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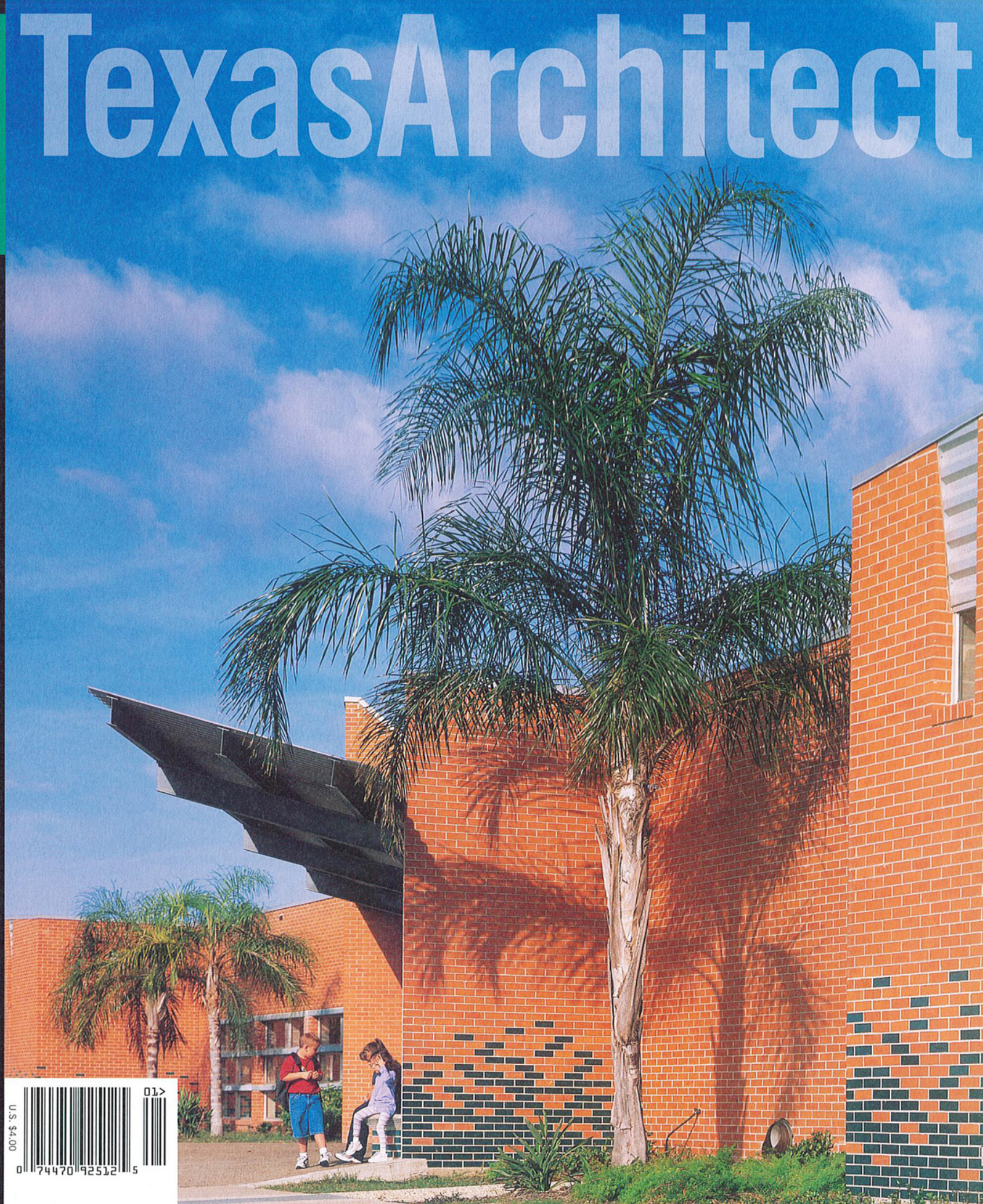
SCHOOLS AS COMMUNITIES



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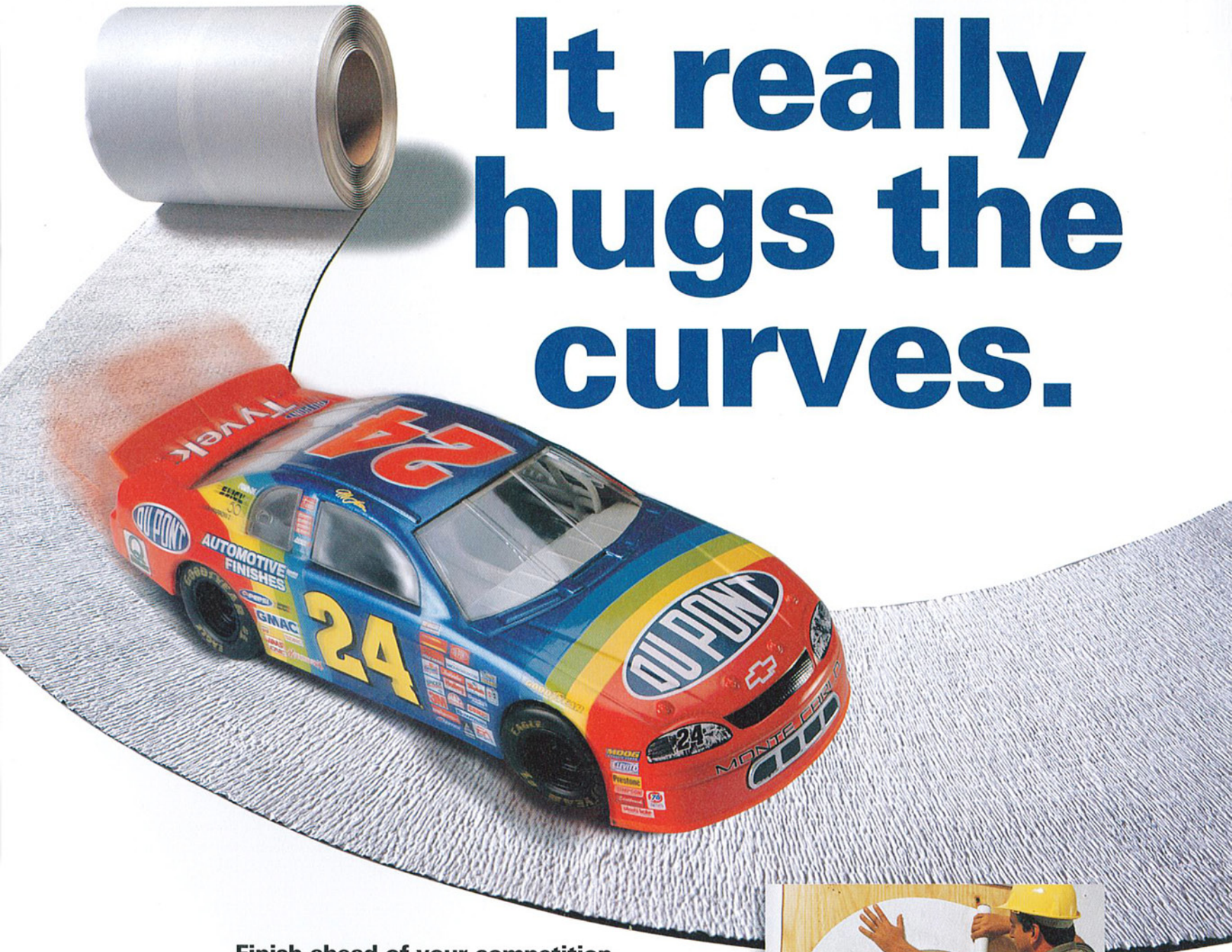

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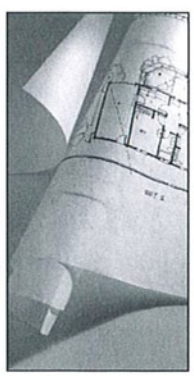

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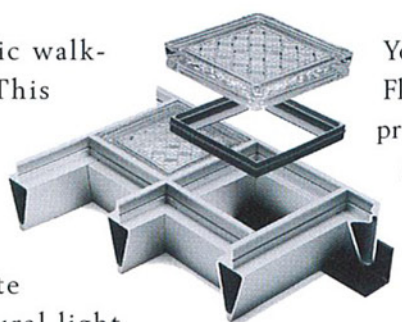

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TexasArchitect

SCHOOLS AS COMMUNITIES

(on the cover) Dawson Elementary, Corpus Christi; photograph by David R. Richter, FAIA; (above) Greenhill School, Dallas; photograph by Paul Hester.

UPCOMING ISSUES

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

July/August 2001–"Color"
(deadline: February 16)

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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Schools as Communities

Students will fondly remember the new Burkburnett High School, photo by David Potter.

AS WE BEGAN PLANNING THIS ISSUE ON ARCHITECTURE FOR EDUCATION, the *TA* staff decided to focus on "schools as communities" We wanted to learn how communities influence the design and operations of their schools as well as how schools themselves function as self-contained communities. In our research we learned how architects are working with school officials to address security issues yet are planning new schools that don't make students feel incarcerated. We also learned how the Internet is changing not only the way schools are designed but also the way educators today approach the task of teaching. Helping to put these issues in perspective, CRS veteran John Focke, FAIA, explains some of these changes in his essay, "The Evolution of School Design," which begins on page 24.

Coincidentally, not long before we began putting this issue together, the U.S. Department of Education released a report titled "Schools as Centers of Community: A Citizens' Guide for Planning and Design." The report (available at www.texasarchitect.org) outlines ways individuals and organizations can help plan their neighborhood schools, both in the physical sense as bricks-and-mortar structures and in the sense of how new schools can best serve the outlying community.

Few people can argue with the need for every community to have well designed, safe schools where students – and teachers – can concentrate on learning. But ensuring that students have adequate facilities is a costly undertaking, and the taxpayers of each community periodically are asked to raise the price they pay for schools. In Burkburnett, north of Wichita Falls, citizens were asked in 1997 to decide on a $13.7 million bond package that included $8.7 million to upgrade the old high school. "Some asked 'why do it?' and my answer has always been the same," said school superintendent Danny Taylor, "This is for the kids . . . for the kids. Kids need a place where they can go to school and years later look back with fond memories. They deserve no less, and this is what we have given them." The school Burkburnett's voters gave them is indeed one that students will remember fondly, and we feature it on page 32.

Many other Texas communities have faced referenda on schools in recent years—the largest bond packages approved were for Houston ISD ($678 million in 1998), for San Antonio ISD ($483 million in 1997), Austin ISD ($369 million in 1996), San Antonio's Northeast ISD ($366 million in 1998). As this issue went to press, El Paso ISD voters were to decide on a $398 million bond proposal.

In the 2000 Ozzie Awards, *Texas Architect* received an honorable mention in the Best Redesign category for association magazines. The annual Ozzies are sponsored by *Folio*, the trade journal for magazine management.

And speaking of redesign, we've added a new column within our News section titled "Briefs" where we list short items about notable projects around the state. If you have an item, send it by e-mail to ssharpe@texasarchitect.org.

STEPHEN SHARPE

"Masonry Success Stories"

Maintenance

Project: Crosby Kindergarten

Project Location: Crosby ISD

Architect: CLR Architects Engineers Surveyors Planners

Masonry Contractor: Easthaven, Inc.

Masonry Supplier: Upchurch Kimbrough, Inc.

The Challenge: When designing and building a project, especially a school, materials must be used that ensure the long-life of the building. The material must be reliable and proven, installed economically and have the ability to introduce color. Along with these standard requirements, the materials must also provide an avenue to inject an exceptional expression of what the building is.

The Solution: Masonry was the natural choice to meet these requirements. Masonry has a long successful history of being a proven, economic and aesthetically flexible material. The masonry gives the building long-life durability and provides Crosby Kindergarten a kid-like (*and kid-proof*), playful atmosphere, something no other material has the ability to do.

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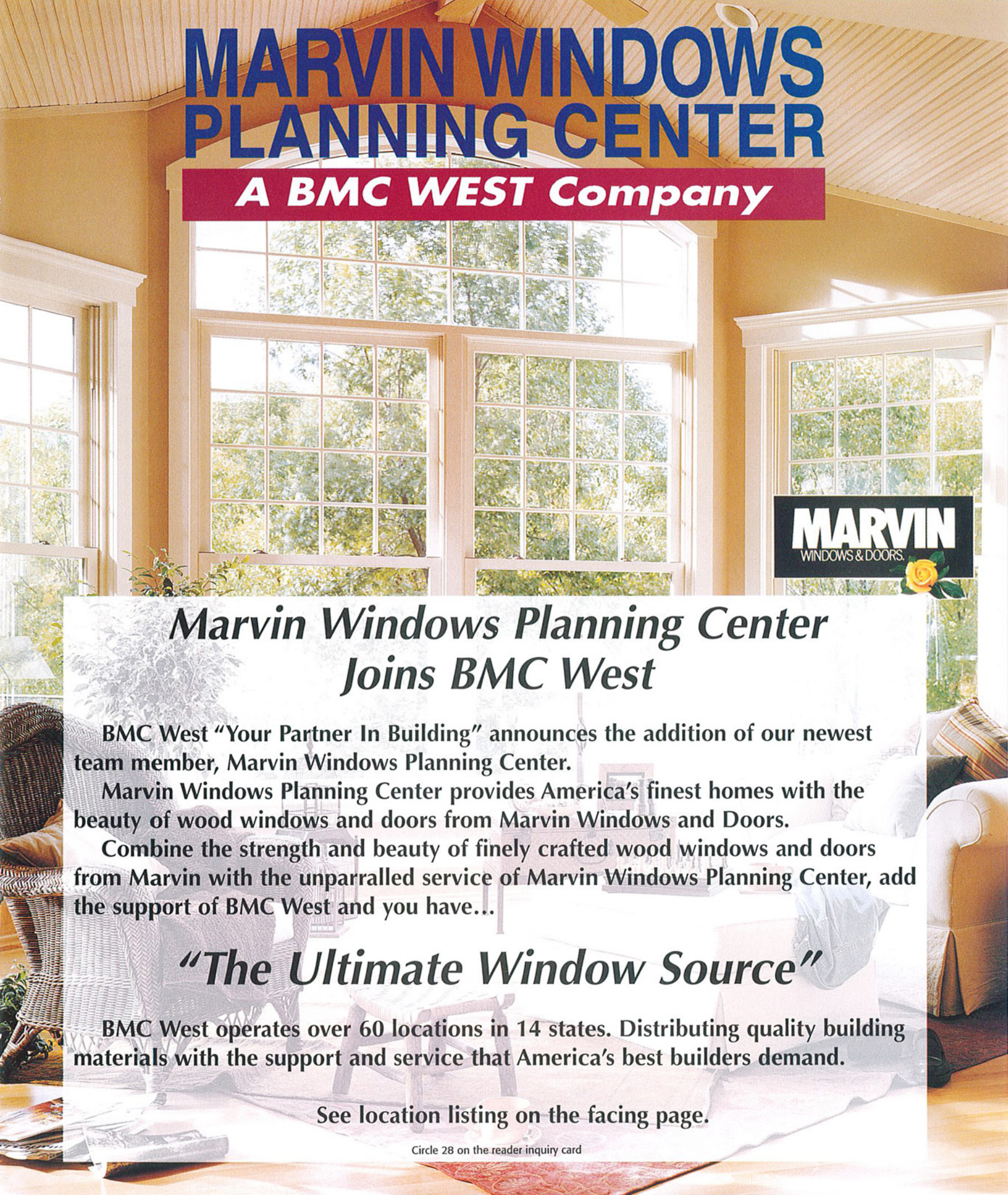

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See location listing on the facing page.

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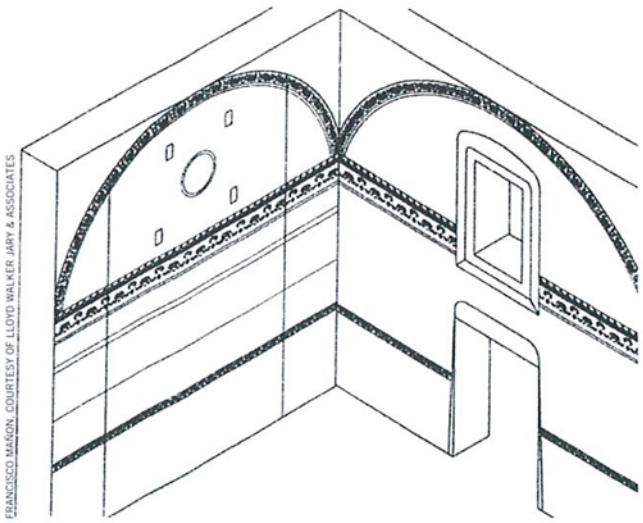
Forgotten Frescoes Uncovered at the Alamo

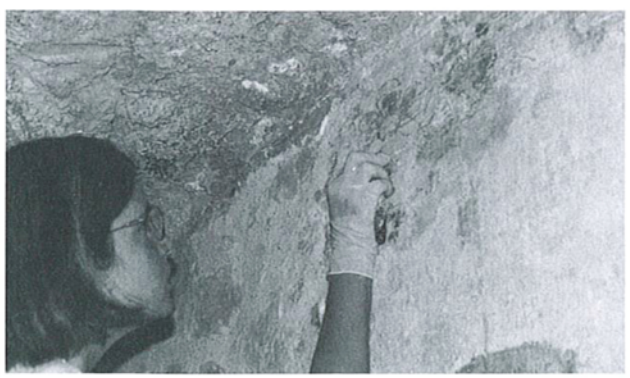
SAN ANTONIO While rearranging displays in the interior rooms of the Alamo early last year, restoration experts were stunned to see faint hints of color beneath the whitewashed walls of the sacristy. Painstaking preservation efforts now reveal an impressive collection of frescoes perhaps 250 years old.

Last February Alamo staff asked Carolyn Peterson, FAIA, of Ford Powell & Carson, to examine cracks in the pilasters at the Alamo. After her inspection, Peterson suggested reorganizing plaques and other interpretive elements in the shrine to provide more protection for the building's interior. "People were crowding around the display cases and leaning against the walls. That contact, combined with rising damp was accelerating the deterioration, and the plaques were concealing the problem," Peterson said.

