements, rendered in contrasting materials, reduce the apparent size of the facades. The stucco volume is punctured by large-paned windows, revealing the thinness of the wall and the lightness of the construction. Half of the volume is recessed to form balconies. A thin plane of cement composition panels enclosing the balconies floats a breath away from the stucco, further decomposing the sense of mass. Then the bright stucco itself only wraps the corners as far back as the garage setback, further emphasizing the lightness of the mass and the thinness of the facade. The rest of the house is clad in cement-composition siding boards.

The townhouse design provides the usually expected amenities while also offering some unexpected pleasures. At 2,800-square-feet, each unit contains three bedrooms, three and one-half baths, a formal living/dining area, and a kitchen opening to a family room with a fireplace. Despite the commonness of this speculative market specification, the surprise inside is the spaciousness, starting with the open-riser steel stair slicing through a generous hall filled with light. The living areas on the second floor flow into one another while maintaining a modest formality.

Simplicity of means in the limited material palette and clear, open interior spaces are quietly exploited by Parra in the Yupon Street Townhomes. As the inner city gets denser, this kind of restraint will be a welcome sign of urban neighborliness, in contrast to the loud falsettos bellowing for attention in the competitive real estate market.

Gerald Moorhead is an architect practicing in Houston.

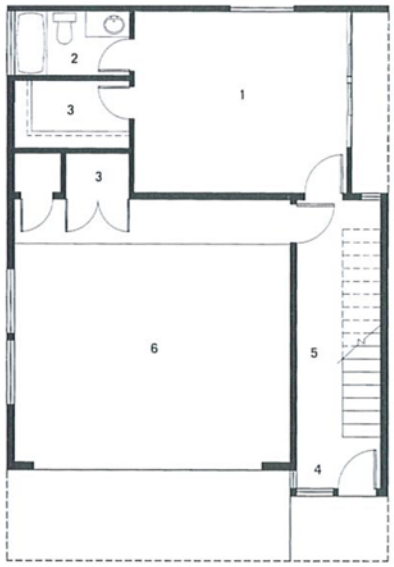
Spec Note: Cement Panels

The dark gray panels on the townhouse facades are CemBonit Type B, a 5/16-inch-thick industrial-grade board with a sanded finish and the appearance of slate. Manufactured by Eternit-Dansk, CemBonit is comprised of portland cement, silicate and selected fibers, and reinforced with cellulose fibers.

For installation, Parra had the four-by-eight-foot sheets cut to two-by-four-foot panels and stacked intermittenly (like coursed ashlar stone masonry) to better complement the proportions of the three-story houses. The surface is similar to stone, yet because they are installed above the surface of the exterior wall, the panels appear lightweight and create a type of extruded volume. Left unpainted, their color changes dramatically from the effects of light and water.

Because fiber-cement expands and contracts, the panels were installed with a half-inch gap in between. "To achieve this, we created a waterproof wall behind the cement boards with the use of glavanized metal," Parra says. "On the galvanized metal we installed two-by-two-inch wolmenized lumber that serves as battens on which the Cembonit panels are attached. The panels are attached to the battens with the use of stainless steel expansion screws that are made especially for use with the CemBonit panels."

RESOURCES **STUCCO SEALANT:** Sonneborn Building Products; **PORTLAND CEMENT:** Holnam, Inc.; **MASONRY CEMENT:** Holnam, Inc.; **FINISH:** Dryvit Systems, Inc.; **SLATE:** American Granite & Marble; **RAILINGS AND HANDRAILS:** SSS Steel; **PRE-FABRICATED WOOD JOINTS AND TRUSSES:** Texas Truss, Inc.; **GLUED-LAMINATED TIMBER:** Anthony Forest Products; **BUILDING INSULATION:** Owens Corning; **VAPOR RETARDERS:** Tyvek; **SHINGLES:** Elk Corp.; **SIDING:** Hardi Plank; **FASCIA AND SOFFIT PANELS:** Hardi Soffit; **METAL WINDOWS:** Champion; **TILE:** Casa Dolce Casa; **WOOD FLOORING:** Hardwood Products; **PAINTS:** ICI Dulux



FIRST FLOOR

SECOND FLOOR

THIRD FLOOR

FLOOR PLAN
1 BEDROOM
2 BATH
3 CLOSET
4 ENTRY
5 GALLERY
6 GARAGE
7 BALCONY
8 FAMILY
9 KITCHEN
10 BREAKFAST
11 DINING
12 FORMAL LIVING
13 STUDY
14 MASTER BEDROOM
15 MASTER BATHROOM
16 MASTER CLOSET
17 UTILITY

by SUSAN WILLIAMSON

Clearly Connected

PROJECT Clear Channel Communications corporate headquarters
CLIENT Clear Channel Communications, Inc.
ARCHITECT Overland Partners
CONTRACTOR G.W. Mitchell & Sons
CONSULTANTS Lundy & Franke Engineering (structural engineer); Goetting & Associates (MEP); Pape Dawson Engineers (civil); Raba Kitner (Consultants (geotechnical); The Sage Group (landscape); RVK Group (furniture & interior finishes); Pritchard Associates (project management)
PHOTOGRAPHER Paul Bardagjy

WITH THE NEW CORPORATE HEADQUARTERS for Clear Channel Communications in San Antonio, Overland Partners took what could have been a predictable palette of materials – limestone, metal, glass, and wood – and created a project that transcends any expectations those materials might suggest.

Over the last decade Austin chalk limestone has become a cliché of Texas vernacular—a motif popular far beyond the boundaries of Central Texas. "Hill Country"-style apartment buildings and tract mansions and strip centers clad in the white, rough-cut stone abound everywhere from Lubbock to Corpus Christi. By using limestone on the Clear Channel building, along with its familiar partner – metal – for accents, fixtures, and roof, Overland risked association with everything its cutting-edge, high-tech client wanted to avoid.

But, for all the reasons that the creamy stone makes no sense in the red dirt of North Texas or the gumbo of Houston, it makes all the sense in the world in San Antonio, perhaps even more so on this project. The Clear Channel buildings are, after all, sited on the edge of a limestone quarry—although closed, and now home to the rolling fairways and greens of a golf course. And, even without the imperatives of the site, in Central Texas the stone is abundant and relatively inexpensive, an environmentally friendly choice for durable cladding.

In fact, Overland's principal-in-charge, Tim Blonkvist, says the firm envisioned the project as being clad in sandstone. Overland had designed a number of recent projects using limestone – including parts of the National Wildflower Research Center in Austin and the South Texas Blood and Tissue Center in San Antonio – and he says the firm wanted to move on to something else. But, in the end, the logic for using limestone was inescapable. The challenge then, Blonkvist says, was to assemble the materials in a way that wasn't just "the same."

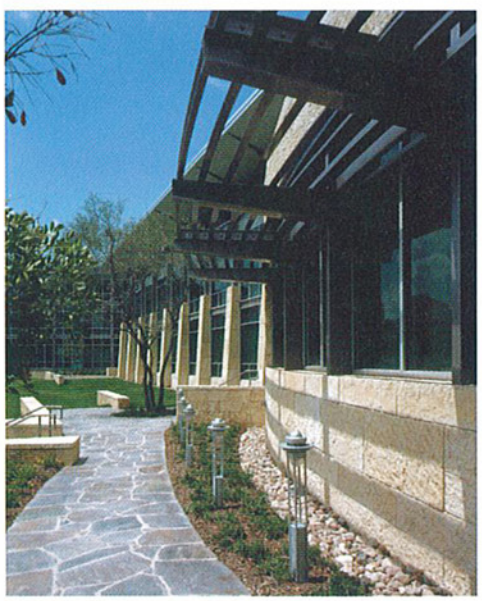
Dialogue about the palette of materials started early. Discussions between the architect and client focused on both the design of the two-building, 50,000-square-foot complex and the craftspeople who would build it. To design a composition that attained the clarity and discipline desired by the architect and the client, all of the implications and limitations of each material were considered, Blonkvist says. Of particular importance in terms of the stone was the working relationship the architects had developed with the masons, L&T Masonry of Austin, who also worked on the Wildflower Center and the Blood and Tissue Center. That ongoing relationship helped determine the cut and finish of the stone for Clear Channel.

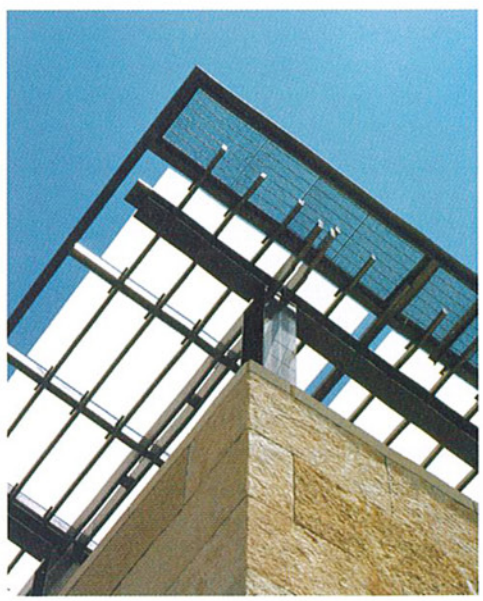
(opposite page) Perfectly suited to its site, the complex sits on the edge of a former limestone quarry and overlooks a golf course. (above) Overland composed the interior spaces with variations on the same material palette used on the facades.