During the reinterpretation of the sanctuary, the team decided to move a group of commemorative flags contained in the sacristy—a room closed to the public for more than fifty years. After moving the flags, the team noticed unusual colorings on the walls. They knew they had discovered something important, possibly frescoes similar to those existing at the other San Antonio missions. "Everybody was excited and had so many questions. 'Where did these come from and why haven't we seen them before?'," said Brad Breuer, Alamo Director.



FRANCISCO MAÑON, COURTESY OF LLOYD WALKER JARY & ASSOCIATES



(top) A diagram of the south and east sacristy walls show four distinct bands of frescoed patterns. (bottom) Restoration specialist Pam Rosser exposing border pattern at ceiling junction depicting stylized flowers and pomegranates.

The Daughters of the Republic of Texas, the custodians of the Alamo, contacted Cisi Jary and Pam Rosser, the mother-daughter team of Restoration Associates in San Antonio, to provide conservation treatments. After an initial examination, Jary and Rosser determined that the paintings were, in fact, frescoes created using *fresco seco*, a method in which pigment is applied to damp plaster. (As the plaster dries, it absorbs pigment, and forms an integrated surface.) In the first stage of the restoration, Jary and Rosser stabilized loose areas by injecting adhesive behind the plaster to adhere it tightly to the stone wall. Then they began the arduous process of removing whitewash. "We had to remove the whitewash in a tedious, manual process using scalpels. We had to be very careful to make certain that the frescoes were not disturbed," Jary said.

As Jary and Rosser worked, faint but intricate patterns began to emerge. Flowers, pomegranates, ribbons, and a wide frieze surfaced from beneath the flaking whitewash. "We were overwhelmed when we began to uncover the frescoes," Jary said. "We worked with the frescoes at Mission Concepcíon and San Jose (other historic Spanish Colonial missions along the San Antonio River). They were beautiful but not as sophisticated. The skill level and application of the frescoes are more advanced at the Alamo then they are at the other missions."

Jary and Rosser suspected that the two friezes in the sacristy were identically arranged, indicating that the artists used a pattern. The conservators traced the design on one wall and overlaid it on the other wall. It was an exact match. "All of the designs fit the space. We feel like they had a plan from the very beginning to install decorative painting," Jary said, adding "We're not sure when the frescoes were created. We feel like they were done when the church [the Alamo] was built in 1744, but we're not certain."

Evidence in the sacristy supports the restoration team's belief that the frescoes have Spanish Colonial origins. Carolyn Peterson points to the double barrel vaults in the sacristy ceiling as "typical of Spanish Colonial construction." During the conservation process, Restoration Associates found vertical lines that had been etched in the wet plaster spaced thirty-three-and-one-third inches apart. Spanish architecture often contains this measurement, called a *vera*. Preliminary research uncovered scant information about the fresco artists' origins. Only the broad historical facts are known. When Mexico became New Spain in 1535, the conquistadors destroyed Aztec buildings and built Christian structures on top of them, and they needed skilled laborers to build and decorate the new churches. At the end of the sixteenth century, Franciscan friars established craft guilds in Mexico City that taught stone carving, wood carving, painting, and architecture. The craftsmen educated by this effort traveled to all of New Spain's construction sites to offer their skills. It is possible that some of these artisans helped construct the Alamo and painted the frescoes. "We are going to proceed with an academic study from a religious, artistic, and archaeological perspective. We think the artists came from Mexico, but we don't know where. Hopefully, the study will provide more definitive answers," Breuer said.

Many wonder how the frescoes could have survived more than 250 years, through occupation by Spanish soldiers, partial destruction at the Battle of

the Alamo, and occupation by the United States Army. Jary and Rosser provide several sound reasons for their durability. "When the quartermaster occupied the Alamo in 1844, the building had been burned and was in need of repair. The frescoes were probably whitewashed over in the effort to clean up the building," Jary said. "This preserved the frescoes, and when the Daughters installed air conditioning, it created a museum-like atmosphere."

Construction of the Alamo, originally called Mission San Antonio de Valero, began in 1724. It functioned as a mission until the Spanish military stationed a cavalry unit in the building in 1803. The Spanish company became known as the Alamo troop – the nickname of their hometown – and their post was called the Alamo. Various military groups occupied the Alamo through the Texas Revolution in the 1830s. After the Battle of the Alamo in 1836, the building was damaged and remained unused until the U.S. Army renovated it in 1849 for use as a quartermaster's supply depot. The quartermaster repaired walls and added the rounded gable parapet that is now the symbol of the building. The Daughters of the Republic of Texas acquired the Alamo and its grounds in the early 1900s and have worked to restore and interpret the building.

Today, the frescoes are on display in an interim interpretive exhibit. "Stabilization and conservation were the first stage. Now we're working on a more detailed interpretation," said Breuer.

Jary and Rosser made several recommendations for continued preservation. Efflorescence – alkaline salt deposits caused by moisture – is threatening the frescoes, and positive drainage away from the walls must be established and maintained. They also propose that specialists reintegrate missing colors within the pattern. Where the old colors can be identified, vertical hairlines of watercolor would fill in the pattern in a reversible restoration process. Reintegration of missing colors would aid in interpretation, making the frescoes easier for visitors to see. "There are so many clues and so much to do. Hopefully someone will be able to go in and do more intense research," Jary said.

JESSICA GILROY

Jessica Gilroy is the marketing director for a San Antonio architecture firm.

TxDOT Seeks More Pre-Certified Architects

Texas Department of Transportation (TxDOT) officials are seeking to increase the number of pre-certified architects for projects planned during its next biennium, a budget period in which more state funds are expected to be spent on highway facilities than ever before.

Due to previous low participation, TxDOT awarded contracts to every architecture firm pre-certified for the 2000-2001 biennium. Bill von Rosenberg of TxDOT's Capital Improvement Programs said architects must complete pre-certification requirements prior to being considered for projects to be designed and built during the 2002-2003 biennium. There is no specific pre-certification deadline, but von Rosenberg recommended that architects complete the paperwork by early spring when TxDOT will publish requests for Letters of Interest, and architects who are pre-certified may submit completed Letters of Interest to be considered for projects. "Letters of Interest take about thirty days, so you can see the problem if a firm is not pre-certified prior to the request," he said.

The 2002-2003 fiscal year promises to be the largest for TxDOT's Maintenance Division, according to division Director Zane Webb. Projects are being planned across the state and range from construction of new facilities to reconstruction and renovation of existing facilities. They include several new "safety" rest areas which feature air-conditioned lobbies, upgraded restroom facilities, and expanded parking lots. The architecture of all of the facilities will be designed to reflect the specific region's unique historical, cultural, and geological features.

Pre-certification information is available on-line at www.dot.state.tx.us. Click on "Business," then "Contract Information," then "Professional Services" to access instructions and forms. The selection process requires each firm to provide information through the pre-certification questionnaire regarding qualifications, experience, and expertise. For more information, contact von Rosenberg at (512) 416-2382 or Mario Medina, in the Online Pre-Certification Process office at (512) 416-2322.

STEPHEN SHARPE

briefs

There's a new life yet for "Old Red." Unused by Dallas County for a decade, the 1892 Romanesque Revival courthouse in downtown Dallas is now managed by the Dallas Historical Society and is available for public and private events.

The University of Texas at Austin has acquired the library of Paul P. Cret (1876-1945), the architect responsible for the university's 1933 master plan and a score of campus buildings that include the UT Tower.

F&S Partners of Dallas won the Dallas Urban Design 2000 Built Award for the Women's Museum: An Institute for the Future, an adaptive restoration of the 1910 State Fair Coliseum remodeled in 1936 by George Dahl for the Texas Centennial Exposition.

The new Meadows Museum Collection at Southern Methodist University in Dallas is scheduled to open March 25. Hammond Beeby Rupert Ainge of Chicago designed the 66,000-square-foot two-story red brick collegiate Georgian structure.

Work has begun in downtown San Antonio on a $3 million project which will link the city's historic Main Plaza with the San Antonio River. Lake/Flato Architects designed the landscaped Historic Civic Center river connection.

Michael Graves & Associates will design the new Federal Reserve Bank in Houston to be located on Allen Parkway on the former site of the recently demolished Jefferson Davis Hospital.

The Frisco Millennium Plan by the PGAL Planning Group of Dallas has received the 2000 Comprehensive Plan of the Year from the Texas chapter of the American Planning Association.

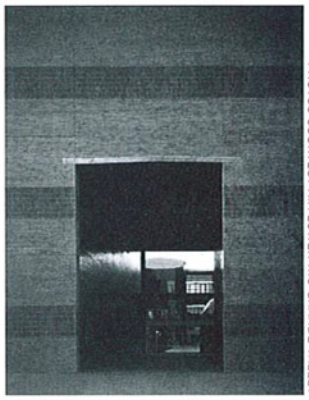
AIA Lower Rio Grande Valley Awards 5 Projects

BROWNSVILLE Two projects won honor awards and three projects won merit awards in the recent Design Awards 2000 held by the Lower Rio Grande Valley chapter of the AIA.

Honor awards went to Los Tomates Toll Station & Administration by Kell Muñoz Wigodsky Architects and Custom Residence in Pharr by *Architecto*ΔMída.

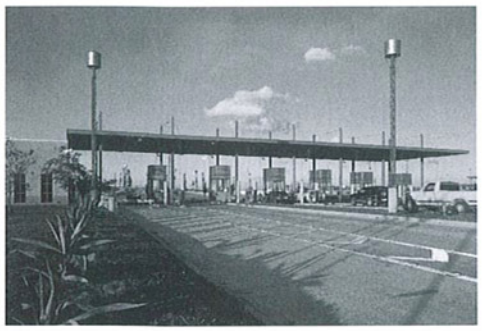
Merit awards went to St. Charles Park by Gomez Mendez Saenz for the City of Brownsville; Science Building at the University of Texas Pan American by Kell Muñoz Wigodsky for the University of Texas System; and Coastal Banc by *Architecto*ΔMída.

Custom Residence



PHOTOS COURTESY AIA LOWER RIO GRANDE VALLEY

Science Building at the University of Texas Pan American



Los Tomates Toll Station & Administration

St. Charles Park

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San Antonio Updates Design Awards Program

SAN ANTONIO With the beginning of a new century, the time had come for a change to the decades old format of the AIA San Antonio Design Awards. The Design Awards Committee wanted to build on the foundation of the local architectural firms' commitment to excellence in design while also drawing upon the legacy of Alfred Giles, Adams and Adams, Atlee B. Ayres, and O'Neil Ford. The result was called "the celebration of design," a program designed to encourage participation by more firms, to engage the public, and to provide a juror lecture/discussion for the public, firms, and local architecture students.

A new design category (the Mayor's Choice Award) was created for all publicly funded projects and was to be selected by the mayor of San Antonio. There was an increase in the award entry submissions as firms not normally inclined to participate submitted projects in this category.

Three award-winning architects served as jurors: Elizabeth Chu Richter, of Richter Associates Architects in Corpus Christi; Rand Elliot, FAIA, of Elliot + Associates Architects in Oklahoma City; and David Salmela of Salmela Architect in Duluth, Minnesota.

To help promote the event the City Council proclaimed October "Celebrate Architecture Month." Also, the San Antonio *Business Journal* published a special pull-out Design Awards 2000 section that included the program for the awards ceremony reception. The special section featured photos and brief project descriptions of every design awards entry, not just the winning projects.

A juror lecture and round-table discussion kicked off the festivities at the downtown campus of the University of Texas at San Antonio (UTSA) with more than 250 people in attendance, including architecture students and faculty from UTSA and San Antonio College. Participation by the large number of students led to lively discussions on their future role in the profession. Afterward, a dinner honoring the jurors allowed architects to socialize and to continue the discussions on design and technique.

The reception announcing the Design Awards took place downtown in the magnificently restored Empire Theatre during a program patterned after the Academy Awards.

Key officials attended as special guests. Mayor Howard Peak presented the "Mayor's Choice Award" to San Pedro Springs Lake/Pool/Bath House by Beaty & Partners Architects.

Mistress of Ceremonies Katy Keifer, a popular local TV co-anchor, kept the crowd in stitches. To warm up the audience Keifer presented a short film in which she asked local second- and third-grade students "What does an architect do?" The answers were surprising and hilarious, and set a jovial and relaxed tone for the evening.

The winning projects were:

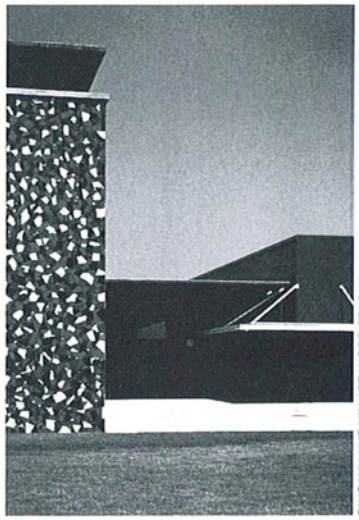
San Pedro Springs Lake/Pool/Bath House by Beaty & Partners Architects (formerly Beaty Saunders Architects) which won two awards, the Mayor's Award and an honor award. Other honor awards went to Ann Richards Middle School by Kell Muñoz Architects; Airbarns by Lake/Flato Architects; and Bartlit Residence by Lake/Flato Architects.

A merit award was presented to Frost Bank/De Zavala Branch by Marmon Mok.

Citation awards went to University of Texas Pan American Engineering Building by Kelly Muñoz Architects; Havana Riverwalk Inn by Marmon Mok; and Northeast Baptist Office by Marmon Mok.

JOHN GRABLE

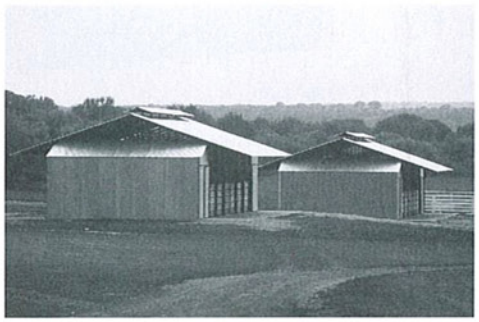
John Grable co-chaired the San Antonio Design Awards Committee.



PHOTOS COURTESY AIA SAN ANTONIO

Ann Richards Middle School

UT Pan American Engineering Building



Air Barns

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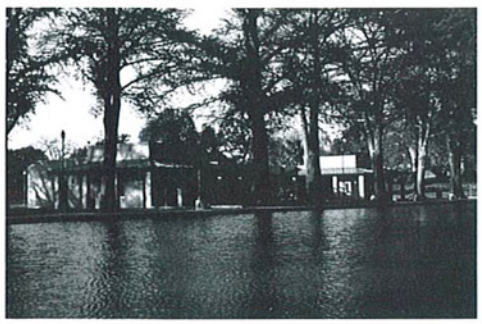
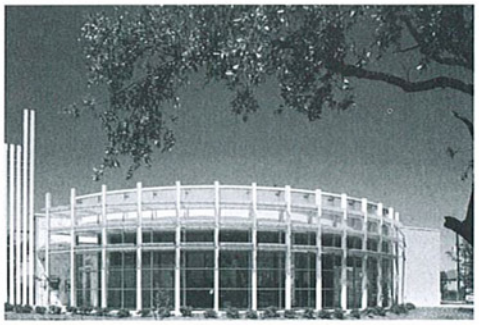


San Pedro Springs Lake/Pool/Bath House



Frost Bank/De Zavala Branch

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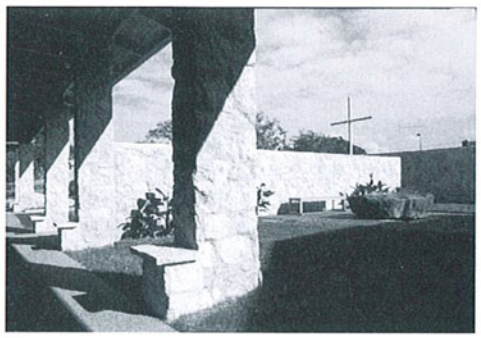
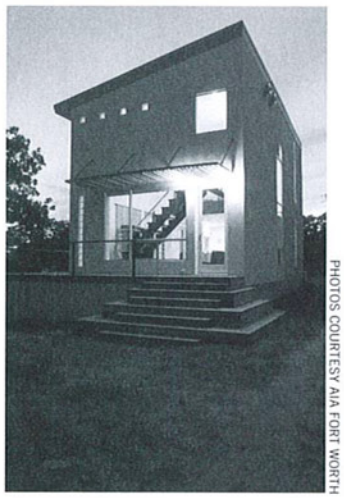


Cross and Porte Cochere at St. Michael Catholic Church

Texas & Pacific Railroad Passenger Station Restoration

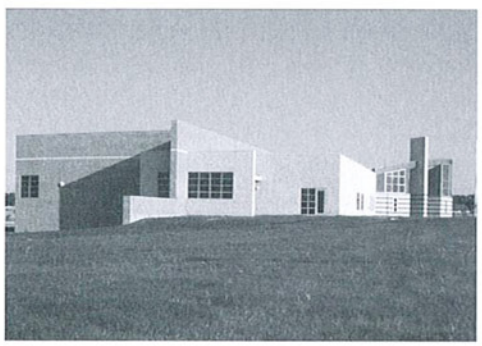
The Elder Annex Restoration

Valeo Electronic Systems Fort Worth Assembly Plant

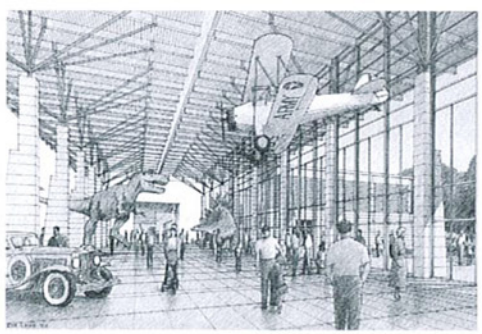


PHOTOS COURTESY AIA FORT WORTH

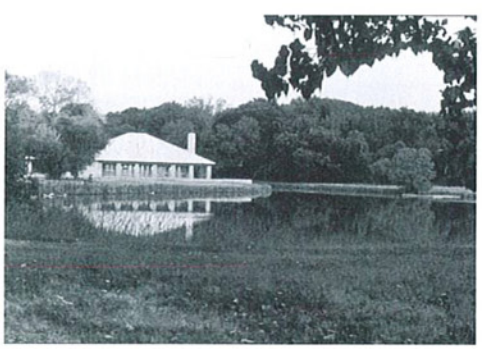
Young Residence



Benbrook Recreation Center/YMCA



Origins Cultural Center



Camp Amon Carter Center/YMCA

Fort Worth Honors 12 Projects

FORT WORTH AIA Fort Worth recognized twelve projects during its recent 2000 Excellence in Architecture Awards, including presenting honor awards to Jim Bransford's Cross and Porte Cochere at St. Michael Catholic Church in Bedford, Gideon Toal's Texas & Pacific Railroad Passenger Station Restoration in Fort Worth, and Richard Wintersole's Young Residence in Burleson.

Merit award winners were The Elder Annex Restoration in Fort Worth by Arthur Weinman Architects; Denton High School Connector Building in Denton by VLK Architects; and Valeo Electronic Systems Fort Worth Assembly Plant by Gideon Toal. Citation awards winners were Benbrook Recreation Center/YMCA in Benbrook by Hahnfeld Associates Architects/Planners; Origins Cultural Center in Arlington by Gideon Toal; and Camp Amon Carter Center/YMCA in Fort Worth by Gideon Toal. In the student competition, an honor award went to Rubi y La Riera by John Stack Ross and Matt Fajkus, both of the University of Texas at Arlington (UTA); and a citation award went to School of Music, Rome by Lauren J. Phillips of UTA.

The annual twenty-five-year-award went to the Ruth Carter Stevenson Residence by Harwell Hamilton Harris, Architect.

Jurors were Jane Lorenz Landry, FAIA, of Landry & Landry Architects and Planners in Dallas; William F. Stern, FAIA, of Stern and Bucek Architects in Houston; and Clifford Miles Welch, AIA, of Welch Architecture in Dallas.

Denton High School Connector Building

Of Note: Placeworks1

AUSTIN An auction of works by distinguished designers, including an Eames splint (in its original World War II packaging), a 1905 Kunstchau chair by Josef Hoffmann, and a vintage le Corbusier chaise lounge, benefited the Charles W. Moore Center for the Study of Place.

Michael Graves served as honorary chairman for Placeworks1 held November 16. More than 400 attended the festivities which also featured Graves leading a "give and take" presentation on architecture and design, but the main event was a silent auction of drawings, photographs, paintings, books, and furniture donated by dozens of nationally renowned architects, artists, and furniture designers. Other works auctioned during the evening included a set of design studies for the new Austin Museum of Art by Richard Gluckman, watercolors by Steven Holl, an original collage by Graves, and a week's stay at Charles Moore's Sea Ranch Condominium #9.

Plans are underway for Placeworks2 but details have not yet been confirmed, said Moore Center Director Kevin Keim. The center sponsors design programs, architectural residencies, and conservation of the Moore/Andersson compound in Austin.

Houston Plans New NBA Arena, Third in State

HOUSTON Voters here have overwhelmingly agreed to finance a new pro basketball stadium, making Houston one of Texas' three largest cities to build new homes for National Basketball Association franchises.

In November, with sixty-five percent of ballots cast in favor, Houstonians passed a referendum to allow existing hotel and rental car taxes to pay for a $256 million stadium for the Houston Rockets. The facility, scheduled to open in 2003, is planned to be built downtown on land owned by the city near the George R. Brown Convention Center and several blocks south of Enron Field which opened in March 2000 as the new home of the Astros professional baseball team.

Dallas and San Antonio each have new stadiums currently under construction for their local NBA teams. The American Airlines Center, future home of the Dallas Mavericks, is set to open this fall. The $325 million (including land and adjacent development) downtown facility is designed by David M. Schwarz/Architectural Services of Washington D.C. and HKS of Dallas. The San Antonio Spurs are expected to move into the SBC Arena in September 2002. The $175 million arena will be built a few miles southeast of downtown, at the current site of the Joe and Harry Freeman Coliseum, and is being designed by a team led by Ellerbe Becket of Minneapolis with associated architects Lake/Flato and Kell Muñoz of San Antonio.

The passing of Houston's referendum promises to keep the Rockets in town, plus it will bolster the city's efforts to lure a major-league hockey team. A similar referendum failed at the polls in 1999, causing Rockets owner Les Alexander to consider moving his team to another city after his lease at Compaq Center expires in 2003. The Rockets' management had said the twenty-five-year-old Compaq Center lacks amenities, such as luxury skyboxes, that allow NBA franchises to stay financially competitive.

Proponents of the new arena say the facility will spur continued development of downtown's east side which is enjoying the public's support of Enron Field, the 42,000-seat facility built for $248 million to replace the Astrodome. Plans for the new basketball arena include seating for 18,500 fans, a state-of-the-art sound system for concerts, and the latest in high-tech information systems for showy presentations.

STEPHEN SHARPE

MFAH Exhibits Impressionist Landscapes

At the Museum of Fine Arts Houston, *Monet, Renoir, and the Impressionist Landscape* features the luminous color and atmospheric effects that made plein-air works the dominant genre of the late-nineteenth-century avant-garde. The collection, from the Boston Museum of Fine Arts, is among the most comprehensive in the United States and contains the largest number of works by Monet outside of Paris. For more information, visit www.mfah.org or call 713/639-7540. JANUARY 21 THROUGH APRIL 15

RDA Hosts *Green Spring* Lectures

Focusing on environmental issues, the 2001 Spring Lecture Series presented by the Rice Design Alliance will bring to Houston five innovative designers from around the world who are asking fundamental questions about architecture's role in society. All lectures will begin at 7:30 p.m. in the Brown Auditorium of the Museum of Fine Arts, Houston. For more information, visit www.rda.rice.edu or call 713/348-4876. Featured speakers are Ken Yeang of Kuala Lumpur, Malaysia, on JANUARY 24; Fruto Vivas of Caracas, Venezuela, on JANUARY 31; Thomas Spiegelhalter of Pittsburgh, Pennsylvania, on FEBRUARY 7; Pliny Fisk of Austin and Robert Berkenbile of Denver, Colorado, on FEBRUARY 21.

Menil Explores Pop and Postmodern

Concurrent exhibits trace two art movements, from the beginnings of Pop Art in the mid-1950s through to postmodernist works of 2000. *Pop Art: U.S./U.K. Connections, 1956-1966* illustrates the impact of popular culture on artists working on both sides of the Atlantic. *Postmodern Americans: a selection* vividly demonstrates the legacy of Pop Art and its influence on a new generation of artists working in various media. For more information, visit www.menil.org or call 713/525-9404. JANUARY 27 THROUGH MAY 13.

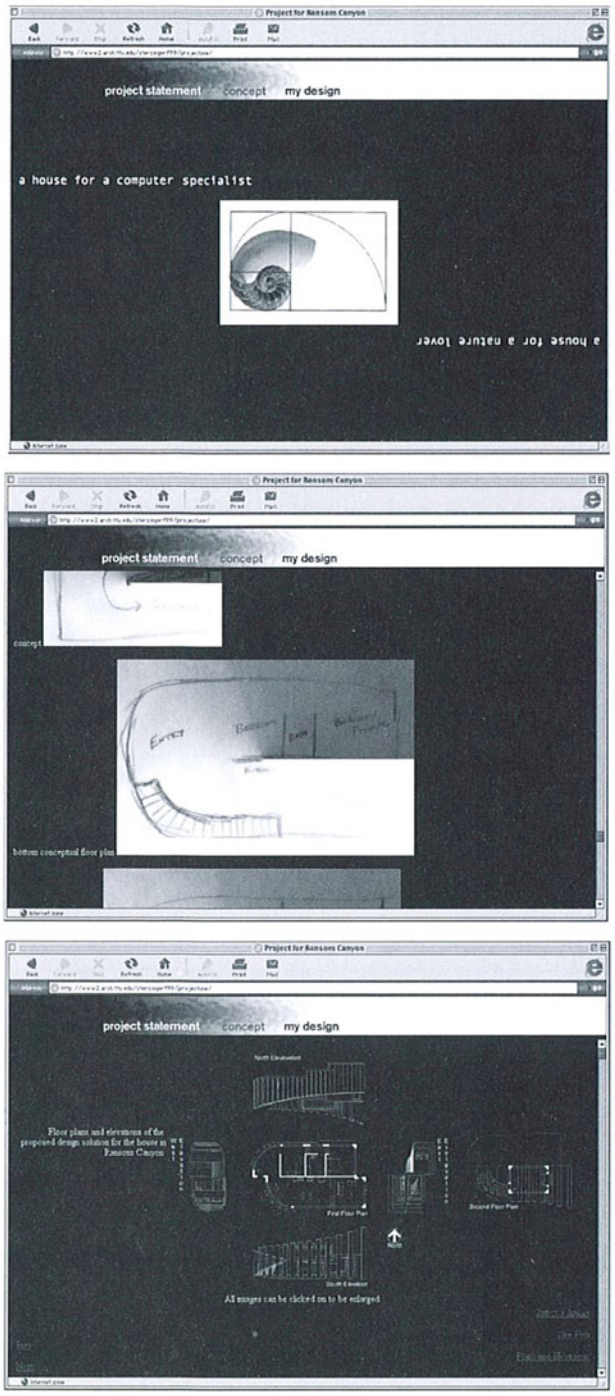
Libeskind at Dallas Architecture Forum

The Dallas Architecture Forum continues its fifth season by presenting Daniel Libeskind, designer of the Jewish Museum in Berlin. Recipient of the German Architecture Prize in 1999, Libeskind is currently designing the Spiral Extension to the Victoria & Albert Museum in London, the Jewish Museum in San Francisco, and numerous other projects. The non-profit DAF is dedicated to providing public discourse about architecture. The program begins at 6 p.m. in thte Horchow Auditorium at the Dallas Museum of Art, 1717 N. Harwood St. Admission is free to DAF members, $10 for DMA members, $15 for general admission, and $5 for students. For more information, visit call 214/740-0644. FEBRUARY 15

by Urs Peter Flueckiger and Robert D. Perl

Texas Tech's E-Studios

LAST YEAR AT TEXAS TECH UNIVERSITY, WE began teaching four experimental on-line undergraduate architecture design studios. By integrating computers and the Internet into the studio experience, we sought to explore meaningful ways to synthesize digital media into educational processes. The College of Architecture provided secure classrooms, Internet access, and space on its network server. Third- and fourth-year undergraduates supplied their own computers and off-the-shelf software. As the instructors, we provided a variety of teaching, architectural design, and computer experiences. All participants brought enthusiasm to embark on an educational adventure.



Pages from Jarrod Sterzinger's Web site show his work on a fall 1999 class project. (top) Sterzinger's project statement demonstrates the dual aspects of his design. (center) Conceptual sketches by Sterzinger illustrate his preliminary ideas. (bottom) Sterzinger offers plans, elevations, and sections in his final presentation.

Design projects, schedules, and the expected quality and quantity of work were roughly the same for the students as for their classmates in concurrent paper-and-pencil studios. They posted their research, preliminary work, and final submittals on Web sites they themselves designed and managed. Lively critiques took place in on-line discussion forums where the designers received and responded to written comments from professional mentors, students at a distant school, the Texas Tech faculty, and their classmates. Of particular interest was a six-week period when Flueckiger taught his class from Switzerland, with only a dial-up connection for communication.

These students opted to take the e-studio rather than a section of a traditional design class. Their design abilities represented a cross section of students enrolled in third- or fourth-year studios. All had taken the first of the two computer classes required at Texas Tech. (The first covers the basics of CAD and 3-D modeling, the second emphasizes advanced rendering and imaging.) To learn the fundamentals of Web page design and management, all took a three-credit-hour co-requisite course (also taught by the two of us) in which each student administered a personal Web site. Each student had exclusive author rights to his or her pages and was responsible for page design, site navigation, and file management on the site. Using Microsoft FrontPage, students learned how to create and edit Web pages, establish hyperlinks, and manipulate images. Additional Web skills were addressed on a "just-in-time" basis.

A computer screen is a small window into the multidimensional processes of design. Communicating the complex flow of intentions, concepts, explorations, alternatives, refinements, systems, etc. through the Web is a very different task than participating in a traditional classroom discussion or pointing to a detail in a large display pinned on the wall. In person, photocopied case studies are recognized as research, and initial sketches are easily distinguished from presentation drawings. However, on the Web, a hyperlink can lead to anything, from anywhere, at any time. A Web site must contain content, of course, but the site must be organized to allow the viewer to easily navigate to find that content. When designed properly, the organization should be nearly invisible to allow the content – in this case, a student's architecture – to come through in all its glory (or lack thereof). On the Web, small file sizes allow pages to download faster. However, if files are too small, images will appear fuzzy and will not properly communicate the designer's proposal. The target was to make student work viewable even with a slow, dial-up connection, a screen resolution as low as 800x600 pixels, and in both Microsoft Internet Explorer and Netscape Navigator. This mark is difficult to reach, but allowing contact with all visitors is very important. The value of clear site navigation and usability was discussed, and sometimes debated, throughout the semester. Preliminary work, final presentations, and subsequent critiques were – and still are – viewable by anyone, without passwords or any other restrictions.

Fall 1999

Once Perl's Architecture Design III class began, each student was assigned a mentor, a professional architect working in an office. Loyal Texas Tech alumni, the mentors each volunteered half an hour per week for the fifteen weeks of the semester. They were asked to view a student's work and offer written advice and criticism to the student via the Web. Many mentors viewed several students' work to better understand how their student compared to others. They posted their comments in the student's FrontPage discussion forum which was available to everyone, and the students read and learned from comments addressed to others. Students also commented on each other's work. Mentor comments were consistently focused and thoughtful.

"E-Studios" continued on page 23"

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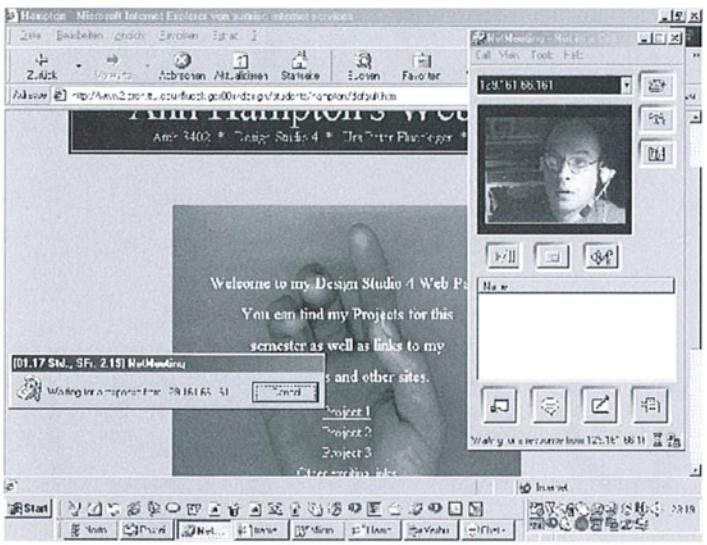
"E-Studios" continued from page 21

Flueckiger's Architecture Design V studio collaborated with the Savannah (Georgia) College of Art and Design (SCAD). An introductory two-week design project was assigned to get everybody used to each other and the new design environment. This was particularly important for the purpose of establishing a consensus for the means and process of communication with the students at SCAD, as the interaction was exclusively through the Internet. This introductory project involved designing a house for a computer specialist working remotely from a picturesque canyon location near Lubbock.



(top) While unexpectedly delayed in Switzerland during spring 2000 semester, Flueckiger continued to teach his class via Web Cam. (bottom) Flueckiger was able to keep a virtual eye on his students at the other end of the server connection.

The client, whose office is completely virtual, desires to live in a house that better reflects and interfaces with his/her lifestyle. The project statement led students to a virtual museum exhibition (via a link to the then-current "The Un-Private House" at the Museum of Modern Art in New York) relating to the themes and concerns surrounding the introductory design project. All 26 exhibited projects at the MoMA incorporated the computer and digital media in their design process and presentations. The students were encouraged to travel via cyberspace and observe relevant and recent architectural designs where digital media were the primary forms of design development and documentation. (Besides learning about the exhibit's featured projects, the students also saw how architecture could be presented on the Web.)

Following the introductory project, the rest of the semester was devoted to the main design project, an educational and lodging facility for artists and people interested in art at an historically significant and active art-studio retreat in Marfa, Texas. In addition to posting student designs on the Web, research information was posted for the SCAD students to download (from more than 1,000 miles away), so they could access the necessary site, climate, cultural, and historical information to begin to develop their designs for an exhibition hall that would complement our students' facility designs. Discussions via AOL Instant Messenger were routinely held as the students working from different locations worked out the specifics of obtaining and coordinating information. Site information was recorded with a variety of digital cameras, and links for downloading software for viewing were provided in the Web pages.