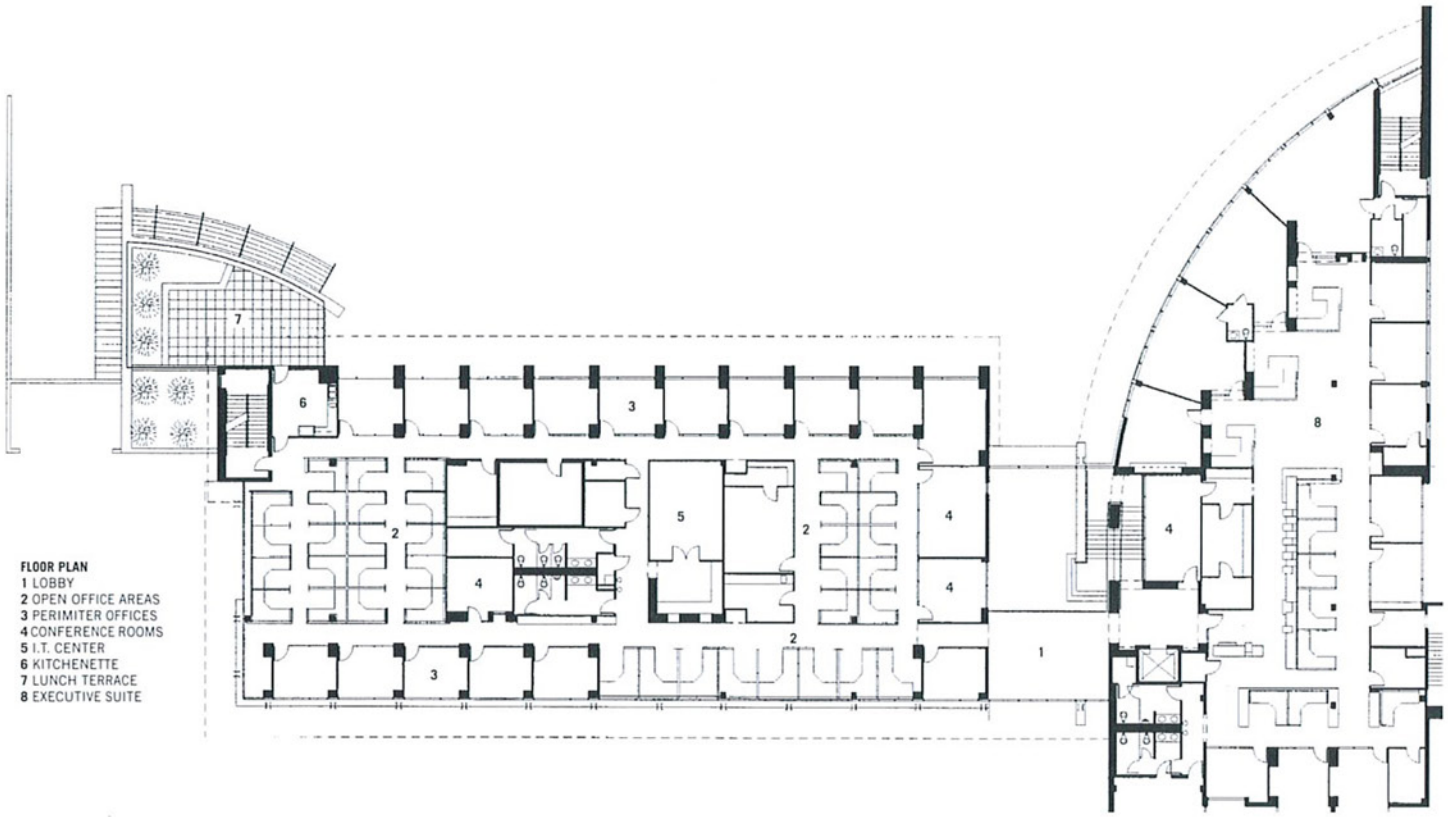
The client wanted a clean, modern look – being an admirer of the travertine at Richard Meier's Getty Center in Los Angeles – but he also appreciated the tactile heft of more roughly cut stone. The architects and masons met both of those goals by using blocks of stone that were cleanly cut in regular-sized blocks but with an irregular finish, left untouched after the stone was lifted from the quarry. From a distance, the regularity of the blocks reads crisply, while up close the irregular finish provides a rich textural variety. At the same time, the stone was installed to emphasize its weight and heft, both by placing the largest blocks on the tower adjacent to the entry and by using the stone as more than thin cladding, particularly in places where it is allowed to penetrate to the interior.

If the installation of the limestone first challenges, then confirms expectations about its rustic nature, a different kind of misdirection occurs with the steel used for railings, columns, and sunscreening devices. Instead of the galvanized metal that has become the ubiquitous partner of limestone, the steel here has been painted with a two glossy coats of automotive paint in a deep gunmetal gray with purple undertones. From a distance the difference is not obvious, but up close the effect is altogether sleeker than the weathered splotchiness of galvanized metal.

(above) The gently upward curve of the maple ceiling panels maximize the light entering through the conference room's full-length windows. (right) Equally detailed are the elements used outside.







SpecNote: Millwork

The millwork throughout the Clear Channel Communications headquarters complex is maple, including the grand stair in the central lobby, the custom furniture crafted for the executive offices, office walls and partitions, and the curving, convex ceiling panels.

Maple, finished to a golden glow, lightens and enriches the interiors. In the lobby, the maple is finished in two shades, with bands of unstained pale wood outlining the edges of the wide stair as well as the treads and risers, while the walls are the deeper gold found throughout the rest of the building.

Overland's Tim Blonkvist says his first reaction, when he saw the two differing shades, was to presume the installer had made a mistake. But the longer he looked, the more he liked it. In the end, the dual color scheme stayed. Now it's one of his favorite aspects of the project and, he says, something that would have been lost if he, as architect, had insisted that his vision was the only one that mattered.

The material palette was limited, Blonkvist says, as another way of ensuring the primary goals of orderliness and rigor. Limestone, metal, and greenish-tinted glass make up the exterior, while those same materials along with an abundance of maple millwork compose the interior. In various places, the materials flow seamlessly from outside in. On the east side of the two-story building, battered limestone columns penetrate the window walls to provide an unexpected massive presence in the offices there. The corrugated metal panels used on the exterior also clad the interior bridge connecting the second level of the two buildings as well as the elevator lobby.

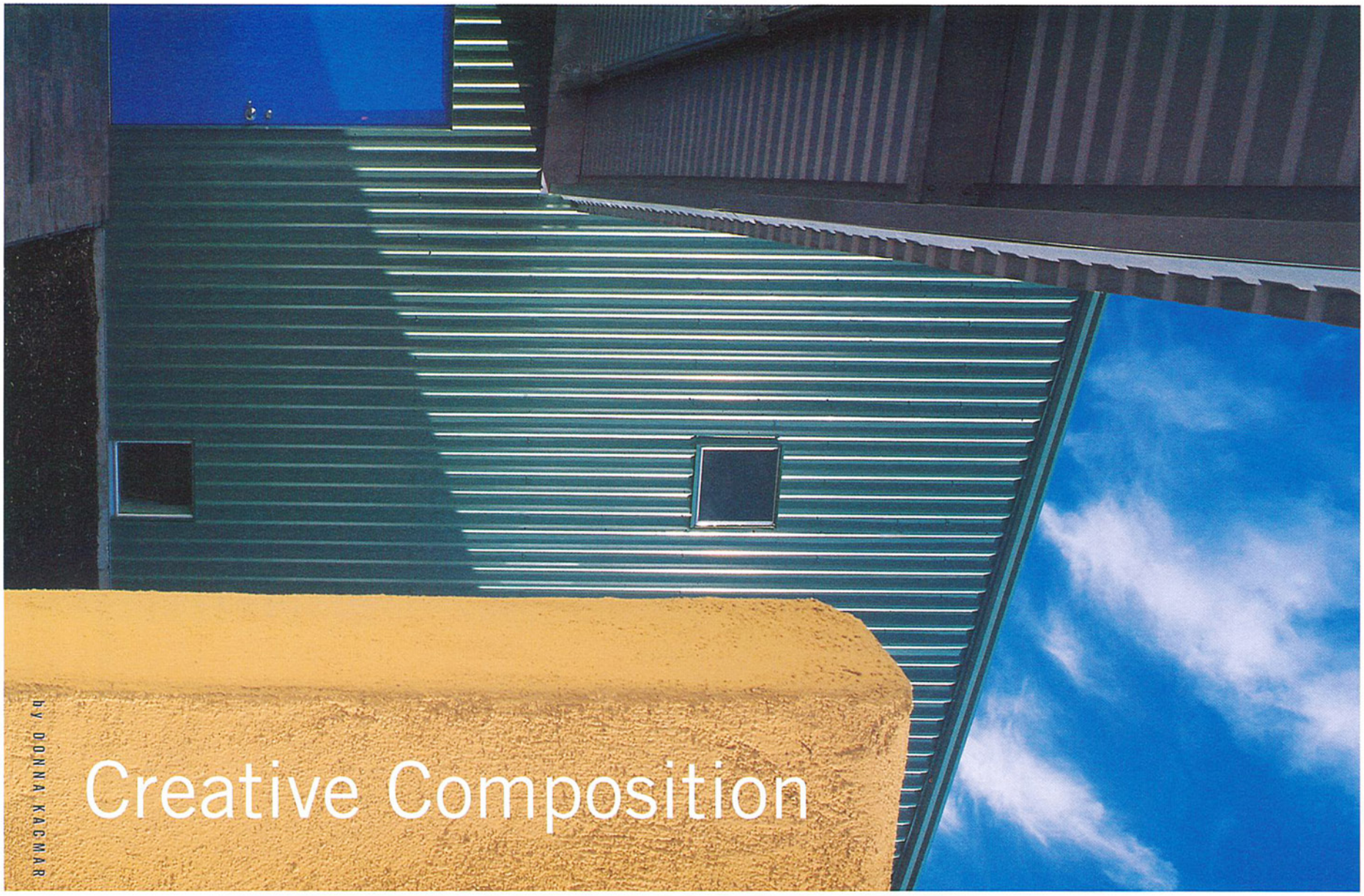
The most remarkable interior feature is the convex flow of the suspended maple ceiling. The glowing wood panels curve up at the building perimeter, but are held back at each edge, allowing the panels to float free of the walls. The curve upward exposes more of the window glass, thus allowing longer angles of natural light to penetrate interior work spaces. In other areas, gypsum-board ceiling panels also appear to float, then are pulled back at the perimeter to reveal full-height sections to the structural ceiling.

The two-building complex is positioned carefully on its odd-shaped site at the edge of the golf course. From the street, the long western facade of the rectilinear two-story building and the mass of the three-story tower with its floating roof canopy dominate. On the golf course side, the three-story mass dramatically curves outward, following the contour of the site. At the opposite end, a curved terrace echoes that knife-edge footprint. The two-story building's western facade is pierced with a series of tall, narrow windows while, on the east, the building opens with large expanses of glass that provide views of the golf course and fill the interior with natural light. The double-height lobby connecting the two buildings is virtually transparent, especially at night when it and the adjacent tower are lit from within. Although the building is fronted by a parking lot, the expanse of concrete is smaller than expected because additional parking was placed underground.

Throughout the project, the detailing is rigorous. Connections between materials are thoughtfully considered and precisely rendered. The location of seams and fasteners in the metal panels, the placement of mechanical systems, control panels, openings, and the arrangement of courses of stone—all of these and more are crafted with a meticulous attention to detail. The rhythm of repeated and layered patterns and materials complicates but does not overwhelm the composition. The result is a project that does not strain for effect but instead attains an understated wholeness and grace.

Susan Williamson is a former editor of *Texas Architect*.

RESOURCES **LIMESTONE:** San Jacinto Materials, Inc.; **SLATE:** Delta Granite and Marble; **RAILINGS AND HANDRAILS:** Rast Iron Works, Casteel; **ARCHITECTURAL WOODWORK:** Hausmann & Hausmann; **LAMINATES:** Architectural Caseworks of Texas; **WATERPROOFING AND DAMPPROOFING:** Mirafi Moisture Protection; **BUILDING INSULATION:** International Cellulose Corp.; **METAL ROOFING:** Berridge Manufacturing Corp.; **WOOD AND PLASTIC DOORS AND FRAMES:** Republic Doors & Frames; **ACCESS DOORS AND PANELS:** Karp Associates, Inc.; **GLASS:** Viracon; **GLAZED CURTAINWALL:** Vistawall; **ACOUSTICAL CEILINGS:** Armstrong; **PAINTS:** Sherwin-Williams; **BLINDS, SHUTTERS, AND SHADES:** Springs Window Fashions Div., Inc.