Spring 2000

Last spring the Internet design studios continued, with each teacher having a section of third-year design students. At the beginning of the semester, Flueckiger was unexpectedly delayed in Europe, waiting on a six-week process of visa adjustments. Perl set up blank Web sites and discussion forums on the college server for students in both sections. Perl began work with his group of students, all new to the Web. Flueckiger, seven time zones ahead, started working with his students (all had taken Perl's class the previous semester) asynchronously and synchronously, via a slow modem connection. The "virtual" teacher regularly placed critiques, comments, and answers to student questions in each student's discussion forum. The comments were posted and read at times convenient to the participants. Synchronous communication during studio hours created additional challenges, but was justified by the "hotter" nature of the telephone-

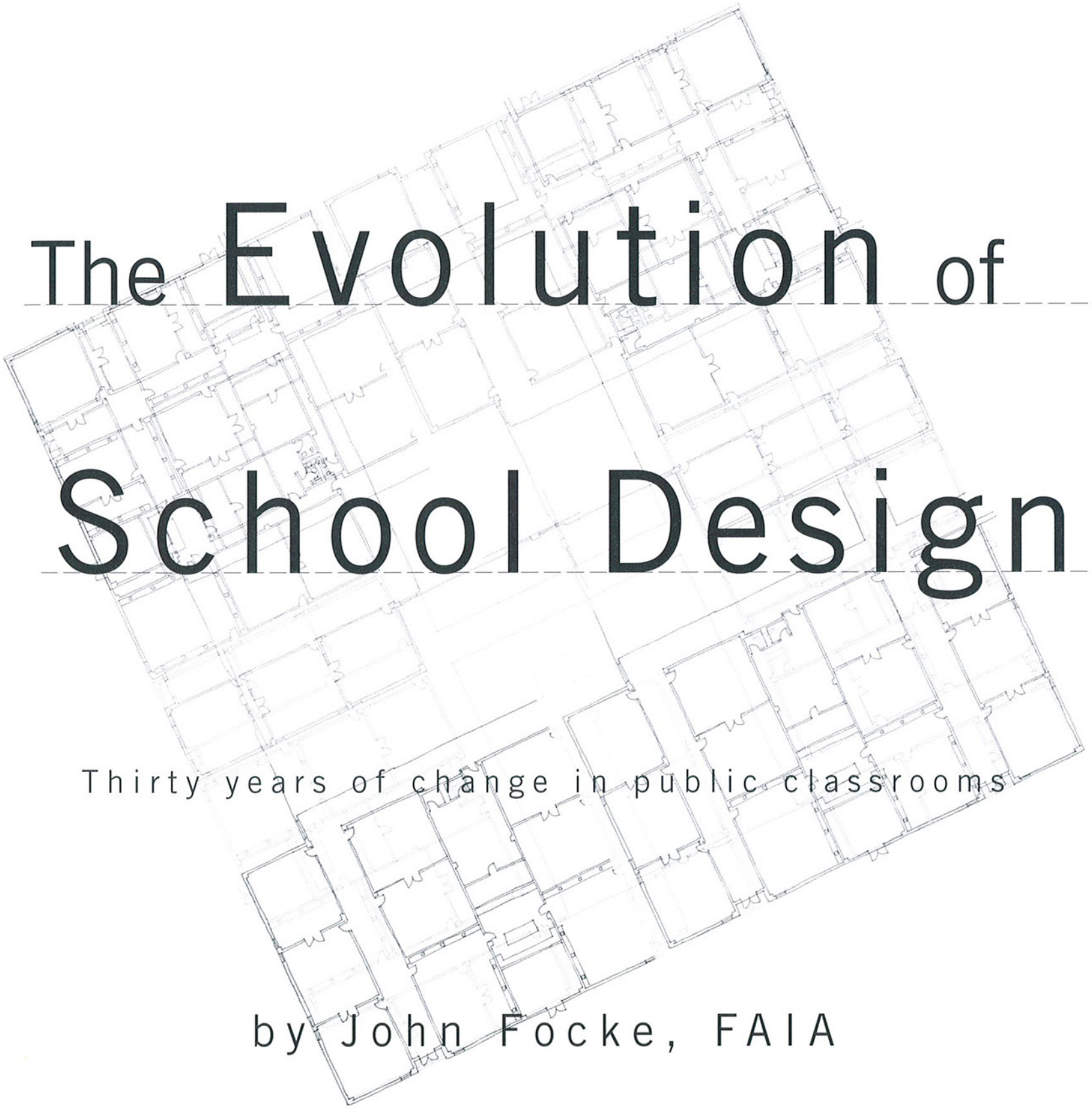
"E-Studios" continued on page 59

To View the Students' Work

Syllabi, project statements, and work by all the students who participated in the e-studio, can be accessed from any computer with Internet access and a browser. In the College of Architecture we work with Microsoft Windows NT and Microsoft Internet Explorer 5. Some work uses Macromedia Flash or Live Picture, both available as free downloads.

To view these Web pages, visit the Web site of the College of Architecture at Texas Tech University: http://www.arch.ttu.edu/Architecture/ and follow the links to Perl and Flueckiger's courses.

Or visit www.texasarchitect.org and look for the link to Texas Tech.



The Evolution of School Design

Thirty years of change in public classrooms

by John Focke, FAIA

Over the past three decades architects and educators have been both witnesses to and players in a fascinating evolution in the planning and design of public schools. Driven by the dichotomy of the traditional schoolhouse genre in which the classroom is a structured environment for "education by lecture" versus a place for the collaborative teaching/learning process occurring in a flexible, interactive, socially and culturally conscious environment. The architect's inquisitive analysis of changing educational needs and synthesis of the design solutions has enriched public education and delivered new images of the schoolhouse which today are being integrated into our communities. But the evolution has not been without serious struggles.

This evolution began in the 1960s with a national effort to rationalize and standardize school design through the use of off-the-shelf, lightweight, adaptable building systems that produced schools which could be delivered within tight budgets. This strategy provided a means to build a new school in six to nine months as a hedge against the double-digit inflation that plagued the construction industry in the early 1970s. While standardized school design was successful for small elementary schools, the planning process and building technology proved not to be adaptable to the larger and more complex middle and high schools. Nevertheless, a new way of thinking about designing and building schools was introduced into the marketplace.

Concurrently, we saw experimentation in the delivery of education. The "open plan" classroom environment of the 1950s was both a financially driven solution – to reduce the cost of new facilities – and a social engineering experiment in education. However, chaos reigned in the open plan: acoustics were poor; use of audio-visual equipment was limited; and student supervision was everybody's problem. As schools grew in overall enrollment, design concepts were borrowed from the familiar retail "shopping mall" environment to merchandise selection of classes and to provide a more interactive social environment. Supervision and security problems took the edge over the academic environment. But we, architects and educators alike, learned at each step.

A recent school facility condition assessment survey conducted by one of the large independent school districts in Texas reported that the traditional school buildings built before 1970 are in better condition today than those built after that date. These concrete or heavy-steel framed structures with masonry exterior wall systems, plaster and glazed tile partitions, and terrazzo floors have proven to be durable and maintainable buildings. Unfortunately, retrofitting these buildings to adapt to changes in the teaching/learning process and the introduction of electronic instructional technologies is costly, and in some cases so limited as to render these buildings functionally obsolete.

As the demand for new schools increased in the latter decades of the twentieth century, capital budgets lagged behind the escalation curve of material and labor costs within the construction markets. Architects, contractors, and building system manufacturers have struggled to find less expensive (and consequently less durable) means to build and air-condition space for education. As a result, schools built today are better bargains on a cost per-square-foot basis—even more so than spec office buildings. This cost-efficient building type responds to taxpayer concern for frugality in public spending but can be a cash drain on the school district on a long-term life-cycle cost basis. Therefore, the K-12 schoolhouse entered the twenty-first century as a distinct set of building types characterized by building technologies optimized to first cost. The one exception to the emphasis on first cost – and one which runs counter to the "pay less for more" philosophy – involves energy consumption, a major component in the operating costs of school facilities. Smart superintendents are investing capital cost in sophisticated energy manage-and-control systems and more efficient HVAC systems in an effort to control long-term operating costs.

Technology for Teaching/Learning

Presently, at a time when the cost pressure is acutely exerted on new construction, educators and students are working together to devise new models for teaching and learning. It's an ongoing process

which requires more flexibility in educational spaces, flexibility that will allow these new concepts to include electronic teaching, learning, and communication technologies. School districts across the nation are consumed with the need to equip the education environment with rapidly evolving technologies that dramatically impact student performance.

In the first wave of application of these learning technologies in school design, architects were called on to adapt traditional instructional spaces to accept new technologies. Computers were first introduced in training labs usually offered as elective courses, but classrooms then were not large enough to accept more than a few computers. As technology has evolved – particularly by adding communication through the Internet – classrooms in new schools are now designed to accommodate computers, communication systems, cable television, and LCD projection. In this second generation of technology, new spaces for learning are being defined by educators and academic technology managers that are resulting in several reconfigurations: the classroom has become a flexible teaching lab; the computer lab has transitioned to a discovery lab in which learning, monitoring, and measuring applications are linked to the computer network for analysis as a learning format; and the library has expanded to become the multi-media center, the information and communication heart of the school. More is to come in the third generation which is being driven by wireless technologies, laptop computers, and cellular communication devices linked to global information resources.

The presence of technology in public schools – with its enormous cost to the taxpayer – is driving the demand for broader community access to that technology and communication beyond the normal school hours, a demand that most schools are not designed to fulfill. Security and increased operating cost for extended hours are only two of the design problems facing school districts – and architects designing the facilities – as educators strive to provide for equal access to technology for all students, their parents, and other members of the community.

> The Internet is drastically changing the teacher's role and is having a profound impact on the classroom, requiring larger spaces, more flexible furniture, and universal network access.

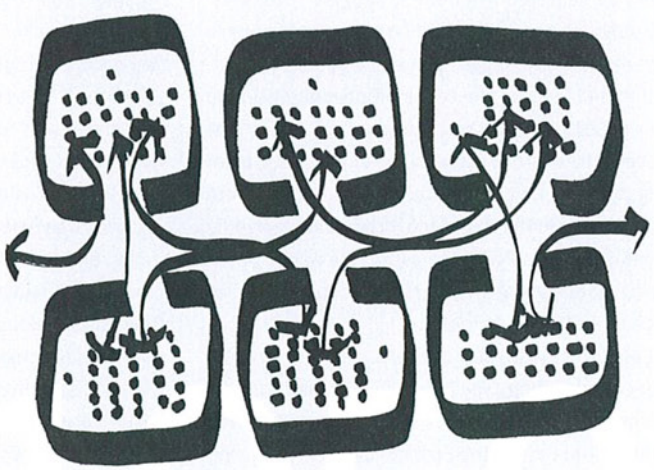
Restructuring Academia

Another profound and related influence on school design is emerging by way of the changing nature of the teaching/learning process. The introduction of global communications via the Internet is making universal access to both public and college/university libraries possible, and in this new world of cyberspace the teacher's role is expanding to include the task of facilitating information. Plus, in this new environment students may learn from the teacher for only a portion of a class period, then visit an on-line university library for self-instructed bibliographic research, and finish the period with instruction via cable TV. In this information-rich environment students move from a typical classroom-lecture arrangement of space to a "problem-based learning format" where they work in teams either clustered within a large space or in smaller spaces designed for group study. The student may physically move around within the learning lab in an arrangement requiring larger spaces, more flexible furniture, and universal network access.

Design Driven by Theory

Adapting classrooms according to scholastic models has led to at least three classroom configurations over the last half-century.

illustrations by Gerald Moorhead, FAIA



Department Plan

In a traditional school plan, rooms are dedicated to particular subjects. The whole student body moves throughout the building to change classes.

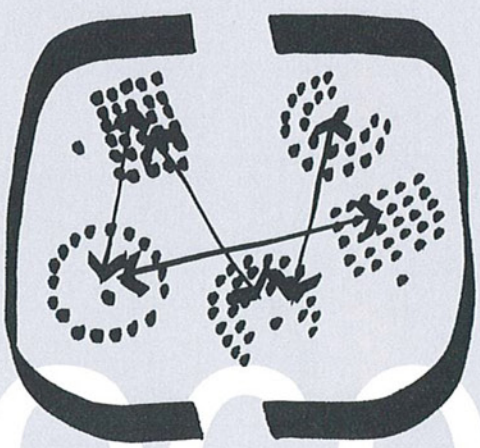
Technology, however, is not the only force of change in the public school. The interdisciplinary/interactive nature of the teaching/learning process, coupled with increasing public-school enrollment, together have spawned experimentation in the management and social organization of the academic system. In decades gone by we could count on a simple departmental entity organized by academic discipline where the student moved from class to class for specialized but isolated instruction. This structured academic environment is efficient from a management standpoint but limits the student in terms of academic inquisitiveness. Educators are evolving a new order of academia in which four teachers, each one representing a core curriculum subject, work together as a teaching/learning team. The physical design for this interdisciplinary team is called the "house plan" in which the four teachers share a suite with 100 students. Additional spaces are needed for computers, a small group-study room, science equipment, a planning area, teacher offices, and parent/teacher conference rooms. This new arrangement places the student in a social and academic "neighborhood" and puts the teaching/learning team in extended contact with students. The physical impact of this house plan on the overall design of a large high school is profound. The learning potential on students is manifold with the potential to integrate the core curriculum at the point of everyday learning.

Administrators and educators work with the complex variable of scheduling the teaching/learning process within limited facilities to optimize the output of their instructional time. Traditionally, the fifty-minute class period meeting three times per week per subject was – and remains – the standard scheduling module in many schools. The evolution of the teaching/learning process has led administrators to a more productive block-scheduling method, which is based on a ninety-minute class period meeting five times on a ten-day cycle per subject. The block schedule has the student in class for a longer period with time to access the computer, work with colleagues on team research, or other learning activities. The impact of block scheduling on the use of school facilities can have the effect of reducing the overall capacity of the instructional space unless other flexible spaces are provided for teaching/learning, team planning, and elective subjects.

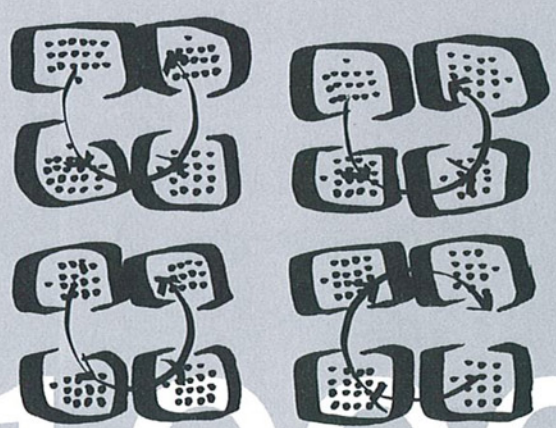
Public school system superintendents and school boards are all too familiar with the impact of rapidly changing technologies and emerging teaching/learning processes, and the costly maintenance of aging facilities. The smart educator must focus on quality in education *and* in facilities. The challenge falls on the architect, working in collaboration with the educator, to understand the unique and changing education needs, to design productive academic environments, and to provide facilities which are durable and maintainable and which enhance our communities. ▪

> Schools built before 1970 are in better shape than those built later, but the cost to retrofit these facilities to accept new technologies has rendered some functionally obsolete.

John W. Focke, FAIA, is a principal in the firm of Ray Bailey Architects, Inc. He co-authored the book *Problem Seeking* on architectural programming with William Peña, FAIA, and the late William Caudill, FAIA.

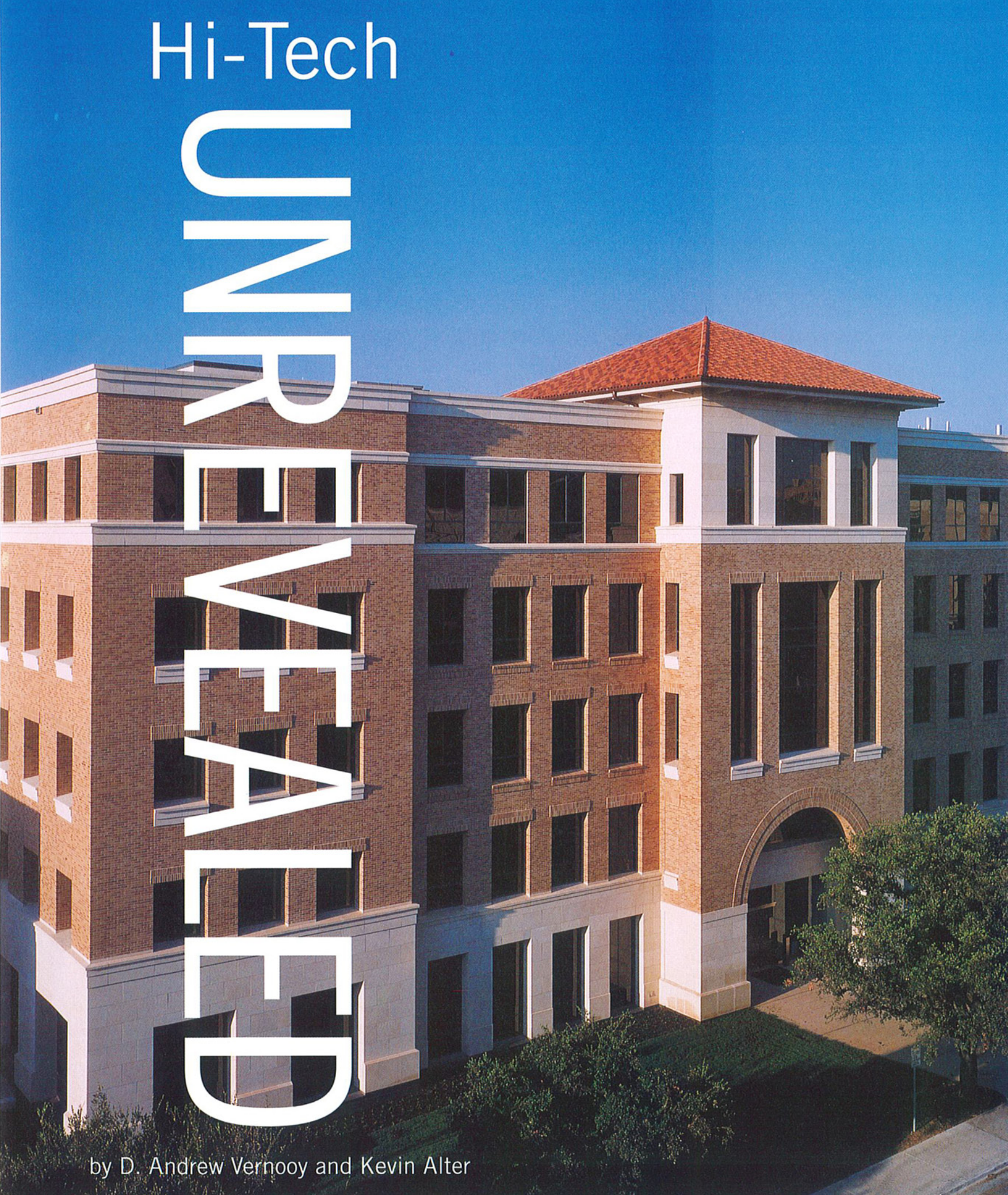


Open Plan
Large open spaces where all students move in all directions to change classes.

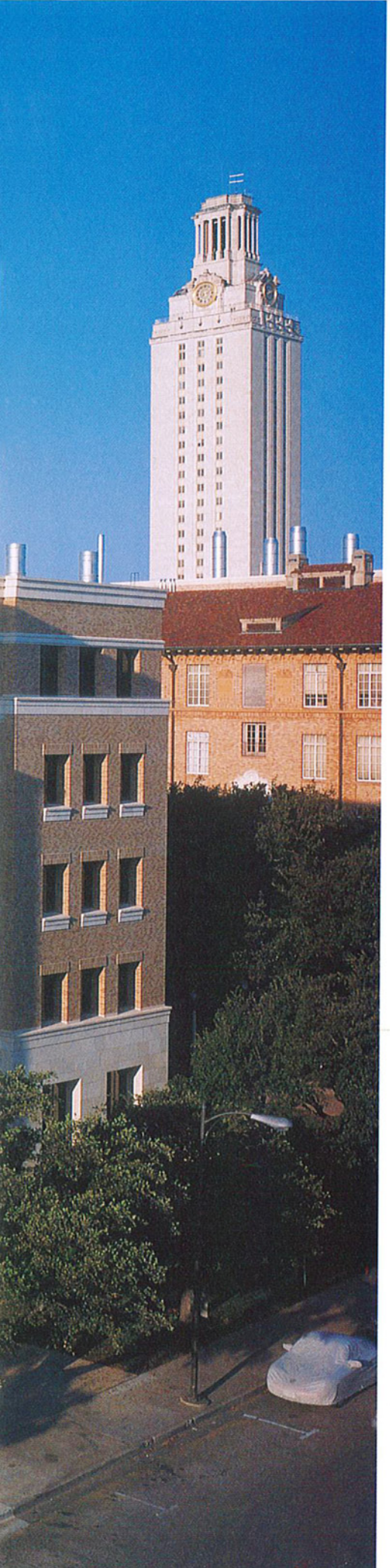


House Plan
Small groups of students share a "neighborhood" of rooms and several neighborhoods share functional areas like the gym, media laboratory, and cafeteria. Students change rooms only within their neighborhood.

Hi-Tech UNREVEALED



by D. Andrew Vernooy and Kevin Alter



PROJECT UT ACES Building, Austin
CLIENT O'Donnell Foundation
ARCHITECT Susman Tisdale Gayle
CONTRACTOR Austin Commercial
CONSULTANTS Jaster-Quintanilla & Associates (civil & structural); Blum Consulting Engineers, Inc. (MEP); The Broussard Group (landscape); Naud Burnett and Partners (owner's landscape); Enterprise Consulting Group (telecomm); Charles M. Salter & Associates, WJHW (audio-visual); Jack Evans & Associates (acoustical); Iversen Consulting Group (owner's food service); Ridgeway's (reprographics)
PHOTOGRAPHER Peter Tata

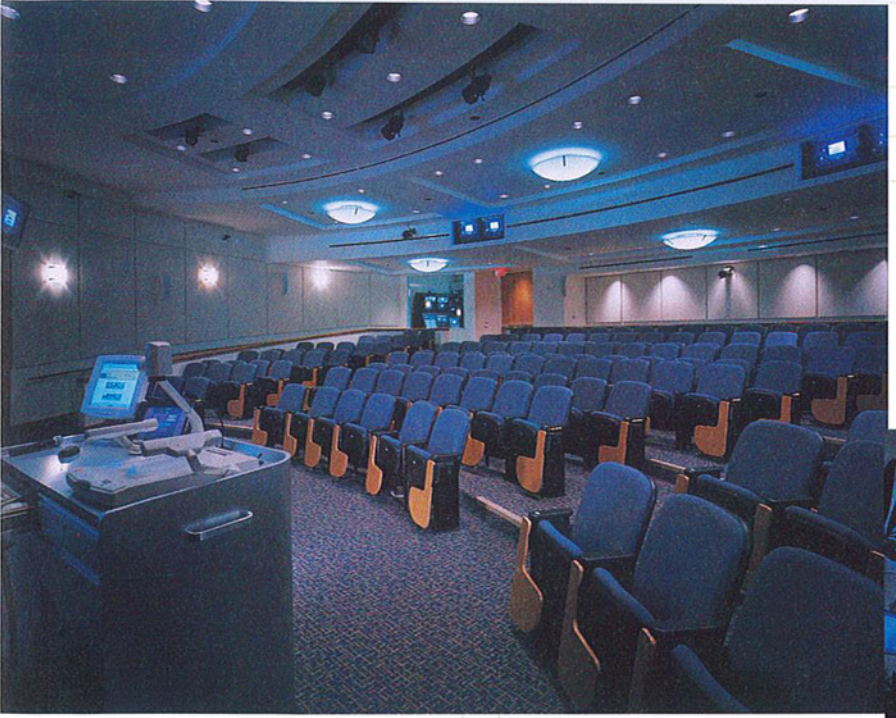
"Quatremère maintained that Greek buildings were 'friendly and truthful liars' and that they were mimetic works of art because they revealed themselves to be unnatural." Sylvia Lavin, from *Quatremère de Quincy and the Invention of a Modern Language of Architecture*

It is too easy to see architecture as a conspiracy of wills – the client, the architect, building codes – but, is this accurate? One could make a case that architecture is just as much a consequence of building practice – in the sense of typological concerns for light, structure, circulation, etc. – and perceived public opinion made explicit by design guidelines or implied by a collective sense of propriety. In the battle of wills the field of disagreement is readily apparent, usually at the level of composition, material choice, and assembly. In the contest between building practice and decorum, the issues are more sophisticated and more difficult to describe.

The Applied Computational Engineering and Sciences (ACES) building at the University of Texas in Austin is a sturdy, decorous, and thoughtful addition to the campus. The architects, Susman Tisdale Gayle of Austin, have invested considerable study in the nature of the campus and its master plan. They have strived to make their building a considerate and civil resident: the brick and stone were chosen to match immediate neighbors; the building holds the corner and reinforces the street space at an important intersection; and the proportion and composition of the dominant north and west facades borrow specifically and generously from other parts of the campus. These are good architects who have done a good building—all the more reason to ask substantive questions about the nature of the relationship between building practice and architectural propriety.

Can institutions guide the character of their architecture without subverting the architects' respon-

(left) Built and donated by the O'Donnell Foundation of Dallas, the 180,000-square-foot facility is located in the heart of the UT campus. (top) Invisible even from inside is the building's telecommunications infrastructure, including 1.3 million feet of Lucent GigaSPEED copper cabling and a wireless network that runs throughout the building as well as the outside courtyard, seen through the doors at left.



(above) All 196 seats in the Avaya Auditorium are wired with power and Ethernet ports. (right) The on-site O's Campus Café is operated by a premier Austin restaurant which offers catering services to everyone working in the building. (opposite page) Videoconferencing rooms on every floor are equipped with user-friendly instructional technology.

sibility to confront their contemporary culture in a critical manner? And, as the constituent assumptions of building practice evolve, should we see a similar evolution in our expectations for propriety? These questions relate more to the campus master plan than to ACES, but our critique of the building is colored by the ideological trappings of the master plan. By its very nature, any master plan imposes contraints on architects designing new structures to fit within that ideological framework. It is that "presence" of the master plan that hangs over ACES and exhibits itself through architectural devices which sometimes seem forced, as if the architects conceded to decorum in the battle of wills.

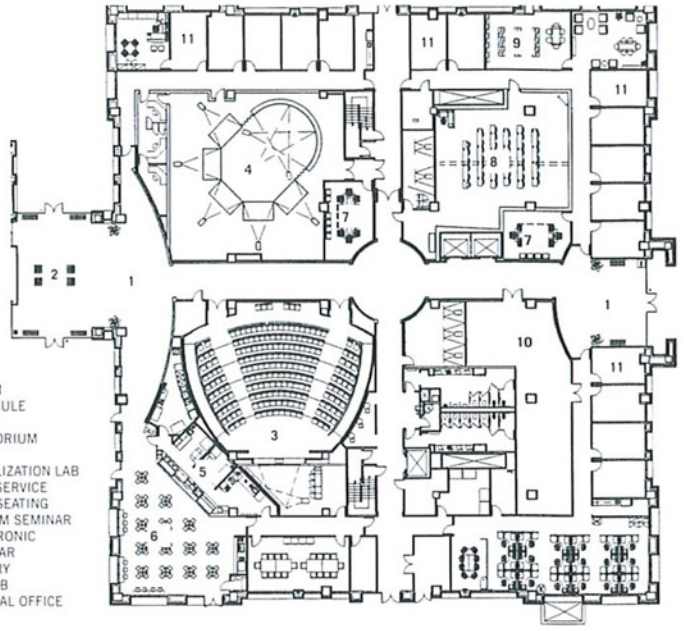
The ACES building is unusual in many ways. It is a multidisciplinary computer/media facility that is the brainchild of a private donor. The land that the facility sits on is leased from the university, and the donor's foundation was as instrumental in the design of the building as the university. The donor required several things, including open areas on each floor to promote interdepartmental interaction, a "deep" facade to give the occupants a sense of insulation from the quotidian distractions of campus life, and a carefully designed, friendly courtyard between the ACES building and its immediate neighbor to the south, Taylor Hall. STG used the formal device of two intersecting axes to nest the program, locate the entrances, roughly coordinate the tower elements, mark important open areas on each floor, and anchor the expression of vertical movement that occurs on the top two floors of the building. Through these and other devices the architecture attempts to reconcile its highly articulated program with the more refined formal objectives of the campus' older buildings.

But, by attempting that reconciliation, the architects grappled with the conflict inherent in any effort to design according to a comprehensive ideological formula. Inside and outside ACES, everywhere you look, there is the presence of the master plan, and the architects' adherence to its presence kept STG from exploring ways in which ACES might engage the culture of architecture in a more critical way.

ACES carries a formidable technical program, including integrated media and information systems for a visualization research lab, nearly 17,000 square feet of open-plan lab space, fourteen electronic seminar rooms, and an auditorium for 196 with each seat wired. This is a cutting-edge building designed in a short period of time and by all accounts the architects did an admirable job fulfilling the technical objectives.

This project is a "loaded" problem – just the sort that one loves to give in studio – because it begs deeper questions like the two posed above.

With the presence of the university's much publicized master plan, STG chose quite self-consciously not to reflect the technological nature of their program, citing that several generations of university buildings dedicated to the study of technical subjects stand on the campus without even a nod to more progressive architectural technologies. Certainly STG is correct to note that technically progressive architectural content is not an immediate and necessary response to separate technological concerns of the program. But, what is the real na-



SITE PLAN
1 VESTIBULE
2 LOBBY
3 AUDITORIUM
4 TICAM VISUALIZATION LAB
5 FOOD SERVICE
6 OPEN SEATING
7 MEDIUM SEMINAR
8 ELECTRONIC SEMINAR
9 LIBRARY
10 CS LAB
11 TYPICAL OFFICE

ture of the campus upon which the master plan is based? One is struck by the physical logic of the older campus, the stereometric rigor of the buildings and their similarities in scale, proportion, and visual texture. This logic was not inspired by fiat but by the nature of campus building itself—its building practice. Responding to the desires for natural light, structural efficiency, and for comely, reasonable roofs, classroom buildings once tended toward a stately thinness—quite an archaic attribute for the new generation of the highly articulated "fat" programs of most contemporary campus buildings like ACES. However, the presence of the master plan offers a mask of congeniality which precludes the exploration of both the practical nature of these desires and their larger formal implications.

While the presence of the master plan insures a level of decorum – the satisfaction of a collective sense of propriety – that relates to the pedestrian nature of the campus, the perceived hegemony of its presence is ruthlessly typological in a negative way—decidedly not in the manner in which Quatremère refered to mimesis above. What is missing is room to conceptualize and to negotiate the considerably more interesting schemes presented by STG in an early round of design. As is evident in an earlier scheme, the architects clearly attempted to sort out the way in which the public aspirations of the master plan – the asymmetry of the program, the conditions of exposure, and the change in building practice – conspire to produce architecture.

Much effort has been invested by STG in the wall section of ACES, for it represented to them the most intimate intentions of both the master plan and the donor-client. This is a sophisticated design effort that responds directly to contemporary building practices – desires to control water and the visual consequences of the section – as evidenced by subtle changes in the exterior plane of the wall. It is tectonically contradictory, like most well designed buildings of today, because it intends a certain substance but must work within the thinness of the layers of the modern wall. These layers are crafted to reveal their thinness at the right moments in an authentic and reasonable way. But, again the master plan trumps the obvious skill of the architects.

Finally, one is inspired to ask after its effort and its pleasure. Regarding Goldsmith Hall or the Texas Union, for example (the sources from which the ACES tower elements were taken), the pleasure is in the carefully controlled, plastic character of the facade, its composition, and all of its symbolic content. The thought that all of that might reside intact in the campus of the twenty-first century – in a world of bits and bytes – is the conceit of an ideology that values decorum over investigation and platitude over confrontation—an ideology where, unfortunately, under the master plan, our buildings will not be 'friendly and truthful liars.'

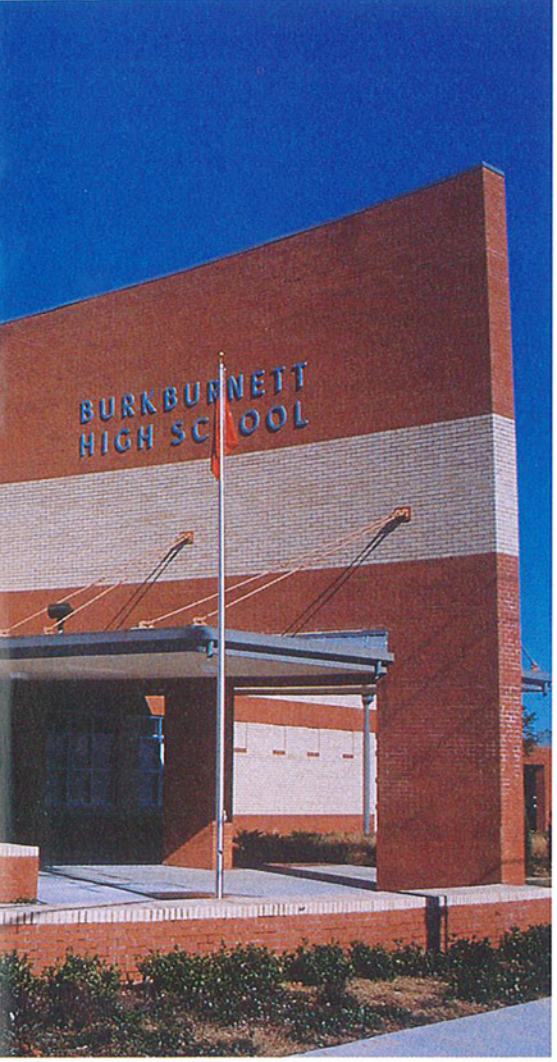
D. Andrew Vernooy and Kevin Alter are on the faculty of the School of Architecture at the University of Texas at Austin. Vernooy is associate dean for graduate architecture programs. Alter is associate professor and co-director of the Center for the Study of American Architecture.

RESOURCES FOUNTAINS, POOLS, AND WATER DISPLAYS: Greenscape Pump Service; SITE FURNISHINGS: Dura Art; CONCRETE: Portland Cement; UNIT MASONRY SYSTEM: Elgin-Butler Brick Company; VENEER MASONRY SYSTEM: Acme Brick, Hohmann and Barnard, Polytite Construction Products, Mortar Net USA, Ltd.; CUT STONE VENEER: Georgia Structural Stone, Texas Quarries; METAL DECK: Vulcraft; METAL FEATURE STAIRS: Big D MetalWorks; FINISH CARPENTRY AND CUSTOM CASEWORK: Buda Woodwork; WOOD TRIM VENEER FACED PANELING: Buda Woodwork; BENTONITE GEOTEXTILE WATERPROOFING: CETCO; BITUMINOUS DAMPPROOFING: Karnak Corp.; INSULATION: Owens Corning; EXTERIOR INSULATION AND FINISH SYSTEM: Dryvit; ROOFING TILES: Ludowici (JEH/Eagle Supply, representative); COMPOSITE METAL BUILDING PANELS: Reynolds Metals Co. (Composite Panel Technologies, distributor); METAL ROOFING: MBCI; METAL FRAMED SKYLIGHTS: Naturay Skylights; STEEL DOORS AND FRAMES: Steelcraft Manufacturing; INTERIOR ALUMINUM FRAMES: RACO Interior Products, Inc.; WOOD DOORS: Eggers Industries; SMOKE CONTAINMENT SYSTEM: Smoke Guard Corp.(Ed Flume Building Specialties, distributor); ACCESS DOORS: Williams Brothers; INTEGRATED DOOR ASSEMBLIES: The Rite Door, LamRite Inc.; OVERHEAD COILING DOORS AND CHAIN GATES: Cookson Manufacturing; ALUMINUM ENTRANCES AND STOREFRONTS, ALUMINUM WINDOWS AND CURTAIN WALL: Kawneer; GLASS AND GLAZING: Viracon; BASE: Roppe; LAMINATE: Laminart, WilsonArt; SOLID SURFACE: Avonite; GYPSUM BOARD SYSTEMS: Delta Metals, Gold Bond, Temple Inland; FLOOR AND WALL TILE: American Olean, American Tile, Ceramic Tile Int'l; SUSPENDED ACOUSTICAL CEILINGS: USG Interiors; RESILIENT FLOORING: Amtico, Nora; RESILIENT FLOORING VCT: Armstrong; FLOORING LAMINATE: BHK Steps; PAINTS: Sherwin Williams; WALL LOUVERS: Construction Specialties; WALL AND DOOR SIGNS: City Stamp and Seal; OPERABLE GLASS PARTITION: Hufcor; METALLIC RACEWAY SYSTEM AND CABLE TRAY: Wiremold

PROJECT Burkburnett High School, Burkburnett
CLIENT Burkburnett ISD
ARCHITECT Bundy Young Sims & Potter, Inc.
CONTRACTORS Poteet, Inc. (food court/classroom addition); Electra Construction Co., Inc. (gymnasium addition); Creative Four (P.E. renovations/performing arts renovation); Arthur Construction (auto technology facility)
CONSULTANTS Ridgway Associates, Inc. (mechanical); Dale Caffey Consulting Engineers, Inc. (electrical); Fischer Engineering (structural); H.G. Rice, Inc. (food service)
PHOTOGRAPHERS David Potter and Torin Halsey

Skillful Blend of Old and New

by Ted Buss



(clockwise, from far left) The transformation of the high school, originally built in the 1960s, united a disjointed group of nondescript horizontal buildings into a cohesive campus which projects a sense of monumental verticality, and finally gave the school a front door. The bulldog logo adds touches of school spirit. The sweeping curve of the front entry invites visitors into the bright and airy interior of the rotunda.