Creative Composition
by DONNA KACMAR

PROJECT Smith Photography Studios, Houston
CLIENT Ralph Smith, Smith Photography
ARCHITECT Natalye Appel + Associates Architects
CONTRACTOR Lewter Constructors, Inc.
CONSULTANTS Matrix Structural Engineers (structural); Karen Rose Engineering & Surveying (civil); The Office of James Burnett (landscape); Dungan Design (concrete finishing); Putterman Scharck & Associates (lighting)
PHOTOGRAPHER Hester + Hardaway

NATALYE APPEL + ASSOCIATES ARCHITECTS WAS asked by Ralph Smith of Smith Photography to provide a new work environment for his growing company. Smith Photography, a leading commercial photographer in the Southwest, specializes in packaging, advertising, and catalog photography for clients including major food corporations, advertising agencies, and design professionals throughout the United States. The program requirements included three photography studios, two commercial kitchens for food preparation and styling, digital studios, offices, and a space for clients to relax or work while they are away from their home office. Many of Smith Photo's clients are from northern climates, and Smith asked for the building to support the creation of more tropical outdoor spaces. Smith also asked that the building help communicate to his potential clients how his services are provided and sequenced while also creating an environment that is a fun work place for his associates and staff.

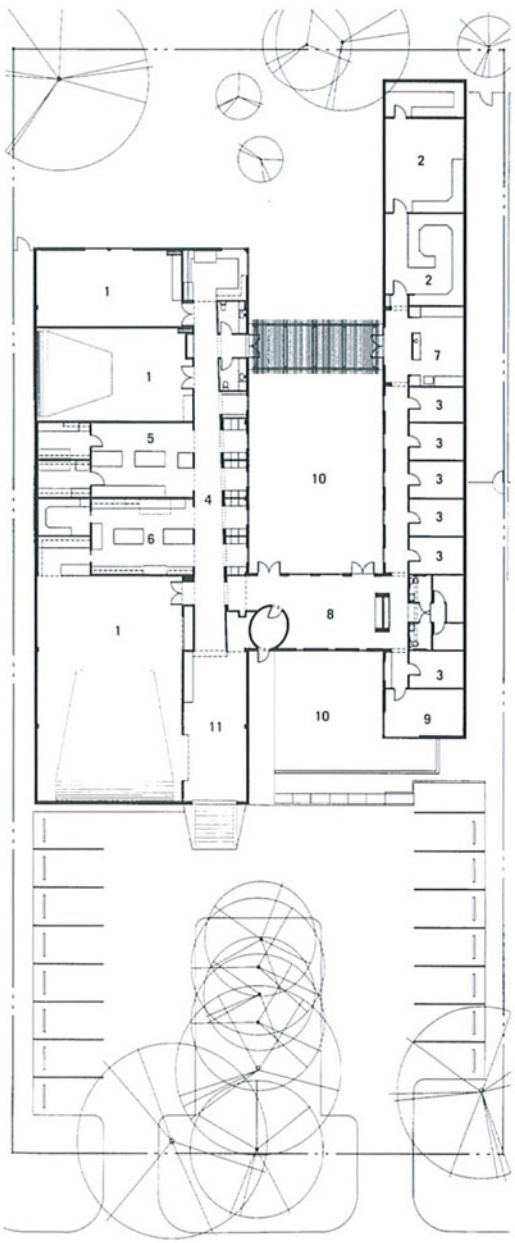
The site, a 132-foot x 290-foot flat piece of land in southwest Houston, has several large post oaks and cottonwoods near the street. The immediate context includes large surface parking lots and neighboring metal sheds or concrete block buildings containing light industrial and warehouse uses.

The 13,000-square-foot building program is divided into two long bar buildings, which define a palm-filled entry court and central courtyard with fishpond, pergola, and kitchen garden by The Office of James Burnett. One bar contains the studios, kitchens, workshop, and prop storage, while the other bar houses offices and digital photography studios. The two bars are linked by a client living room, where clients may work or relax during the day long photo shoots yet be available to review and approve shots.

The light frame of the pre-engineered steel building system was selected for its ability to economically enclose the large volumes of space needed for the studios and a workshop. The architect worked with the supplier to manipulate the typical low-slope gable roof forms of this building type to create an

(opposite page) Vivid colors of the entry court hint at the creative nature of the work going on inside. (above) For the client lounge, Appel's staff designed custom cabinetry of medium density fiberboard, plastic laminate, and hardware cloth. The entry tower is in foreground.

(opposite page, top) Cable lights set a subdued mood in the client lounge. Photography studios are beyond the entry tower at rear left. (opposite page, bottom) Flush steel access plates are set in the concrete slab near MDF cabinetry.



FLOOR PLAN
1 STUDIO
2 DIGITAL IMAGING
3 OFFICE
4 PROP CORRIDOR
5 PHOTO EQUIPMENT
6 PREPARATION & STYLING
7 WORKROOM
8 CLIENT
9 CONFERENCE
10 COURT
11 STORAGE/SHOP

inward-looking composition of asymmetrical gables and sheds. Smaller scale spaces are made more intimate by a change in materials and smaller punched openings. The tautness of the metal skin cladding of the steel building system is contrasted by the textured stucco wall at the entry.

Color – in the form of green painted metal siding, the yellow stucco wall, and plantings in the courtyard spaces – is used to visually separate the two galvalume-clad bar-shaped buildings. Color is also used in architectural "set pieces" to intensify the circulation sequence in the same way a photographers' set enhances the object being photographed. One moves from the yellow entry wall to the surprise of the blue front door and then into the building through the purple oval entry tower. A long, red prop storage and display wall, skewed to create a forced perspective, defines circulation through the studio wing. Changes in hue also distinguish the serene palette of the office area from the more saturated colors of the highly activated studio and workshop area.

The structural slab was left exposed and was finished in a deep khaki with imprints of film strips provided by the client. Access and service areas are fitted with flush steel flooring which intersects the monolithic nature of the concrete.

Medium density fiberboard (MDF), brightly colored plastic laminate, and hardware cloth paneled cabinetry house the media and refreshment centers which help to separate circulation areas from work or relaxation areas.

The food preparation and styling kitchens are outfitted with MDF cabinetry, low walls of CMU that support butcher-block counter islands, brightly colored plastic laminate, and stainless-steel appliances and equipment. The exhaust hoods in the kitchens are custom finished with contrasting surface treatments which help distinguish the two food styling rooms.

The tactile and visual play of materials and surfaces constantly confronts the visitor: solid mass of the stucco walls contrasts against the light frame pre-engineered steel structure while surprises of color animate the smooth planes of gypsum board. Free-standing cabinetry pieces, inserted in the photography studios, create a dialogue with the container wherein the smooth, white "infinity" walls are pulled from the edges of the container's black box. Even in the restrooms the countertops of glass float away from the wall; the interior walls are clad in gypsum board that stops at 14 feet above the floor to reveal the steel structure. Also in the studios, exposed metal

SpecNote: Lighting At Smith Photography Studio, a Translite low-voltage cable system proved to be just the right choice for lighting their customer lounge. Natalye Appel specified several different types of lighting systems in the project, but opted for the cable solution (rated for both residential or commercial interior use) to bring the light down to the desired elevation. Using lower wattage lamps, the client benefits from the system's energy efficiency with lower wattage lamps positioned closer to the object or space being illuminated.

Jay Leggett of Putterman Scharck & Associates, Inc. in Houston, says the Translite system "affords ultimate flexibility for any given lighting application. With low voltage cable lighting, one can have uplights for indirect ambient light and accent lights with the same system." Installation is simple, he says—wall anchors attach the cable with a single screw at each end and require only one electrical connection/power supply per group of up to 25 fixtures. In most cases, cable systems are installed without a junction box or canopy cover; thus, producing an attractive, visually discrete lighting solution.

Low-voltage MR-16 lamps (20- to 50-watt) can provide a wide range of beam spreads from very narrow spots (six-degree), to wide floods (60-degree). Appel used narrow floods (25-degree) in the lounge to accent photographs, artwork, etc., and floods (40-degree) to create ambient lighting bright enough for general illumination.

ductwork and cable lights make their roles as inserted pieces very clear.

Natalye Appel + Associates Architects allowed the metal-frame and metal-clad building to do what it is best at doing, containing large volumes of uninterrupted space, and manipulating that space – and the materials in between – to create a new home for Smith Photography that fulfills the client's requirements for a fun place to work. The jury for the 2001 AIA Houston Design Awards saw this project as an exemplary work space, honoring it with a design award earlier this year. Juror Ted Flato, FAIA, described the project as "an extremely elegant place to get to work."

Donna Kacmar practices architecture in Houston and teaches at the University of Houston Gerald D. Hines College of Architecture.

RESOURCES CONCRETE STAINS: Kemiko; ARCHITECTURAL METAL WORK: Arteferro; RAILINGS AND HANDRAILS: Arteferro; CUSTOM MILLWORK: Commercial Cabinets; LAMINATES: Pionite; ROOF AND WALL PANELS: MBCI; METAL ROOFING: MBCI; WOOD AND PLASTIC DOORS AND FRAMES: Bison Building Products; METAL WINDOWS: Alenco; TILE: Dal-Tile; PAINTS: Martin-Senour, Kelly-Moore, Behr, ICI Dulux, Ace Royal; CARPET: Mannington Carpet; OFFICE AND RECEPTION FURNITURE: Knoll; METAL BUILDING SYSTEMS: Whirlwind Building Systems

by DANNY BOULTINGHOUSE

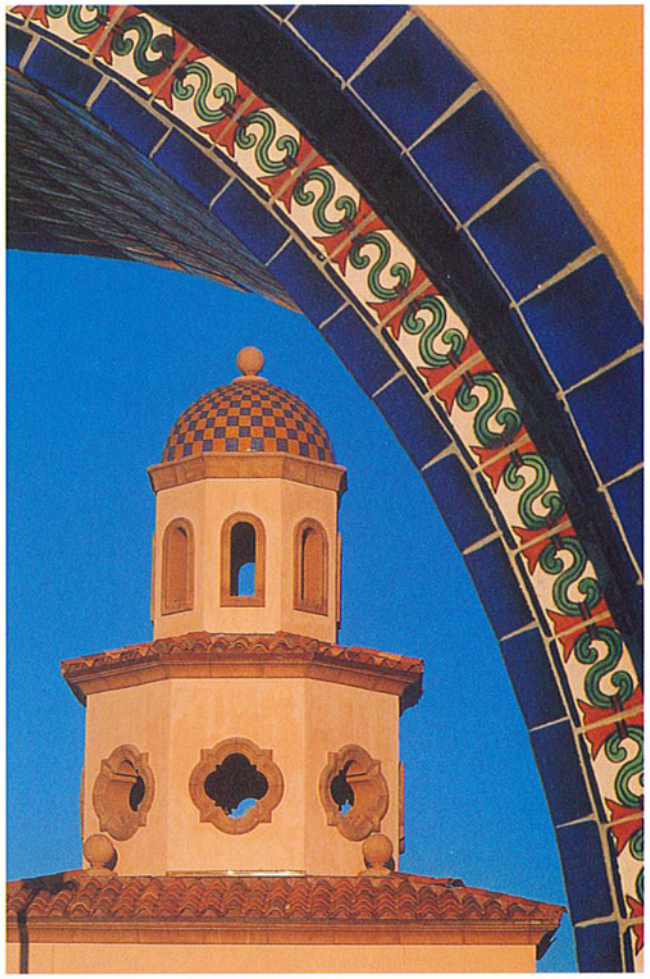
History Reflected

PROJECT TxDOT Travel Information Center, Laredo
CLIENT Texas Department of Transportation
ARCHITECT Ashley Humphries & Sanchez
CONTRACTOR Leyendecker Construction Co.
CONSULTANTS Eschman Engineering (MEP), Foster Engineering (civil), WSC, Inc. (structural), Jim Cooper (landscape)
PHOTOGRAPHER Hester + Hardaway

THE TEXAS STATE TRAVEL GUIDE DESCRIBES Laredo as being rich in south-of-the-border flavor. The guidebook encourages visitors to immerse themselves in its 245-year history by strolling its streets to see the Spanish Colonial architecture and absorbing the ambience of the Hispanic culture so apparent amid the quiet elegance and refined simplicity of the historic La Posada Hotel and other of the city's Old World architectural gems.