IT WASN'T EXACTLY LIKE TEARING DOWN London with a claw hammer, but the challenge was daunting, nonetheless. Burkburnett school officials knew it. The architects knew it.

Simply put, Bundy, Young, Sims & Potter of Wichita Falls were asked to transform a disjointed hodgepodge of 1960s buildings into a compact, highly functional, and subtle but spectacular blend of old and new architecture. In other words, their charge was to create something logical out of a seemingly dysfunctional maze of boards, bricks, and mortar.

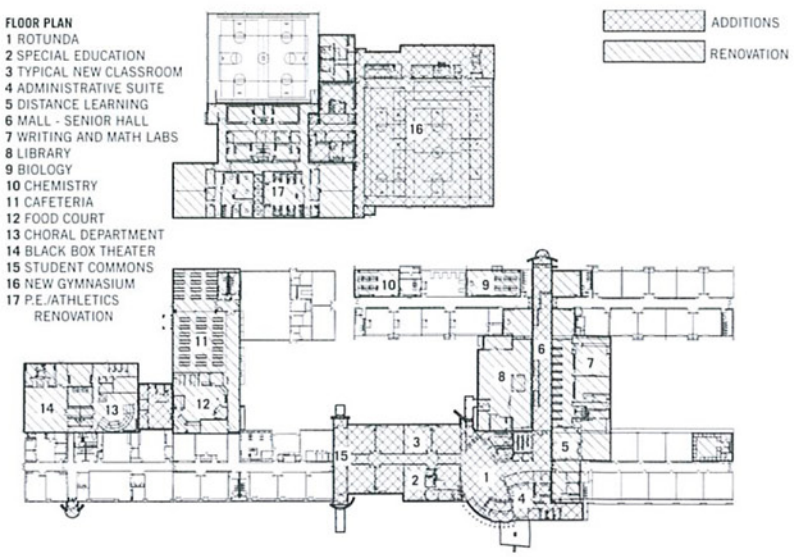
Although countless puzzled faces watched as old walls fell and new corridors took shape, the metamorphosis was indeed special: Burkburnett High School, in the year 2000, became a truly self-contained campus, a skillful blend of the past and the present. Today the school spans 300,000-square feet of bright and airy "main street" influence. "It all began with the school and the community and their vision," says Dick Bundy, a principal in the architecture firm. "With Rick Sims as the project manager, we were able to develop a plan where we could successfully bring the old and the new together without really noticing it." Bundy adds, "To me, this school is an example of public education in architecture. We took a set amount of dollars and used it with discretion. In North Texas we learn to stretch the dollar and make it work, and there is never anything wrong with that."

The first thing students, faculty, and residents noticed in the $8.7 million project was that finally, after thirty-six years, the high school had an official front door rather than thirty-two different access points that ricocheted in various directions like shots from a loose cannon.

Not to be cruel, but the old Burkburnett campus resembled a small western town in the 1800s. It appeared to have no starting point—only a collection of buildings that were added to over time.

A front door may sound like a small matter, but it became a focal point that led all cultures and interest groups through one portal and into a dynamic rotunda.

"We wanted to energize the entire campus," says Danny Taylor, superintendent of the Burkburnett schools system. "We spent thirty-six years with no place for students to gather because all these different entry points made it impossible. Now we have a front door. We have a back door and two other



(left) Beige brick distinguishes exterior entrances and provides contrast with the red-orange brick chosen to match the veneer of the original buildings.

entry and exit points. Security is vastly improved, and now students have common sites where they can mix and mingle and build a sense of pride and unity."

That sense of pride is represented visually by the bulldog, the high school's mascot, which is etched in cornerstones throughout the exterior of the campus. More evidence of school spirit, banners celebrating past and future athletic and academic championships hang from the rotunda's towering cathedral ceiling. The centerpiece is a mounted classic bronze bulldog sculpture designed and created from a live model by famed Texas artist Jack Stevens.

From the rotunda with its earthy rust-colored floor, the classic design begins its swirl of the old and the new. It is impossible to detect where old outside walls become new bright corridors leading to a cafeteria and a library that were once disjointed, and to arts, math, English and special education classes where students once scurried from one building to another, often with no mercy from the elements. And in the cafeteria, where long lines used to wait for the "same-old, same-old," a food court now thrives.

"With 1,100 kids who can't go anywhere else for lunch, you'd better give them what they want in the real world, and that's what we've done," says Taylor. And by eliminating a stage, an old band hall, and wasted corridors, the cafeteria, he adds, has gone from seating 300 to 600.

The former auto mechanics and body shop has a new location, its old spot having been converted to a fine arts center where classes are held and theater pieces are staged.

Special education students who previously attended classes in a separate building, are now part of the main student body.

"These kids learn how to cook, make a bed, clean house, and generally how to look after themselves," says Taylor. "Hopefully, we are helping them to gain some independence in family-life skills, but just as important, they are part of the student body."

Various halls were closed, and as a result the school gained five additional classrooms for computer labs and other educational needs.

"We listened to what the educators and the community wanted and we identified the problems," says Bundy. "Then it became the mission to creatively solve those problems and give the community, students, and faculty a sense of ownership in the campus."

The idea, also, was to give Burkburnett a structure that was not only highly functional, but one that would last.

"We wanted them to be able to feel as comfortable with the building 20 years from now as they do today and we believe we have succeeded," Bundy says.

Ted Buss is business editor of the Wichita Falls *Times Record News*.

RESOURCES **FLAGPOLES:** Concord Industries Inc.; **CONCRETE MATERIALS:** TXI; **PRECAST ARCHITECTURAL CONCRETE:** Dallas Cast Stone Co., Inc.; **MASONRY UNITS:** Boral Bricks, Featherlite Building Products, Acme Brick; **CAST STONE:** Dallas Cast Stone Co., Inc.; **GLASS MASONRY UNITS:** Pittsburgh Corning; **METAL DECKING:** SMI-Joist; **BUILDING INSULATION:** Firestone Products Co.; **ROOF AND DECK INSULATION:** GAF; **MEMBRANE ROOFING:** TAMKO; **METAL ROOFING:** MBCI; **METAL DOORS AND FRAMES:** Ceco Door Products; **WOOD AND PLASTIC DOORS AND FRAMES:** Graham Wood Doors; **ENTRANCES AND STOREFRONTS:** Kawneer; **UNIT SKYLIGHTS:** Naturalite; **COILING DOORS:** Cookson; **VINYL TILE:** Tarkett; **ACOUSTICAL CEILINGS:** Armstrong; **ATHLETIC WOOD FLOORING:** Robbins, Inc., Bio Cushion I; **PAINTS:** PPG; **SIGNAGE AND GRAPHICS:** A.R.K. Ramos, Best Signs; **LOCKERS:** Penco Products; **ATHLETIC EQUIPMENT:** Jaypro; **GRANDSTANDS AND BLEACHERS:** Hussey

A TOWN SQUARE FOR KIDS

by Dan Parker

PROJECT Dawson Elementary School, Corpus Christi
CLIENT Corpus Christi ISD
ARCHITECT Richter Associates Architects, Inc.
CONTRACTOR Moorhouse Construction Co.
CONSULTANTS Callins, Haggard & Associates (MEP); Wilkerson Engineering (structural); Shiner, Moseley Associates (structural); Urban Engineering (civil)
PHOTOGRAPHER David R. Richter, FAIA

VISITING DAWSON ELEMENTARY SCHOOL IS, IN a sense, like strolling through the downtown of an older American city where life revolves around a town square and the feeling of community is strong.

In the school's center stands a broad, airy atrium—a public space surrounded by a compact collection of classrooms. Similar to storefronts surrounding a town square, the classroom windows allow students and teachers to see outside their classrooms and into the atrium. Also, like a town square, the atrium provides a place where students gather to conduct group activities and celebrate their achievements, posting their work on the walls for the rest of the school community to see.

"Either in the school or outside the school, one thing that's very important in this design is the sense of connectedness," says Elizabeth Chu Richter, half of the husband-and-wife team of Richter Associates Architects, Inc. in Corpus Christi. "When you are in the school and in a classroom, how you relate to the whole of the school and the other classes ... there is the feeling you are part of the school and not just in the room."

Lined with clerestory windows, the atrium is naturally lit. Sunlight passing through the atrium, which runs east to west, gives the building a welcoming transparency from the building's approaches. That solar orientation contributes to the sense of community.

"You kind of get the sense that this place is open," David Richter says. "You can look all the way through the building, all the way through the atrium, in one side and out the other. Without that (solar orientation), you can't very well have a space that is penetrated by natural light and therefore has good comfort and a sense of openness and inclusiveness."

While designing Dawson, the Richters looked to schools of a generation or more ago as prototypes that used a lot of natural light. Those older schools

often had windows in their classroom doors, so the architects planned for Dawson to have windows in its classroom doors. The benefit of such windows, David Richter says, is that they help everyone to be involved in and contribute to the school community.

"Teachers, principals and other people walking the hall deserve to see what is going on. It's a team effort to teach kids these days, and teachers shouldn't be too bashful about somebody looking in on them and seeing all the fun stuff going on," he says. "We're trying to create a more transparent classroom."

"When you go through a lot of other schools, you walk down the halls, and there are only doors into the classrooms," adds Elizabeth Chu Richter. "There is no sense of what is happening behind the walls. You can walk through the whole school and have no idea there is education, there is learning, there is activity behind those walls. But when you walk through (Dawson Elementary), you have that sense because of the windows. Even the interior ones in the kindergarten area and the atrium and outside. When you walk through ... you do sense there is a cohesiveness of activity in the school, the community sense, how each part is linked to the next, each group of students is linked to the others."

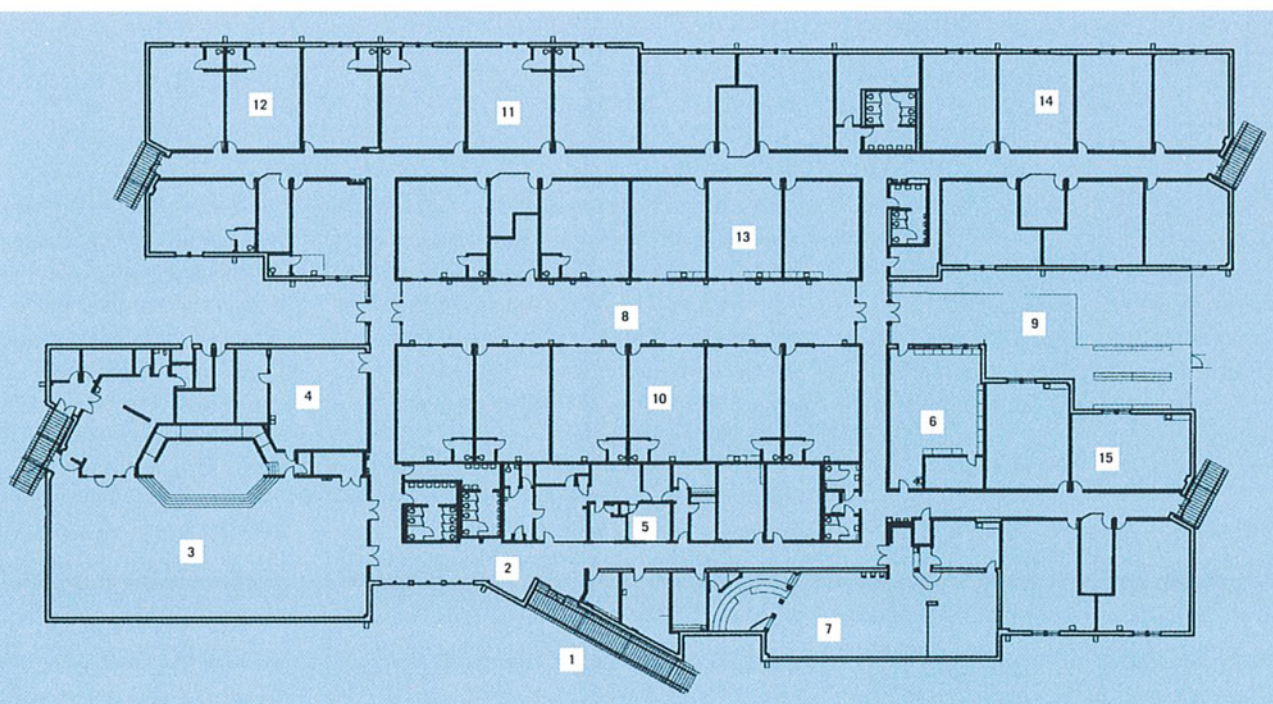
The school's exterior windows, which provide natural light from every vantage point in the building, ensure an unusually direct relationship with the larger community surrounding the campus. "One of the problems that exists in a lot of contemporary school design is the way they've become so internally focused," David Richter says. "You lose a connection with the outside."

The windows also provide visual references that give people a sense of direction, unlike in an opaque building where visitors can easily become disoriented after a few turns and unsure of how to find their way back to the front door. The opaque school building is an unfortunate byproduct of the concerns of school officials who demand new fortress-like buildings they believe are necessary to protect their schools against vandalism and maintenance woes. The desire to build fortresses often means a school will have fewer openings in its exterior walls, a design element that contributes to a visitor's sense of disorientation and to the school's occupants' sense of separation from the outlying community.

The Richters' design provides the windows which prevent those problems, but the number of windows is not great—it's the positioning of the windows that matters. The Richters decided they did not want to build any classrooms that did not have natural light, which is not an easy thing to do these days.

"Because of this atrium space," David Richter says, "we're able to take the old-fashioned school wing and stack it together and get the benefits of the modern, more enclosed design—but with the orientation and the natural light of the old-fashioned school design where you have these wings that always keep you connected to the exterior." In some new schools, resource rooms tend to be embedded deep within the building where they are out of sight of hallway walkers, but Dawson's resource rooms are located amid clusters of classrooms and adjacent to corridors. Reinforcing the overall sense of commu-

FLOOR PLAN
1 ENTRY
2 FOYER
3 CAFETORIUM
4 MUSIC
5 ADMINISTRATION
6 ART
7 LIBRARY
8 ATRIUM
9 OUTDOOR PROJECT AREA
10 KINDERGARTEN
11 FIRST GRADE
12 SECOND GRADE
13 THIRD GRADE
14 FOURTH GRADE
15 FIFTH GRADE



nity, the resource rooms are positioned so that students and teachers can see into these spaces through the windows in their classroom doors. Classroom doors are clustered together, close to resource rooms, adding to the effect.

Residents of neighborhoods surrounding the Dawson campus can easily become part of the school's community. After-school activities may be held in the cafetorium and the library, each of which have entrances opening into the school's reception area and which are easily visible when a visitor first enters the building.

In addition, the school's very "look" becomes part of the educational process for students. "Much of architecture today is sort of hidden beneath the walls," David Richter says. "You see paint and Sheetrock, and it doesn't give you much insight as to what's in there. And so, it doesn't much portray itself. The carpet on the floor doesn't tell you much about the floor, and then there is the suspended ceiling. So you're enclosed by all these sort of fake finish materials, and the real stuff is hidden from view. We felt like if kids are going to be in a dynamic learning environment, rather than painting Crayolas on the wall and doing cute supergraphics, we wanted to create what we thought was a stimulating environment with the real thing. And so we picked materials we thought would be very durable, like brick and tile, and used them in a kind of creative way."

For example, green tile on lower portions of exterior walls mimics a hedge, and kids can get a sense that brick can be a fired-clay color, or it can have a glaze. Also, some concrete blocks were left unpainted and steel support structures left exposed. "So, an observant kid – which some kids are – can walk through a building like this and literally construct the building in his head," David Richter says. "They know how it's built, and they know what kinds of materials it uses, and they kind of know what holds the roof up."

Dan Parker is a reporter for the Corpus Christi *Caller-Times*.

RESOURCES CONCRETE: Alamo Concrete Products Ltd.; MASONRY UNITS: Featherlite; MASONRY VENEER ASSEMBLIES: Elgin-Butler; METAL MATERIALS AND DECKING: Western Steel; LAMINATES: Timber Caswork Manufacturing Co., Inc.; WATERPROOFING AND DAMPPROOFING: Gulf States Asphalt Co., Inc.; BUILDING INSULATION: Dow Chemical; MEMBRANE ROOFING: Schuller Roofing Systems; ROOF ACCESSORIES: Bilco Company; METAL DOORS AND FRAMES: Curries/Essex; WOOD AND PLASTIC DOORS AND FRAMES: Graham/Essex; ENTRANCES AND STOREFRONTS: VistaWall; METAL WINDOWS: Alenco; GLASS: Pilkington; ACOUSTICAL CEILINGS: Celotex Building Products; ACOUSTICAL TREATMENTS: Essi Acoustical Products; PAINTS: Devoe Paint; LETTERS AND PLAQUES: Corpus Christi Stamp Works; SIGNAGE AND GRAPHICS: Corpus Christi Stamp Works; METAL BUILDING SYSTEMS: Red Dot Corporation

(left) Exterior windows create a visual connection between the school's occupants and the surrounding community, as well as provide classrooms and other spaces with abundant natural light. (right) Brick and tile are among the durable materials the architects employed to enliven the interiors.