That tranquility, however, suddenly disappears when the visitor journeys away from that nostalgic soul of Laredo—especially north along Interstate 35 where the effects of today's booming local economy jar the historically seduced traveler back to the realities of the modern, post-NAFTA world. Here, along the commercial corridor between the international border and San Antonio, the quietness and serenity is obliterated by the roar of 18-wheelers, the stench of diesel exhaust, and the spectacle of portable toilets lining the highway to accommodate nature's needs for cross-country truckers stuck in the often immovable congestion. The visual simplicity of old Laredo's architectural elegance is replaced by row after row of concrete tilt-up, metal-clad, dock-high 200,000-square-foot boxes incongruously decorated with geometric patterns in an attempt to gain the semblance of individuality. In this bizarre, chaotic landscape, these warehouse monstrosities pretend to be "architecture" because "form follows function."

The choice of materials derived from the architectural antecedents of Laredo, including the hand-painted Talavera tile used in many of the structures throughout the complex.

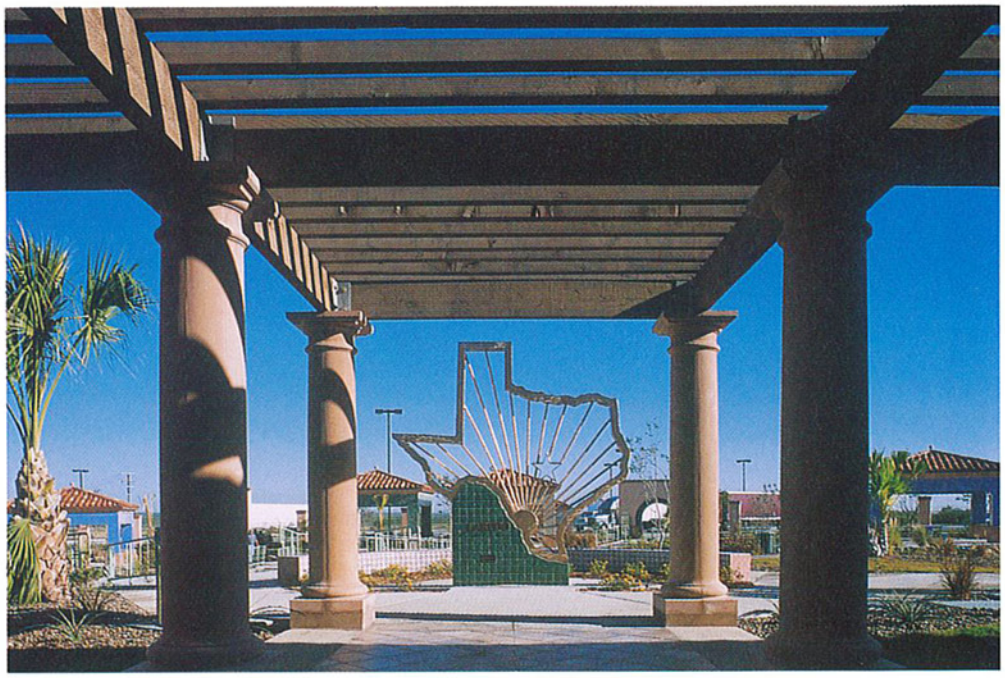


SpecNote: Synthetic Stone

The architects chose architectural precast rather than cast stone for columns, wainscoting, and trim molding on the Laredo TxDOT Travel Information Center. Although manufacturing processes are similar, architectural precast is less dense and less durable – and less expensive – than cast stone, which makes the lighter product easier to work once delivered to the construction site. In general, architectural precast is used for decorative elements while the stronger cast stone can sometimes substitute quarried stone as structural units.

Neither of the two synthetic materials have the variation, unpredictability, nor high cost of natural stone. Manufacturers often state that their products are superior to cut stone while offering a wide array of pigments and "natural" textures complete with voids to more closely mimic the inconsistent surfaces of the real thing. The ability to replicate deteriorating natural stone on existing buildings is touted by manufacturers as making the synthetic products ideal for the remodeling or restoration of historic structures.

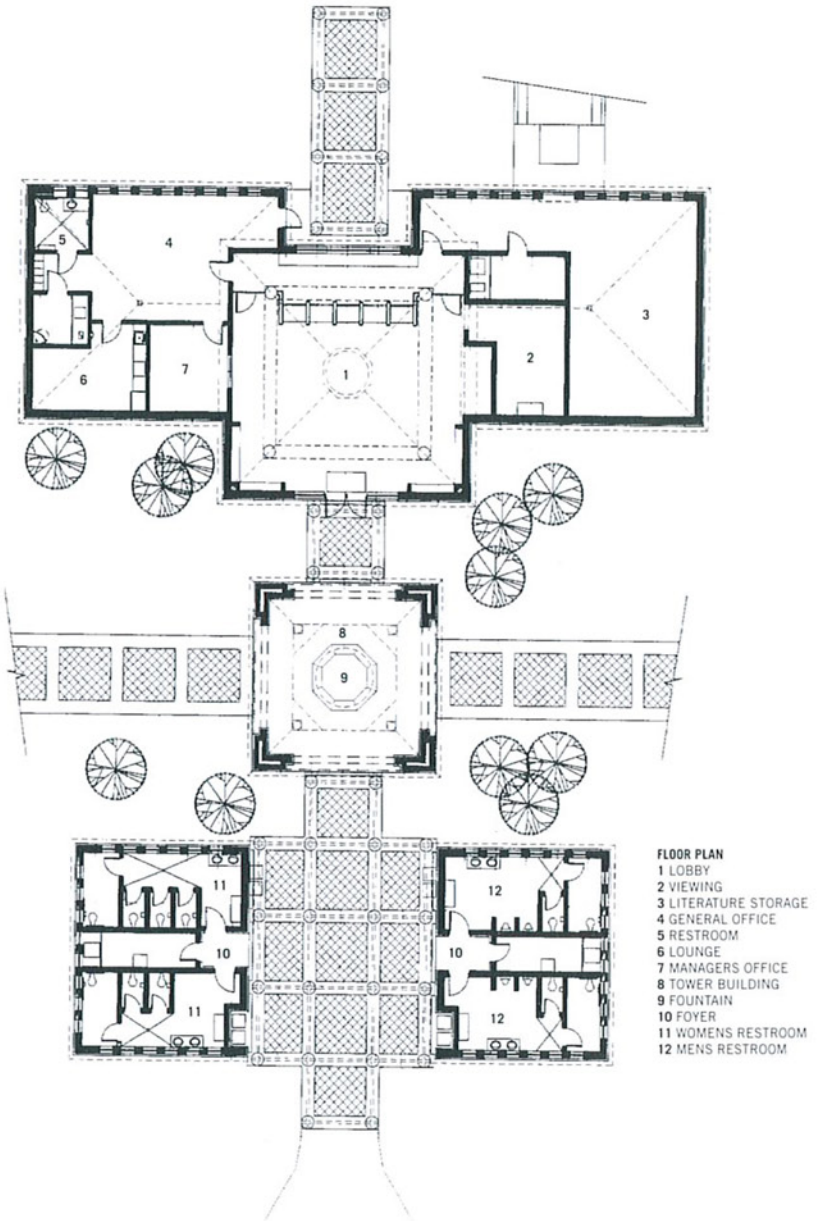
For more information, visit the Web sites for the Architectural Precast Association (*www.archprecast.org*) and the Cast Stone Institute (*www.caststone.org*).



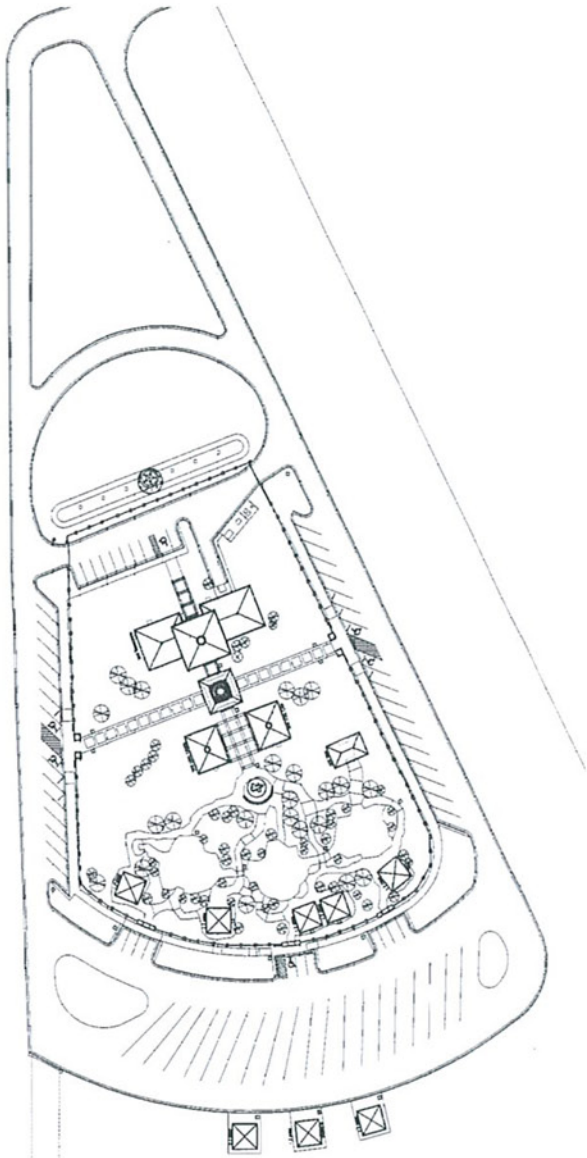
Hoping to help visitors recover from this joltingly harsh contrast, the officials of the Texas Department of Transportation decided to build a new travel information center along I-35. TxDOT requested architects to design a facility that would not only offer a place to obtain tourist literature, but also to provide visitors a place to get out of the heat of the day, to gather their thoughts, and to reflect and possibly recapture the experience of being embraced by the cultural soul of Laredo and South Texas. The challenge was met by the McAllen-based Ashley Humphries & Sanchez Architects who designed a facility that vividly recalls the Moorish and Spanish Colonial architecture of old Laredo. Situated some 18 miles north of Laredo (enough distance to give travelers a little time to recover from the warehouse wars), brightly colored towers emerge on the horizon above the sparse semi-desert vegetation. This is the first hint of a place that – through the blend of forms, shapes, and color, along with the thoughtful use of traditional materials – begins to recapture the architectural experience left behind, encouraging the traveler to pause and investigate.