Academic Village

by Rebecca Boles

PROJECT Renner Middle School, Plano
CLIENT Plano ISD
ARCHITECT Corgan Associates, Inc.
CONTRACTOR Douglas E. Barnhart, Inc.
CONSULTANTS L.A. Fuess Partners (structural); S. Toub & Associates, Inc. (MEP); Brockette Davis Drake, Inc. (civil); SMR (landscape); Amtech Roofing Consultants, Inc. (roofing); Worrell Design Group (kitchen consultant); Wrightson, Johnson, Haddon, & Williams (acoustical)
PHOTOGRAPHER Craig Blackmon

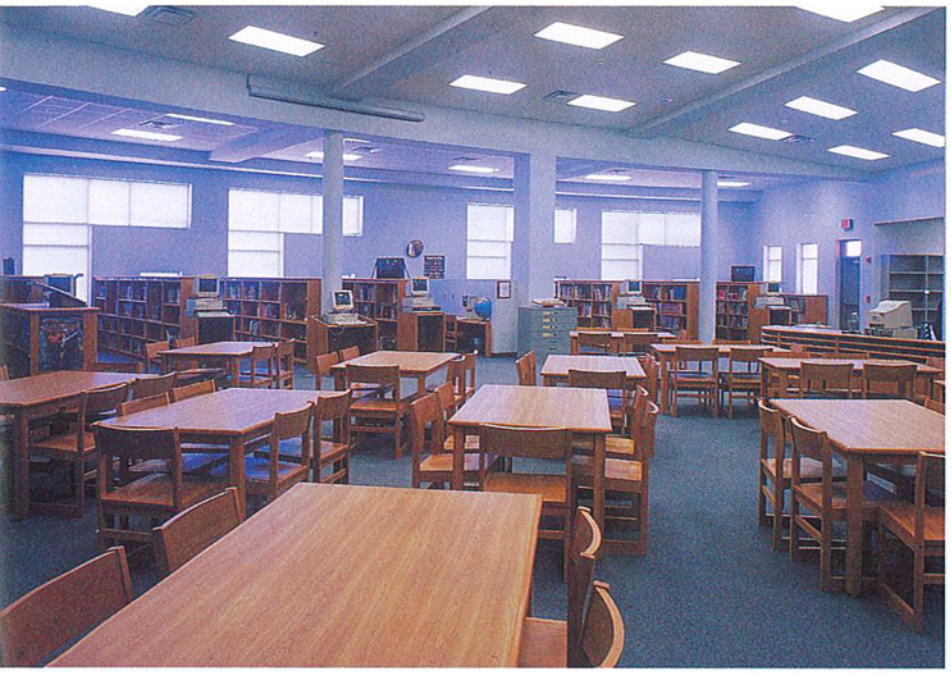
LOCATED IN THE MIDST OF PLANO'S REPETITIVE housing developments, Renner Middle School has kept suburbia at bay since opening during the 1998-1999 school year. Designed by Corgan Associates, the building exterior is reserved, but the heart of this academic village is found in the interior of this unified building. Anchored by a tall, metal-clad, cylindrical rotunda, the balance of the building works outward from the center.

The village metaphor is appropriate for this school. The corridors are the streets running through the building fabric of classrooms. The elective areas are the cultural centers, and the rotunda houses the town hall, which includes the administrative offices, library, cafeteria, and auditorium.

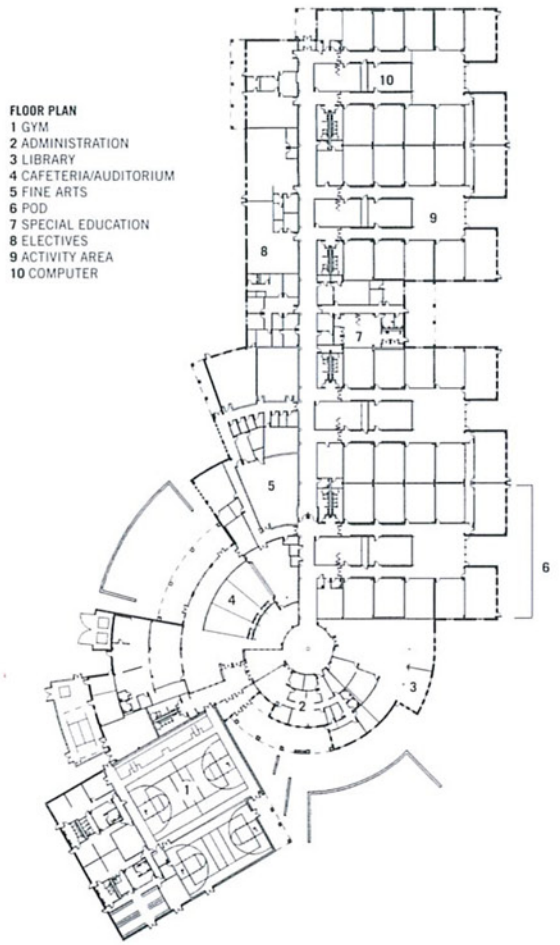
The concept of academic teaming has been in operation within the Plano Independent School District since the inception of Renner, and its principles are strongly evident in the plan. Sixth-, seventh-, and eighth-grade students are divided into academic teams of approximately 130 students. Within each academic team, students move between adjacent classrooms for instruction in the five core classes of English, reading, math, social studies, and science. This configuration is the repeated organizational unit of the school. One "pod" is formed from two sets of core classrooms and an open activity center for group gatherings. Collectively, Renner Middle School is composed of four pods. The color-coded pods are arranged along one side of a linear corridor opposite the elective classes of choir, band, orchestra, speech and drama, art, and home studies.

The school has a lively corridor that links the administrative town center to the pods. Along the main corridor, triangular planes cut across the hall to mark the entry to the pods—painted either blue, red, yellow, or green to mark their location. The color-coded corridor is the main directional device in the school. A directive such as "All students report to the blue pod activity center for a special science presentation" simplifies announcements.

The architecture of Renner Middle School strengthens the academic teaming environment and the teachers are enthusiastic advocates of the classroom organization. Since each pod is dedicated to one grade level, the students are in the company of their peers, and the teaching teams are better able to observe the progress of their students. In daily team meetings, teachers discuss student performance and opportunities for collaborative projects and assignments that unite the various core classes.



(opposite page) A metal crown set atop the central building, the cylindrical rotunda is the most salient feature of the school. (this page, top) Among the spaces housed inside the central building is the multimedia center, as well as the cafetorium and administrative offices. (this page, bottom) Steel trellis shades the entrances to the cafetorium. The courtyard offers students a place to congregate before school and is available for use as an outdoor theater for neighborhood residents.



The design provided computer accessibility throughout the school. Each classroom contains one computer for the teacher and eight shared computers for the students. In addition, each pod has a dedicated computer room.

Renner Middle School is reminiscent of a small town elementary school while satisfying the functional requirements of today's public schools. Security is an important concern: unrestricted access is limited to peak times, and the exterior entry doors are secured via keypad control for the majority of the day; cameras and motion detectors continuously monitor exterior doors and hallways; and administrative offices are located to maintain visual control over the main entry and the main corridors.

The exterior is straightforward, with changing roof forms lending exterior prominence to important interior spaces. The main roof continuously slopes to provide clerestory lighting along the main street circulation. Gabled roofs mark the location of the four group activity areas.

The solidity of the architecture has well withstood the energies of its eleven-, twelve-, and thirteen-year-old users and the adaptability of the planning continues to meet academic objectives. Renner Middle School is continuing to find ways to enliven their facility, with a mural for the town hall rotunda scheduled to be completed early in 2001. Inside, the academic village continues to evolve and progress, not unlike the city of Plano outside.

Rebecca Boles is an architect practicing in Fort Worth.

RESOURCES CONCRETE PAVEMENT: TXI; MASONRY UNITS: Eureka Brick Co., Summit Brick Co.; LAMINATES: WilsonArt; WATERPROOFING AND DAMPPROOFING: Sonneborn Hydrocide; BUILDING INSULATION: Celban Spray-on Systems; METAL ROOFING: Berridge; FASCIA AND SOFFIT PANELS: Berridge; METAL DOORS AND FRAMES: PW Metal Products Co.; WOOD AND PLASTIC DOORS AND FRAMES: AWI Custom (VT Industries, supplier); ENTRANCES AND STOREFRONTS: Kawneer; ALUMINUM WINDOWS: Alenco; All Seasons Commercial; GYPSUM BOARD FRAMING AND ACCESSORIES: Georgia Pacific; GYPSUM FABRICATIONS: GoldBond Gypsum Wallboard; TILE: Dal-Tile; TERRAZZO: American Terrazzo; ACOUSTICAL CEILINGS: U.S.G. Interiors; VINYL COMPOSITE TILE: Armstrong; ACOUSTICAL WALL TREATMENTS: Wall Technology; PAINTS: Sherwin Williams; OPERABLE PARTITIONS: Panelfold; PRE-MANUFACTURED MUSIC PRACTICE ROOMS: Wenger; GRANDSTANDS AND BLEACHERS: Interkal

Planning for the Future

by Barbara Koerble

PROJECT Carroll Junior High School, Southlake
CLIENT Carroll ISD
ARCHITECT VLK Architects
CONTRACTOR Buford-Thompson Company
CONSULTANTS Metro Structural Consultants (structural); Wells Doak Engineers, Inc. (M.E.P.); Cheatham and Associates (civil); Schrickel, Rollins & Associates, Inc. (landscape/athletic facilities); H.G. Rice (food service)
PHOTOGRAPHER Craig Kuhner

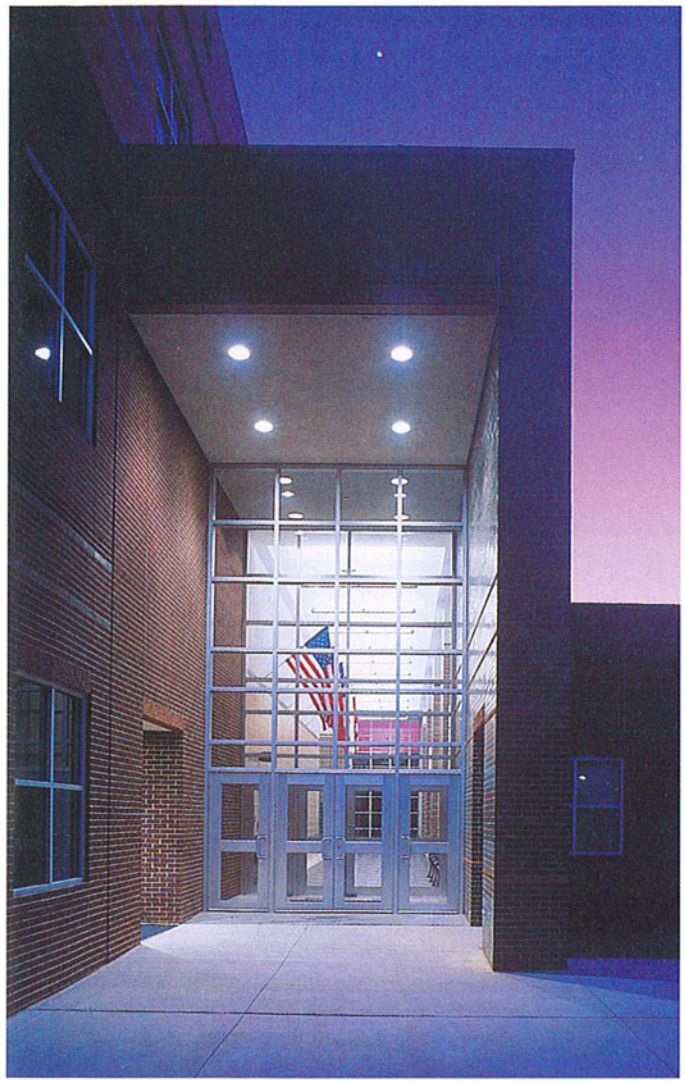
CARROLL JUNIOR HIGH SCHOOL IS EMBLEMATIC of the demands placed on school districts in a state with a burgeoning school-age population. Carroll Independent School District had been growing at a rate of 600 students per year, so master planning for future expansion was a primary consideration in the school's design. The junior high school, designed by VLK Architects, received a 1999 Merit Award from AIA Fort Worth. The school was designed for 1,400 students but can be expanded to accommodate 2,000 students. In anticipation of demographic changes, the junior high school which currently serves seventh to ninth grades, by 2002 will house ninth and tenth grades. By 2004, this facility will become a high school and will be expanded to serve ninth to twelfth grades.

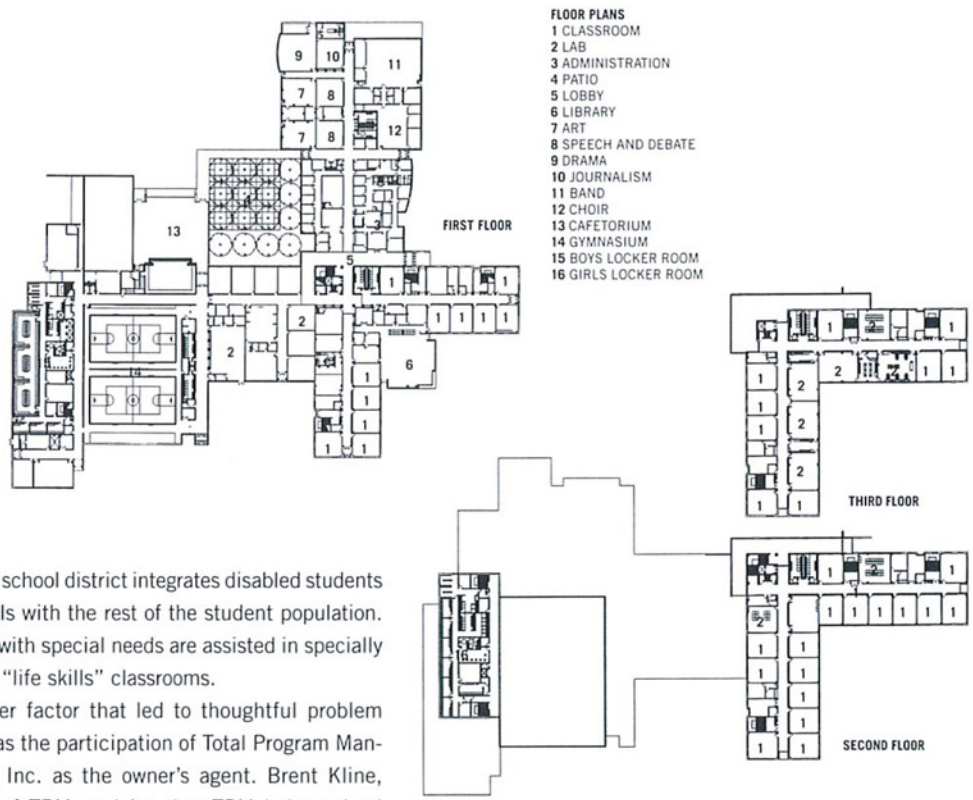
Maximum flexibility is provided by a cross axial plan which will permit classroom extensions at the end of each arm. Important facility services such as the gymnasium, library, and cafetorium also are positioned for easy future expansion. The juncture of the cross axis is a convenient location for a hall monitor to keep a watchful eye on four different hallways. For additional security, restrooms have open switchback entrances.

The initial plan was flipped early in the design process to preserve mature trees on the eastern side of the site, a move made in deference to the City of Southlake's strict ordinance requiring replacement of all trees removed from a development site. The plan also had to accommodate a thirty-five-foot drop in grade, and French drains were installed to control the water saturation level in the higher ground. Southlake also has stringent restrictions on site lines from adjacent residential development, and this limited the height of the school buildings and their placement on the site. The site plan also included an eight-lane all-weather track and baseball, softball, and practice football fields. The next expansion phase will include a new competition gym with 1,800 to 2,000 seats, a field house with an indoor workout facility, and an 800-seat auditorium.

(above) The door to the cafetorium opens onto a patio. Seen in the background, tall windows illuminate the school's main lobby. (opposite page, left) Green brick defines the main entrance, a two-story hall which connects the academic area to the complexes containing athletic and fine-arts spaces. (opposite page, right) A stage is currently configured as part of the dining facility, but plans for future expansion include construction of an 800-seat auditorium.

The modernist exterior profile of the school is enlivened with bands of rock-faced and green glazed brick. Slightly recessed sections of the wall's brick cladding provide further subtle articulation. The building's volumetric form expresses its program. A three-story L-shaped classroom block Contains two floors of classrooms toped with a third level dedicated to science labs. The main entrance and circulation core is a two-story volume encased in green





glazed brick and daylit by a row of clerestory windows. The one-and-a-half-story library block has an extruded aluminum *brise-soleil* to shade its eastern and southern exposures.

For acoustical reasons, the band/choir rooms and the gymnasium/locker rooms are positioned at the ends of separate wings. The fine arts wing is well equipped. The journalism classroom has an adjacent ten-station darkroom, the art rooms have kilns and a computer graphics work station, and the drama room has a black-box area to imitate a stage set and double doors for easy prop movement. The band and choir rooms are sound-proof, acoustically enhanced, and connected with a shared sheet-music storage area.

All teachers' stations in the "smart" classrooms are equipped with computers, VCRs, and monitors which are wired for cable television. A typical classroom seats twenty-eight to thirty-two students, and has six computer stations. Classrooms for science are located across the hall from the labs. Separate workrooms for teachers are located in each classroom wing to provide teachers quiet places for grading and lesson planning. Of particular interest is the manner in which the school district integrates disabled students at all levels with the rest of the student population. Students with special needs are assisted in specially equipped "life skills" classrooms.