Visitors enter the complex through one of the massive freestanding archways that, along with a decorative wrought-iron fence, define the perimeters of the compound. A dominant open-arched tower invites them into the core of the facility. From there one can enter the main building which contains TxDOT administrative offices and an information counter in a spacious high-ceiling vaulted area where travel information is neatly displayed. Also included is a small meeting room for lectures and viewing of videos about the Lone Star State. Opposite the visitors' center is a garden/picnic area that is intimately depressed into the site's north side— "an oasis" in the words of architect James Humphries: a series of three ponds connected by falling water, surrounded by native landscaping, which form the focal point for five covered gazebo picnic structures. And in the center of all this, lest visitors momentarily forget where they are, a "State of Texas" sculpture

(top) Travelers will know where they are when they spot Laredo artist Armando Flores' sculpture framed in steel and clad in heavy-gauge bronze. (below) The central tower rises above the facility, as seen from the architects' "oasis" at the picnic area.



FLOOR PLAN
1 LOBBY
2 VIEWING
3 LITERATURE STORAGE
4 GENERAL OFFICE
5 RESTROOM
6 LOUNGE
7 MANAGERS OFFICE
8 TOWER BUILDING
9 FOUNTAIN
10 FOYER
11 WOMENS RESTROOM
12 MENS RESTROOM



created by a local artist, offers the traditional obligatory tourist photo-op.

So, with all that said, why is this place special?

Domes and vaults and arches, yes, but it's the appropriate placement of materials that bring this facility to life. By employing Mexican construction techniques and traditional materials such as colorful Talavera tile, stucco, clay-tile roofing, and wrought iron, the architects have captured that elusive sense of architectural appropriateness. Their efforts are rewarded – as is each visitor – with a built environment from which emanates a simplicity, a touch of patience and calm, a sense of symmetry and balance, an overall impression of harmony among earth, water, and sky. A world away from the nasty, nerve-wracking, NAFTA-inspired noise, this facility successfully reflects the rich cultural mosaic of light and color.

Architecturally speaking, the TxDOT complex serves as a welcome example of the indigenous Spanish Colonial architecture to the traveling public. And, for the busloads of local school children who visit the facility to learn about Texas, it provides a lesson and source of pride about the influence Hispanic culture has on their state. TxDOT should be congratulated for recognizing that often overlooked history, and for realizing its potential to yield good architecture. In addition, the architects should be congratulated for responding so well to the challenges posed by TxDOT, and for creating an oasis sorely needed in this region burdened, as well as blessed, by the effects of a booming economy.

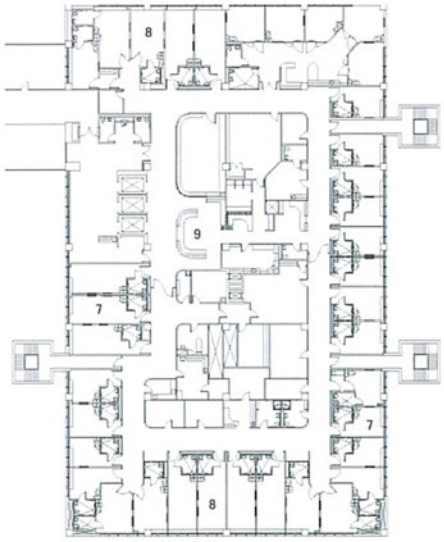
Danny Boultinghouse is an architect practicing in McAllen.

RESOURCES **CONCRETE PAVEMENT:** City Ready Mix; **PRECAST ARCHITECTURAL CONCRETE:** CDI; **LIMESTONE:** Brick & Tile Center; **LAMINATES:** Wilsonart; **ROOF TILE:** Brick & Tile Center; **METAL WINDOWS:** Kawneer; **TILE:** Brick & Tile Center; **PAINTS:** Sherwin-Williams

Texas Scottish Rite Hospital for Children

FLOOR PLAN
1 TYPICAL EXAM ROOMS
2 FAMILY RESOURCE
3 LABORATORY
4 STAFF WORK ROOM
5 PHARMACY
6 WAITING ROOM
7 TYPICAL PRIVATE ROOMS
8 TYPICAL SEMI-PRIVATE ROOMS
9 RECEPTION

CLINIC LEVEL



THIRD LEVEL

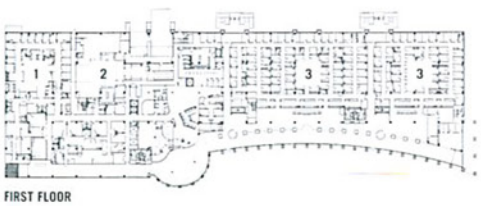
PROJECT Texas Scottish Rite Hospital for Children, Dallas
CLIENT Texas Scottish Rite Hospital for Children
ARCHITECT HKS, Inc.
CONTRACTOR The Beck Group
CONSULTANTS CCRD (MEP)
PHOTOGRAPHER Rick Smith

Since 1974 HKS, Inc. has partnered with Texas Scottish Rite Hospital in Dallas, a facility supported solely through donations which has grown to become one of the nation's leading medical centers providing pediatric orthopedic healthcare services. Most recently, HKS planned major interior renovations to the original hospital (completed in 1977, a joint project between HKS and Beck) to meet the healthcare industry's transition from inpatient to outpatient services. (top) Renovations included new clinic waiting areas designed around kid-friendly conceptual themes, such as "The Great Outdoors" which features a colorful mural depicting a camping scene. The "Olympics" waiting area, not shown, is outfitted with sport memorabilia and a 30-foot running racetrack. Skylights in each waiting area help create bright, pleasant spaces for the youthful patients, their families, and the hospital staff. Play areas for kids are also part of the outside grounds. Jeffrey Haven, HKS' director of special projects group, said the firm succeeded in designing interior and exterior environments that encourage and support patients and their families throughout the healing process. (bottom) Multi-patient wards were converted to private and semiprivate suites on the 28,000-square-foot third floor. Designed with bright colors and offering lots of natural light, the new rooms allow for family stayovers, with plenty of storage for personal belongings. Colorful plastic laminate cutouts on the walls conceal medical gases. Also part of the firms' recent work at the children's hospital are a 3,350-square-foot surgery waiting area which features a cylindrical aquarium and a turtle terrarium; a new chapel three times the size of the one it replaced; and the 1,000-square-foot Christi Carter Urschel Family Resource Center offering reference materials pertaining to medical diagnoses, as well as two computer workstations, conference tables, and lounge chairs.

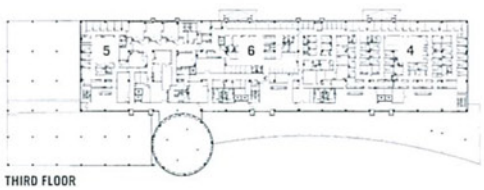
RESOURCES FENCES: Forms and Surfaces; LAMINATES: Formica, Wilsonart, Pionite, Abet Laminati, Nevamar; SOLID POLYMER FABRICATIONS: Formica, Nevamar, Corian (The Conrad Co.); SPECIALTY DOORS: Vancouver Architectural Wood Doors; DECORATIVE GLAZING: Pulp Studio, PPG; GYPSUM BOARD FRAMING: Unimast, Inc., Delta Metal Products; GYPSUM FABRICATIONS: National Gypsum Co., USG Interiors; ACOUSTICAL CEILINGS: Armstrong World Industries; TILE: Dal-Tile; LAMINATE FLOORING: Nora Rubber Flooring, Tarkett, Armstrong Flooring, Amtico; FLUID APPLIED FLOORING: Stonehard; ACOUSTICAL WALL TREATMENTS: Maharam, Knoll; PAINTS: Sherwin-Williams

Kelsey-Seybold Clinic Main Campus

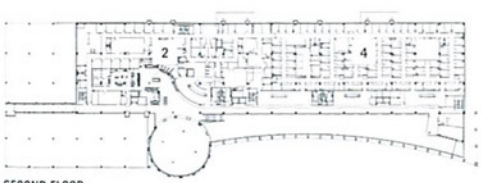
FLOOR PLAN
1 URGENT CARE
2 DIAGNOSTIC SERVICES
3 PRIMARY CARE CLINICS
4 SPECIALTY CARE CLINICS
5 ROTATION CLINIC
6 AMBULATORY SURGERY CENTER
7 ADMINISTRATIVE SERVICES



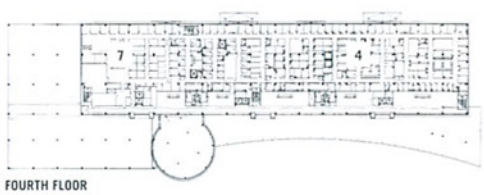
FIRST FLOOR



THIRD FLOOR



SECOND FLOOR



FOURTH FLOOR

PROJECT Kelsey-Seybold Clinic Main Campus, Houston
CLIENT Kelsey-Seybold Clinic
ARCHITECT Morris Architects
CONTRACTOR Brasfield & Gorrie, LLC.
CONSULTANTS Smith Seckman Reid, Inc. (MEP engineer); Haynes Whaley Associates, Inc. (structural engineer); Walter P. Moore Associates (civil engineer); Worrell Design Group (food service consultant); Linda Cummings Lighting Consultants (lighting consultant); SWA Group (landscape architect); MCM (security consultant)
PHOTOGRAPHER Timothy Hursley

Addressing the client's desire for a new, "patient-friendly" facility, Morris Architects based its plan for the Kelsey-Seybold Clinic Main Campus on criteria similar to retail enterprises—a successful mix of available services offered in a central location with easy access and simple circulation. The four-story clinic building is the first phase of a master plan Morris designed for the 13-acre site, surrounded by dense suburban neighborhoods about three miles from the Texas Medical Center. (top) The focal point of the campus is the Green Park, which also serves as a navigational device to orient visitors when they arrive on campus. Once visitors are inside the building, this park is visible from the interior corridors and continues to provide a directional reference. (bottom) To aid wayfinding inside the building, Morris chose 16 bright colors to differentiate clinical departments, and create a cheery environment meant to transcend the typically stressful visit to a medical institution. Furnishings and fabrics are coordinated with the color keyed areas to further enhance the patient's experience. A network of "streets" and "neighborhoods" simplifies circulation. Each neighborhood corresponds with a clinical department (family practice, pediatrics, internal medicine, etc.) located along "Main Street," and smaller neighborhood streets and cul-de-sacs connect patients to exam and procedure rooms. Beyond the patients' circulation network is the "alley" that functions as a departmental and administration service corridor.

RESOURCES SITE, STREET, AND MALL FURNISHINGS: Smith and Hawken benches; MASONRY UNITS: Acme Brick; SIMULATED/MANUFACTURED STONE: Arriscraft; ARCHITECTURAL METAL WORK: Alamo Steel Company; RAILINGS AND HANDRAILS: Offenhauser Co.; ROOF AND DECK INSULATION: Johns Manville; MEMBRANE ROOFING: Johns Manville; METAL DOORS AND FRAMES: Door Pro Systems; WOOD AND PLASTIC DOORS AND FRAMES: Door Pro Systems; GLAZED CURTAINWALL: Standard Glass & Mirror; TILE: Dal Tile; TERRAZZO: National Terrazzo Tile & Marble; ACOUSTICAL CEILINGS: USG; VINYL FLOORING: Medintech, Armstrong Flooring; VCT: Mannington Commercial; SPECIAL WALL SURFACES: Duroplex; PAINTS: Sherwin-Williams; PLASTIC LAMINATES: Formica, Wilsonart; MANUFACTURED CASEWORK: Kimball

Helpful Hints for Masonry Cleaning

The Construction Research Center at the University of Texas at Arlington publishes *Cleaning Masonry - A Review Of The Literature* which provides detailed recommendations for removing 100 stains from 14 masonry materials using a variety of cleaning agents, methods, and equipment. This article summarizes that report's recommendations for cleaning brick masonry, concrete masonry, concrete, marble, limestone, cast stone, sand-lime brick, granite, flint, alabaster, sandstone, slate, glazed terra cotta, and glazed tile.

Why Clean?

Masonry should be cleaned to: 1. remove damaging deposits and mitigate future damage; 2. enable surface inspection and repair; and 3. improve appearance. Dirt has a greater surface area than the masonry to which it may adhere. It may, therefore, retain moisture and increase the potential for harmful chemical reactions with substrate. Soluble salts in a dirty crust may be transported inside pores and cracks to cause damaging cryptoflorescence.

Dirt on masonry may be air pollutants, algae, animal feces, ash, bacteria, clay, dust, grit, gypsum, insects, intrinsic stains (e.g. efflorescence and iron inclusions), lime, metallic oxides, organic matter, pollen, sand, smoke, soil, soot, tar, and a host of accidental and intentional stains (e.g. mortar smears and graffiti). Particulate matter smaller than 10 microns is said to be smoke. Dust is between 10 and 76 microns, and grit is larger than 76 microns. The inorganic particles are often bound by gypsum formed by acid rain and calcium salts in masonry materials.

The combination of so many types of stains on various types of masonry generates a multiplicity of cleaning agents and methods and necessitates the testing of agents prior to widespread cleaning operations. The effectiveness of the cleaning agent and technique should be tested on a small area. For general dirt removal the test area should be about 25 square feet (2.3 square meters) in an obscure location. Judgment of suitability should be delayed for or as long as is tolerable (as much as a year has been suggested), but not less than seven days.

Cleaning Methods

When cleaning masonry, mask lower areas to prevent loosened stain from soiling other surfaces, or keep the lower areas saturated with water to prevent absorption of dirty run off. Remove all stains as soon as possible. Do not smear wet stains by wiping. Soak up wet stains with absorbent materials, e.g. soft cloth or paper towel. Be careful not to smear stain with solvent.

Water Cleaning

The oldest, simplest, and most gentle form of cleaning is dry brushing. Next is water fog, mist, or spray at low pressure. Alternate wetting and drying, at intervals ranging from a few minutes to a few days, is more effective than continuous soaking. Start at the top of walls. Use only enough water to wet the surface, and avoid freezing and leakage into the building. Acidic water must be treated before prolonged application to acid-sensitive surfaces such as marble, limestone, or calcareous sandstone. Water spray is not very effective on granite. The application of water is often followed by manual scrubbing with bristle brush, perhaps with two tablespoons of trisodium phosphate per gallon of water. Use nonmetallic bucket. Do not use detergents containing soluble salts. Water washing of older limestone may produce some brown staining, but subsequent washing will reduce the brown stain, which, in any case, fades with time.

Prior softening of dirt with water spray is very helpful. Low pressure has been defined as 100 to 300 psi (0.7 to 2.1 MPa), medium pressure as 300 to 700 psi (2.1 to 4.8 MPa), and high pressure as 700 to 1200 psi (4.8 to 8.3 MPa). Water applied at moderate pressure at a rate of 3 to 4 gpm (1.89×10^{-4} to 2.52×10^{-4} m^3/s) through a fanjet is effective on hard stone or brick. On the hardest stone and brick, water at very high pressure (1200 to 2500 psi, 8.3 to 17.2 MPa) can be effective but requires very careful application by experienced operators. Chemicals should not be used with water at high pressure.

Water pressure, volume, temperature, nozzle pattern, angle of incidents, operator skill, and chemical additives all affect the quality of water pressure cleaning. Pressure should not exceed that which would damage the substrate. As the angle of incidence of the water jet to the masonry surfaces increases, the surface pressure increases. The distance from the masonry at which the nozzle is held also affects surface pressure. It is this surface pressure which must be controlled rather than nozzle pressure or pressure at the pump discharge manifold. Most masonry cleaning is done with a fan nozzle, ranging from 15 to 50 degrees, which variable also affects pressure of the water stream at the masonry surface. Water volume is usually in the range of 3 to 6 gpm (1.89×10^{-4} to 3.78×10^{-4} m^3/s), but for delicate interior work volumes of less than one gpm (6.31×10^{-5} m^3/s). Heated water is useful on greasy surfaces or to improve cleaning ability of chemical solutions during cold weather. Warm water, when used with alkaline chemicals, should not exceed 1600 °F (710 °C). There is no significant advantage to using hot water with acid cleaners.

Steam

Steam cleaning without chemical additives and at pressure less than 60 psi (414 KPa) is not injurious to most masonry but is little more effective than cold water, except on heavy incrustation, on a greasy surface, or on chewing gum coated pavement. Steam cleaning is not recommended for surfaces of high artistic value, e.g. monuments. It is time-consuming at about one square foot per minute. Steam is now rarely used for general purpose cleaning.

Mechanical Cleaning

Dry abrasion cleaning may involve hand tools such as chisels, brushes of bristle or stainless steel, or abrasive blocks. Power tools include carborundum cones, grinding discs and belts, and rotary brushes. Abrasive agents may be blown onto the masonry surface by a blast of air or water at high pressure to scour away the stain. Soft material such as walnut shells, almond shells, ground corn cobs, ground

coconut shells, crushed egg shells, or silica flour have been used.

Dry Abrasion

Pressure at the nozzle may be controlled by the applicator. For dry abrasion, air pressure may be 20 to 100 psi (138 to 68S KPa) at the nozzle with airflow of 125 to 300 cmf (0.06 to 0.14 cmm). Abrasive material be 00 to 0 mesh in size, but 20 mesh is also used. All openings in the masonry must be sealed, and non-masonry surfaces must be protected.

Some of the masonry surface is inevitably blown away with the abrasive. Careless application will seriously damage the substrate. The method is, therefore, not applicable to carved or polished surfaces or to sanded, coated or glazed brick or terra cotta. The increased surface area of an abraded surface may actually attract more dirt. Sandblasting considerably increases the water permeance of brick masonry. Blasting noise may be a problem. The operator and the environment must be protected from dust and rebounding abrasive. Silica dust can cause irreversible lung damage. The process is not controllable and should be used only in a exceptional instances.

Wet Abrasion

Wet abrasive cleaning is similar to dry blasting. Water is introduced into the air stream with the solid abrasive particles. Pressures range from 7 to 43 psi (48 KPa to 296 KPa). The addition of water does not eliminate the harmful effect on life and property of dry blasting, but wet abrasion blasting is less destructive than dry abrasive blasting, and dust annoyance is diminished. The slurry of abrasive particles and water obscures the operative's vision of the surface by covering his/her visor and the masonry. Accordingly, the cleaned surface may be mottled, and a rinsing down after blasting is necessary. Many operatives find the water a nuisance and turn it off in the absence of adequate supervision. Wet abrasion should not be used on smooth or polished surfaces or during freezing weather.

Chemical Cleaning

Chemical cleaning should be performed only when surface temperatures are between 60 and 80 °F (15 to 27 °C). Use stiff fiber brushes to apply cleaning agent on rough textured masonry and soft fiber brushes on smooth masonry. Do not use low carbon steel wire brushes.

Acids

The application of a 10 percent solution of hydrochloric acid to water-soaked brick masonry is the

A Design Check List To Avoid Leaking Masonry Walls

1. Detail flashing at heads and sills of wall openings; at base of wall; and at wall-roof intersection, copings, spandrels, lintels, and shelf angles.
2. Extend coping beyond each wall face and provide drip. Turn out lower edge of metal fascia and coping and provide continuous cleat and sealant.
3. Extend flashing outward beyond wall face 3/4 inch (20 mm) and turn down to form drip. Provide sealant in the acute angle at wall face.
4. Extend wall base flashing from wall face inward through one wythe, turn up at least 8 inches (20 cm) and into a reglet or interior wythe.
5. Do not extend stiff flashing longitudinally through expansion or control joints.
6. Provide dams at least 2 inches (50 mm) high at longitudinal ends of flashing, at expansion joints in brick masonry, at control joints in concrete masonry, and where masonry walls meet other wall types or abut columns.
7. Flashing should be continuous,without gaps. Lap at least 6 inches (150 mm) and seal all flashing joints.
8. Provide weep holes 16 inches (400 mm) o/c with 16 inches (400 mm) long masonry units and 24 inches (600 mm) o/c with 8 inches (200 mm) long masonry units at wall face immediately above flashing.
9. Do not permit use of deeply cracked masonry units.
10. Soldier courses result in increased water permeance.
11. Mortar air content greater than 12 percent increases water permeance.
12. Provide concave or 'V' tooled mortar joints at exterior wall face.
13. Completely fill head and bed joints. Shell bedding of hollow masonry units is cceptable in non-bearing,non-reinforced walls.
14. Keep cavities clean of mortar droppings and other debris. Do not parge cavity face of exterior wythe. Cavity face of interior wythe may be parged to form an air barrier,only if the exterior wythe is built subsequently. Minimum parging thickness is 3/8 inch (10 mm). Require eyes of two-piece ties to be kept clean of parging. Provide minimum cavity width of 2 inches (5 cm). Require rigid board insulation to be well anchored flush with the cavity face of the interior wythe.
15. Well before laying,wet brick having an initial rate of absorption (IRA) greater than 0.67-g/sq in.-min (1 g/10 sq cm-min). Do not saturate brick. Before lying, do not wet CMU. Cure CMU walls during hot-dry-windy weather by periodic water mist spray [air temperature >100 °F (24 °C),relative humidity <50 %,and wind >7 mi/h (11 km/h)].
16. Do not specify sand finished brick,where the driving rain index is greater than one.
17. Lay masonry units within one minute after spreading mortar.
18. Use redundant,vented,and weeped sealant joints where possible. Notify building owner that the average life of a sealant joint is seven years. Periodic inspection and maintenance is essential t o water permeance integrity.

Source: "Water Permeance of Masonry Walls: A Review of the Literature," Masonry: Materials, Properties, and Performance," ASTM STP 778, American Society for Testing and Materials, 1982, pp.178-199.

most general method for cleaning brickwork. The following procedure is used:

1. Wait until masonry has cured, i.e. at least seven days;
2. Dry clean, i.e. remove large clumps of mortar with wooden paddle;
3. Protect metal, glass, wood, limestone, cast stone, and vegetation;
4. Soak the masonry from top to bottom;
5. Use nonmetallic acid containers and tools. Add acid to water, not vice versa. Apply the acid by scrubbing with a long handled fiber brush. Low-pressure spray is also used. Clean 10 to 20 square feet (0.9 to 1.9 square meters) at one time;
6. Allow the acid to remain on the wall for three to ten minutes, depending on drying conditions. Do not permit the acid solution to dry on the masonry;
7. Rinse the masonry thoroughly with large quantities of clean water from top to bottom. Where large quantities of water are objectionable as for interior work, neutralize the surface with a solution of one ounce of potassium hydroxide or two ounces of household ammonia to two gallons of water;
8. Repeated once or twice if necessary; and
9. After work on each section, the outside of all scaffolding posts and planks should be washed.

If the wall is not presoaked or if acid is left on the wall to dry, chlorine in the acid may combine with calcium in the mortar to form salt, which can result in florescence.

The use of hydrofluoric acid (HF) in a 3 to 5 percent solution will clean efflorescence, but it is a very dangerous material in the hands of unskilled workers. Ammonium bifluoride produces less hazardous solution on granite. HF is used to remove a wide variety of stains but not most paints. It will attack high lime mortar, stucco, and cementitious paint.

Acids may attack free iron in some sandstones and granite which may cause rust stains, in which case a proprietary rust inhibitor or a small quantity of phosphoric acid may be added. Acid may be used on concrete, unpolished granite, unglazed terra cotta, sandstone, and unglazed brick masonry, but not on sand finished brick, limestone, marble, calcareous sandstone, or on glazed or polished surface.

Alkali

Most alkaline cleaners have a sodium, potassium, or ammonium hydroxide base and may be used on acid sensitive surfaces. Use of caustic soda is discouraged. Ammonium hydroxide is preferable. The dirty surface of limestone, glazed brick, or glazed terra cotta should be pre-wetted to reduce its suction. The cleaner is then brush applied. Rinsing with a mild acid solution followed by a thorough water rinse may neutralize the surface. The process may be repeated once, if necessary.

Solvents

Fats, oils, paints, sealants (caulks), and bitumens are removed by organic solvents, i.e. amines, dichlorethane, trichloroethylene, toluene. Solvents are safely used on calcareous materials and are effective in poultices for removing deep stains. Biological growths, e.g. algae, lichens, and moss are removed by pentachlorophenol in methyl alcohol and alkylbenzene sulfonate in water.

Clayford T. Grimm is a licensed structural engineer and is the most published American on the subject of masonry, according to the International Masonry Institute. For 22 years, Grimm was an adjunct member of the architectural engineering faculty at The University of Texas at Austin.

Uniquely Geometric

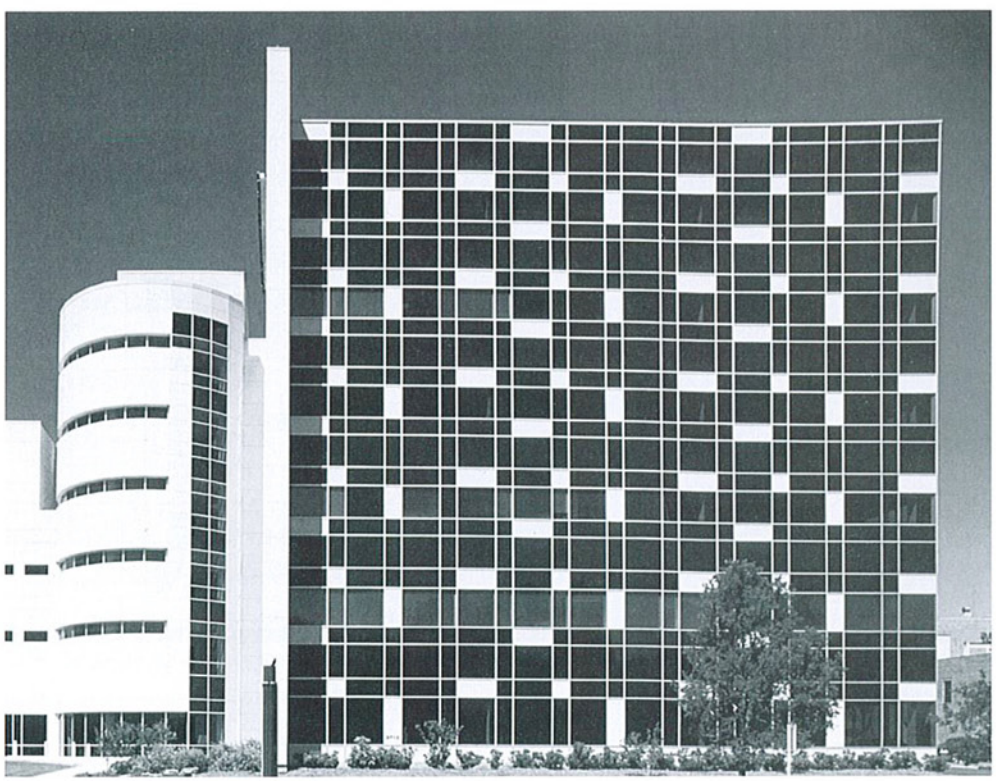
PROJECT Northeast Baptist Medical Office Building, San Antonio
CLIENT Baptist Health System
ARCHITECT Marmon Mok
CONTRACTOR Lyda Constructors
CONSULTANTS Reynolds-Schlattner-Chetter-Roll (structural), Marmon Mok (MEP), Pape-Dawson (civil), Place Collaborative (landscape)
PHOTOGRAPHER Craig Blackmon, Dror Baldinger

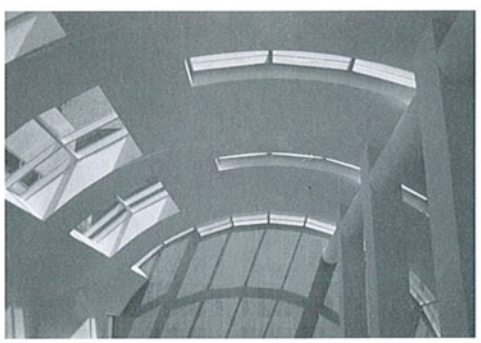
Adjacent to Northeast Baptist Hospital in San Antonio, the new medical office building was designed to accommodate the hospital's ambitious expansion of services. The site for the 145,000-square-foot building was a plot of land on which an existing medical office building had to remain open to the public. New construction came within five feet of the existing office building, requiring the City of San Antonio to issue a special permit. An additional constraint to the building's site was adjacent construction for a new 600-car garage, with both structures scheduled to open on the same date.

The architects approached the design by viewing the building's programmatic components as a series of distinct elements. Rentable floor plates of equal size and little spacial distinction were expressed as a simple box wrapped in a visually complex skin. An ordinary, off-the-shelf, glass curtain wall was transformed into a unique statement that has become the building's identifying element. Instead of regarding the curtain wall as a static and monochromatic cast, the glazed exterior surfaces were designed as bold and abstract billboards of glass. The curtain wall is a composition of clear anodized aluminum, graylite one-quarter-inch glass and a rhythmic pattern of white Alucobond panels.

As a programmatic component separate from the leaseable floor plates and as a compositional hinge between the office block and the parking garage, the lobby required its own identity and geometry. As a singular vertical space it serves as a critical counterpoint to the repetitive and horizontal nature of the office floors. The approach to the building's lobby expression took the opposite route to that of the office block. Here, the space was conceived as a complex volumetric interior wrapped in a simple and monochromatic skin. A singular curve of white metal panels enclosed the six-story lobby with vertical openings of varying shapes creating a complex weave of voids.

RESOURCES **PRECAST ARCHITECTURAL CONCRETE:** Manco Prestress; **BUILDING INSULATION:** Owens Corning; **EXTERIOR WALL PANELS:** Alusuisse (Alucobond); **ENTRANCES AND STOREFRONTS:** Vistawall; **GLASS:** PPG; **GLAZED CURTAINWALL FRAMES:** Vistawall; **DOOR OPERATORS:** Stanley Magic Door; **GYPSUM BOARD FRAMING:** G-P Gypsum Corp.; **TILE:** Dal-Tile; **ACOUSTICAL CEILINGS:** Armstrong; **PAINTS:** ICI Dulux; **CEILING SUSPENSION SYSTEM:** Donn (USG)





(below left) Exterior view of the curtain wall and lobby of the Northeast Baptist Hospital. (below) View inside the lobby. (bottom) The site plan shows the detail of the expansion around the existing office building; photos courtesy Marmon Mok.

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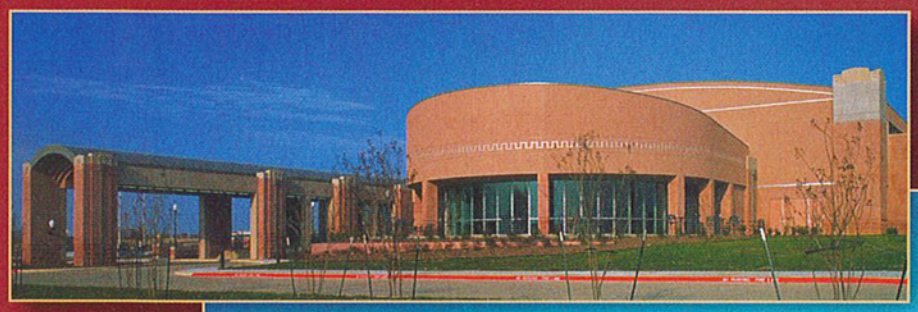

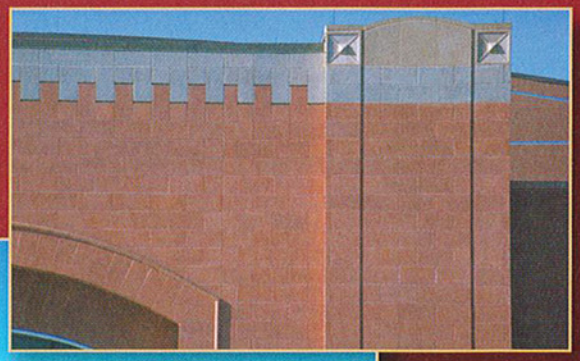

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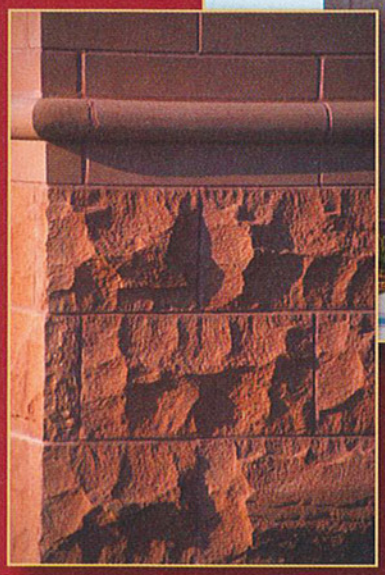

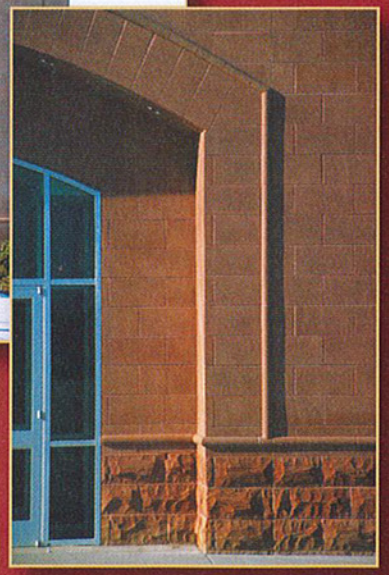

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face, sides, and back and partial recycled gypsum in the core. All paints and other finish coatings are water based and are low or no-volatile organic compounds (VOC).

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The REJ building represents a sincere effort on the part of a multi-disciplinary team to research and employ building materials in a creative and responsible manner. While design team leaders – myself and Wendy Dunnam, both from Page Southerland Page, and Mick Kennedy from Cotera Kolar Negrete – had primary responsibility for broad design direction, consultants such as Bob Berkebile from BNIM Architects, Jane Pulaski from the State Energy Office, and especially Gail Vittori from the Center for Maximum Potential Building Systems contributed invaluable specialized expertise. In addition, dozens of industry representatives played essential roles in supplying data and other production and performance information.

Together, the design team sought a comprehensive and holistic view of material usage and its impact. Concerns, shared by all team members, ranged from visual and functional to technical and environmental. Trade-offs between various benefits and costs were deemed to be inevitable and appropriate. Throughout the decision-making process the importance of highlighting materials selection as a primary design parameter took consistent priority–a factor which left a strong and lasting imprint on both the character and performance of the Robert E. Johnson Legislative Office Building.

Lawrence Speck, FAIA, dean of the University of Texas School of Architecture, practices architecture in Austin.

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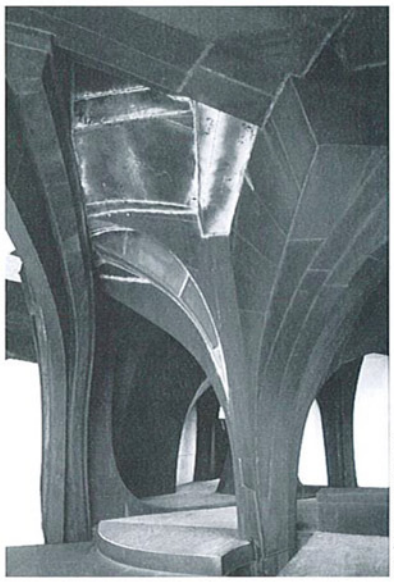
110 Tons of Steel, and Growing

A sculptor in West Texas welds his dream home

ROBERT BRUNO



GERALD MOORHEAD, FAIA

FOR 26 YEARS I HAVE BEEN SCULPTING THIS house on a canyon rim outside of Lubbock. It rises on four legs and stands 45 feet off the ground, cantilevered over a cliff, 150 feet above Ransom Canyon.

I haven't so much built to have it as build to do it. The material itself is very appealing to work with. It is strong in both compression and tension, and when welded it becomes a continuous membrane. Steel also permits the creation of nearly organic, sculptural shapes far beyond the conventional limits of typical house construction. I wanted a structure with a complexity that could only be realized at full scale, the design process occurring during construction rather than preceding it. This means that there is constant full-scale feedback from what is already designed, as well as feedback from the site itself through the annual cycle of seasons. It also means that on occasion a finished section may have to be cut out and reworked to incorporate new design developments.

The structure is made of 1/4-inch and 3/16-inch steel plate, and the skin itself is its own support. The exterior will be left to rust. About two-thirds of the interior, which is a separate layer, is also exposed steel. The free-form interior spaces enfold two bedrooms, two and one-half baths, living, dining, kitchen, library, and a large loft planned as a guest room and patio. Irregular shapes defined by seams within the free-form window frames will open to the canyon's natural breezes and updrafts. One of the legs will house an elevator. I expect to be finished within a year.

ROBERT BRUNO

Sculptor Robert Bruno taught studio courses for eight years at Texas Tech University's College of Architecture.

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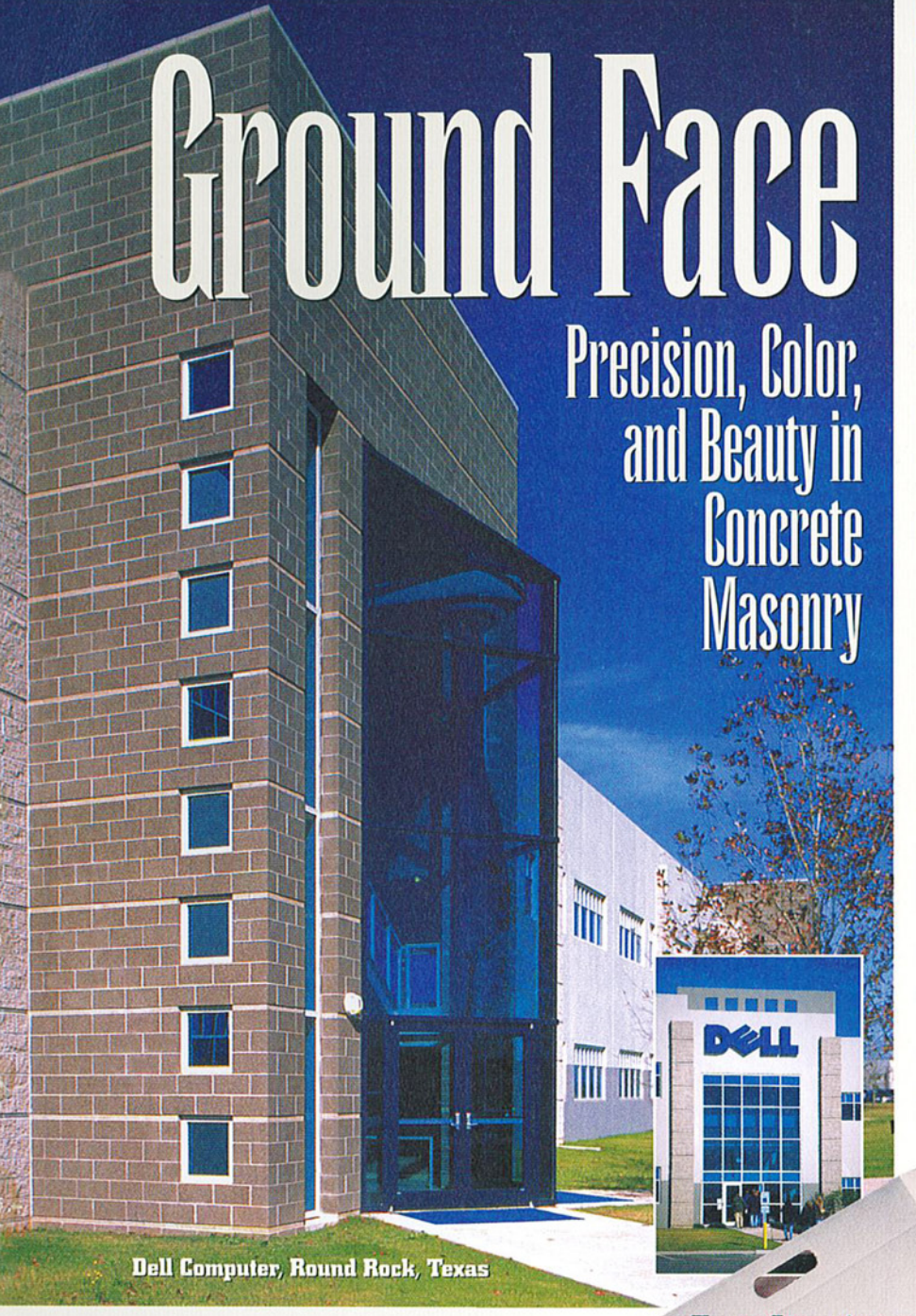

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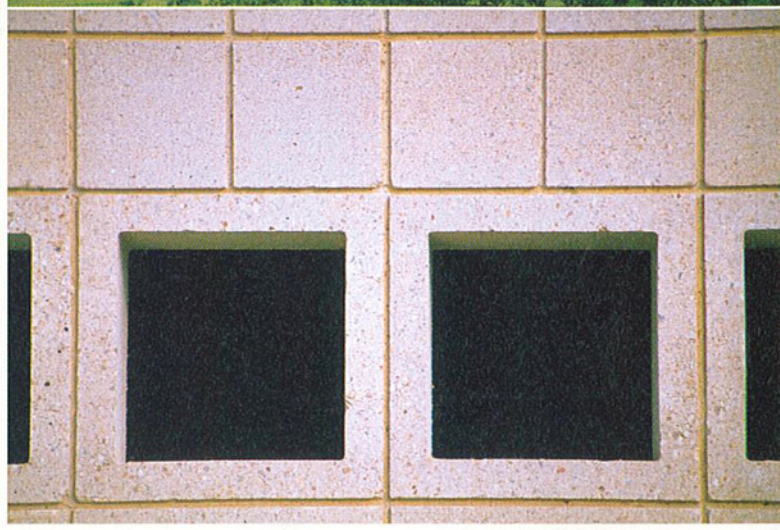

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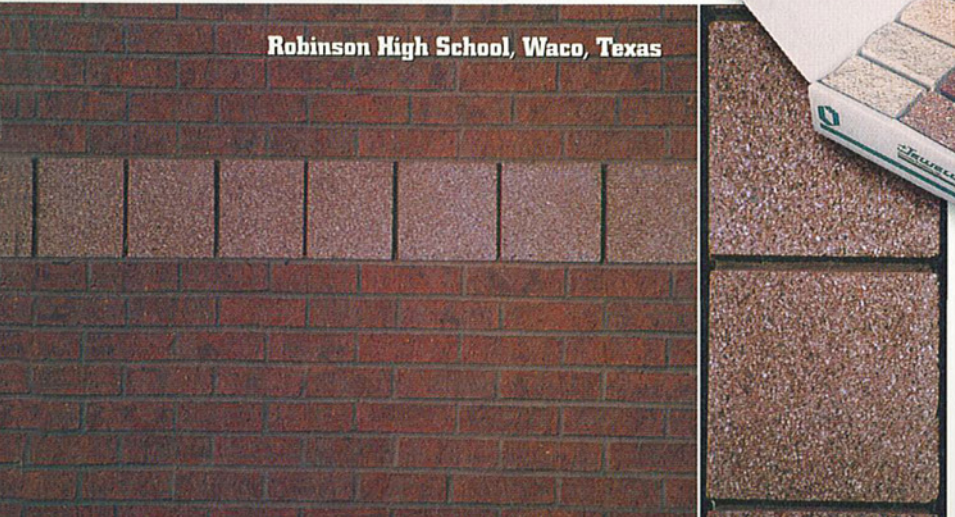

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