Another factor that led to thoughtful problem solving was the participation of Total Program Management, Inc. as the owner's agent. Brent Kline, principal of TPM explains that TPM helps school districts with their planning & programming of bond elections, usually working eight to ten years in advance. Planning so far ahead can save tax dollars and can help school districts better manage growth. For example, in 1986, because of escalating land prices, the Carroll ISD bought all the land they would need for build-out. The programming of Carroll Junior High School was a team effort of the district staff, VLK, and TPM. The budget for the 199,000-square-foot facility, all-inclusive with site preparation, was $20 million.

Barbara Koerble is a contributing editor for *Texas Architect.*

RESOURCES **ATHLETIC AND RECREATIONAL SURFACING:** Track Masters, Inc.; **MASONRY UNITS:** Boral Brick, Tri-State; **GLAZED BRICK:** Glen-Gery Corp.; **RAILINGS AND HANDRAILS:** Livers Bronze Co., Inc.; **LAMINATES:** WilsonArt; **WOOD DOORS:** VT Industries; **PULLS:** HEWI; **LATH AND PLASTER:** Lone Star Stucco, Fry Reglet, AMICO; **QUARRY TILE:** Summitville Tile, Inc.; **CERAMIC TILE:** Dal-Tile; **PORCELAIN TILE:** Crossville Ceramics; **ATHLETIC WOOD FLOORING:** Maine Mountain Maple; **WALL COVERINGS:** Lentex; **CARPET:** Collins & Aikman; **ACOUSTICAL WALL TREATMENTS:** Guilford of Maine; **PAINTS:** Sherwin Williams; **GROUT:** Custom Building Products; **VINYL COMPOSITION TILE:** Armstrong; **RUBBER FLOORING:** Johnsonite; **LETTERS AND PLAQUES:** A.R.K. Ramos; **SIGNAGE AND GRAPHICS:** Bunting; **METAL LOCKERS:** List Industries; **TOILET COMPARTMENTS:** AMPCO; **EXTERIOR SUN CONTROL DEVICES:** Construction Specialties; **CHALKBOARDS:** Texas Chalkboard; **LABORATORY CASEWORK:** LSI; **TELESCOPING BLEACHERS:** Interkal; **GRANDSTANDS AND BLEACHERS:** Southern Bleacher Company; **SPECIALTY LIGHT FIXTURES:** Linear Lighting Corp.; **ELEVATOR:** Otis Elevator

Campus and Identity

by Willis Winters

(opposite page) Raised clerestories at the Levy Middle School mark assembly areas for each grade. (above) Three chimneys on Lake/Flato's administration building denote the visual centerpoint of Greenhill's south-oriented campus.

PROJECT Addition to Greenhill School, Dallas
CLIENT Greenhill School
ARCHITECT Lake/Flato Architects
CONTRACTOR Hisaw & Associates
CONSULTANTS Raymond L. Goodson Jr. Inc. (structural); Basharkah Engineering, Inc. (MEP); Pacheco Kock Consulting Engineers (civil); Alan Fujimori (landscape); Archillume Lighting Design, Inc. (lighting); Pelton Marsh Kinsella (accoustical)
PHOTOGRAPHER Paul Hester

DESPITE ITS POSITION NEAR THE TOP OF THE Dallas educational register, Greenhill School has, in the past, suffered from a minor identity crisis. While its private school rivals benefited from highly visible sites scattered across the north Dallas landscape, Greenhill was saddled with an awkward location between Addison and Farmers Branch, one block removed from a major thoroughfare. Burdened by this geographic handicap, Greenhill endured years of visual obscurity. Furthermore, the school's campus plan lacked both spatial focus and architectural distinction. By 1993 – Greenhill's forty-third year – the time had come to call in the troops.

The following year, Lake/Flato Architects of San Antonio, in their first Dallas commission, teamed with Hidell Associates to craft a finely honed master plan for the Greenhill campus. Then, between 1995 and 1998, the two firms (with Lake/Flato as design architect and Hidell as architect of record) collaborated on the execution of this master plan in two separate phases, adding four new buildings comprising a hefty 101,000 square feet of administrative, educational, and athletic space. With the physical re-development of Greenhill now essentially complete (only a replacement fine arts facility remains to be added to the 1994 master plan), the school has admirably achieved two critical goals—an impressive panorama of new buildings oriented toward the site's southern entry, and the coalescence of a more homogenous campus distinguished by architectural character and ingenuity.

In the existing Greenhill campus, Lake/Flato Architects encountered a loose assortment of buildings that established the contextual foundation which would be rigorously pursued in the master plan. The Greenhill commission also afforded the firm's two founding principals, David Lake and Ted Flato, the opportunity to confront the work of their mentor—O'Neil Ford, who was responsible for five buildings on the campus dating back to 1963. While taking cues from the older structures designed by Ford and others, Lake/Flato eschewed their somewhat laconic,

(above) The second-phase gymnasium and canopied alumni lounge overlook the endzone of the adjacent football field. (opposite page) In their 1994 master plan for Greenhill School, Lake/Flato deftly inserted four new buildings to establish a new system of campus circulation and open space.

utilitarian nature in favor of a more robust vocabulary of building forms and architectural details. At the same time, the architects established the school's current circulation and spatial infrastructure by creating a series of exterior courtyards set along a meandering path that transects the campus along its north-south axis.

The hierarchical progression of exterior spaces is initiated at the administration building, which, together with the Levy Middle School, was completed in 1995 as the master plan's first and most critical phase. Both of these buildings were deftly inserted into the existing campus fabric – like two pieces in a jigsaw puzzle – and engaged nearby structures to form no fewer than three exterior courtyard spaces where none previously existed. The largest of these spaces is the new heart of the Greenhill campus—a well-defined, heavily landscaped "commons" anchored on the south and west by Lake/Flato's middle school, on the north by several O'Neil Ford and Arch Swank buildings, and on the east by William Hidell's upper school. The permeable boundary established by these surrounding buildings is further softened through the generous use of covered arcades.

In addition to its decisive role as the anchor of Greenhill's figure-ground plan, the Levy Middle School building also serves to mitigate the problematic scale of the neighboring athletic complex with the decidedly low-profile campus to the east. At the center of the middle school is a tall octagonal volume with a distinctive pyramid-like roof topped by a clerestory lantern. Projecting wings feature symmetrical shed roof forms beneath linear raised clerestories which act as visual cues to the bowed roof of the adjacent gymnasium. These elements are familiar components of Lake/Flato's highly refined architectural vocabulary, recalling similar forms and devices in the firm's previous work, including small-scale ranch houses in Hebbronville, Canyon Lake, Cotulla, and Marble Falls, as well as a private residence and a branch library in San Antonio. Standing-seam metal roofs with deep overhangs, sun louvers, covered arcades, and softly hued masonry walls with horizontal stripes – lesser elements of the typical Lake/Flato palette – are also abundantly present in the middle school. In a campus with strong spiritual ties to the contextual vernacular work of O'Neil Ford, the Levy Middle School building fits in comfortably.

The administration building fulfills a similar role in establishing this vernacular *parti*, albeit on a more practical (but less inventive) level than other components of Lake/Flato's master plan. Three simple gabled volumes, each terminated by a tall brick chimney and covered arcade, are slightly staggered in plan to funnel visitors toward the principal pedestrian entry (otherwise unmarked) into the campus. The chimneys also denote the visual centerpoint of Greenhill's southern prospect, efficiently balancing the scale of this small building against the imposing

bulk of the second-phase gymnasium farther to the west. If the middle school acts as a linchpin that unifies circulation and open space at the center of the campus, the administration building performs a complementary function as the portal to this series of surprisingly rhapsodic pedestrian experiences.

Anchoring the Greenhill campus cluster on its western edge is the Phillips Family Athletic Center, completed in 1998 as the second component of the Lake/Flato master plan. Consisting of a competition gymnasium and a natatorium appended to two sides of a renovated field house, the complex (at first glance) threatens to overwhelm the one-story academic buildings to the east. The gymnasium, in particular, is the main culprit—its height magnified by the decision to stack the gym on top of an entire level of support space. While this gesture provided convenient locker room and maintenance access to the nearby playing fields, it also presented the architects with a dilemma regarding the heightened scale of the building—a problem imaginatively solved in several ways. For example, the volume of the gymnasium is differentiated from its lower support level through contrasting materials. The brick-clad gym comfortably rests upon a cast-in-place concrete base, above which extend concrete columns in the same plane as the lower walls. These exposed columns "buttress" the gymnasium volume, which is crowned by a bow-shaped roof with extended sun screens running the length of each side. These shading devices, in turn, are supported by diagonal steel struts springing from the top of the buttress columns. This lively combination of materials, surface modulation, and exposed structure – together with the interplay of light and shadow – successfully reduces the apparent scale of the gymnasium and firmly anchors it in the Greenhill landscape.

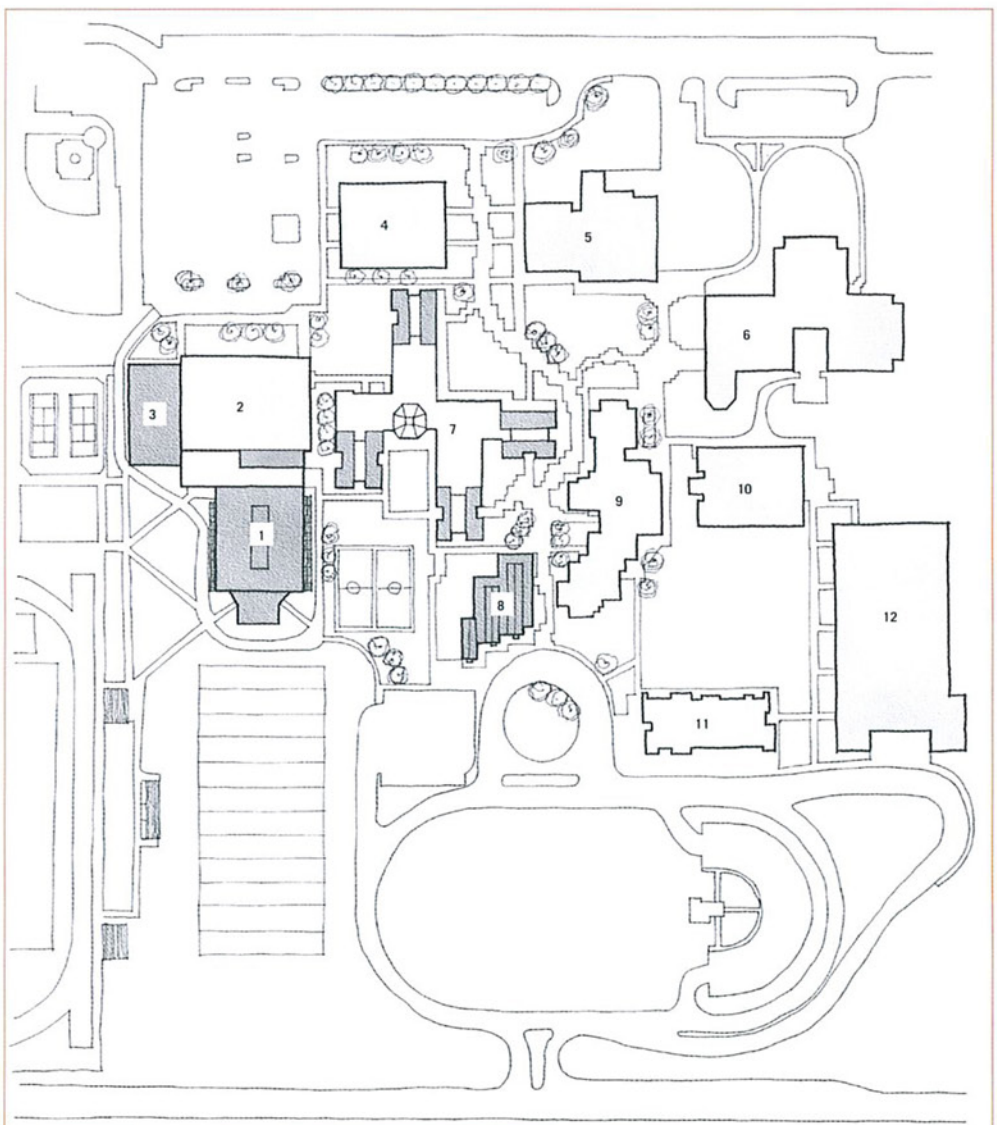
A more singularly dramatic gesture occurs on the gymnasium's south facade, where a shed roof and cascading steps extend outward to encapsulate a glass-enclosed alumni lounge overlooking the end zone of the nearby football stadium. In the city where the luxury skybox was invented, this manifestation at the high school level is a resourceful solution that addresses the programmatic, aesthetic, and symbolic needs of the Greenhill campus.

The final component of the Greenhill master plan is the natatorium, positioned to the west and rear of the gymnasium in a location that fosters its neutral, utilitarian aesthetic. While it employs similar materials and forms to those found on the gymnasium, the natatorium suffers from an unfocused approach to exterior detailing. Sun screens and support struts employed on both the middle school and administration buildings are incorporated here in an effort to maintain visual continuity with these first-phase components of the master plan, yet they seem misapplied and out of character with the scale of the building. A little less exuberance would have been in order.

Without a doubt, Greenhill School is a better place now than it was six years ago. It enjoys a significant new public identity and (more importantly) survives as a campus that nurtures a profound sense of community. By creating thoughtful buildings with a sensitivity toward context, craft, and climate, the architects have endowed Greenhill with a significant new architectural legacy.

Willis Winters is a contributing editor for *Texas Architect.*

RESOURCES CONCRETE PAVEMENT: Texas Industries; UNIT PAVERS: St Joe Brickworks; FOUNTAINS, POOLS, AND WATER DISPLAYS: Paddock Pools; CONCRETE MATERIALS: Texas Industries; METAL MATERIALS: Metroplex Fabrications; METAL DECKING: Vulcraft (Metroplex Fabrication, supplier); RAILINGS AND HANDRAILS: Metroplex Fabrication; GLUED-LAMINATED TIMBER: Unit Structures; ARCHITECTURAL WOODWORK: Jzac, Inc.; LAMINATES: Formica; BUILDING INSULATION: Dow Corning; MEMBRANE ROOFING: TAMKO; METAL ROOFING: MBCI, Inc. ; ROOF ACCESSORIES: Bilco; METAL DOORS AND FRAMES: PW Products (Piper Weatherford, supplier); WOOD AND PLASTIC DOORS AND FRAMES: Buell Doors (Total Openings, supplier); ENTRANCE AND STOREFRONTS: Vistawall; UNIT SKYLIGHTS: Major Industries; GLASS: PPG; GLAZED CURTAINWALL: Vistawall; GYPSUM BOARD FRAMING AND ACCESSORIES: USG; TILE: Dal-Tile; ACOUSTICAL CEILINGS: Armstrong; WOOD CEILINGS: Jzac, Inc., supplier; ATHLETIC WOOD FLOORING: Robbins, Inc.; PAINTS: Sherwin Williams; KITCHEN AND BATH CABINETS: Jzac, Inc.; GRANDSTANDS AND BLEACHERS: J.L. Hammond



SITE PLAN
1 GYMNASIUM
2 EXISTING FIELDHOUSE
3 NATATORIUM
4 EXISTING SCIENCE
5 EXISTING CAFETERIA
6 EXISTING UPPER SCHOOL
7 MIDDLE SCHOOL
8 ADMINISTRATION
9 EXISTING FINE ARTS
10 EXISTING LIBRARY
11 EXISTING PRESCHOOL
12 EXISTING LOWER SCHOOL

2000 School Architecture Awards

In this issue's portfolio, *Texas Architect* presents a selection of winning projects from the 2000 School Architecture awards, sponsored by TASA/TASB. The full list of winners follows.

Caudill Award

Ronald Reagan High School,North East ISD, Pfluger Associate Architects, O'Neill Conrad Oppelt Inc.-Associate Architects
Birdville High School, Birdville ISD, SHW Group, Inc.

Educational Appropriateness Award

Denton Creek Elementary School, Coppell ISD, SHW Group, Inc.
Harvey Mitchell Elementary School, Bryan ISD, SBWV Architects, Inc.

Value Award

John B. Connally High School, Pflugerville ISD, SHW Group, Inc.
Stony Point High School, Round Rock ISD, BLGY, Inc.
Joe M. Pirtle Elementary School, Belton ISD, BLGY, Inc.
League City Intermediate School, Clear Creek ISD, PBK Architects, Inc.
Manor High School, Manor ISD, BLGY, Inc.
Clifton High School, Clifton ISD, Claycomb Associates
The Village Elementary School, Georgetown ISD, Booher/McGee & Associates
Frisco Administration Building, Friso ISD, Corgan Associates, Inc.

Design Award

Denton Creek Elementary School, Coppell ISD, SHW Group, Inc.
John B. Connally High School, Pflugerville ISD, SHW Group, Inc.
Round Rock Performing Arts Center, Round Rock ISD, Pfluger Associates Architects
Stony Point High School, Round Rock ISD, BLGY, Inc
League City Intermediate School, Clear Creek ISD, PBK Architects, Inc.
Cinco Ranch High School, Katy ISD, PBK Architects, Inc
Kingwood College, North Harris Montgomery College District, Joiner Partnership, Inc.
Calhoun Middle School, Denton ISD, VLK/Architects
Pasadena High School, Pasadena ISD, Bay Architects

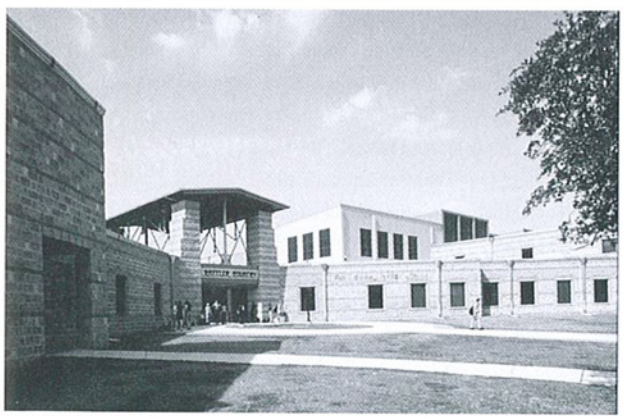
Innovation Award

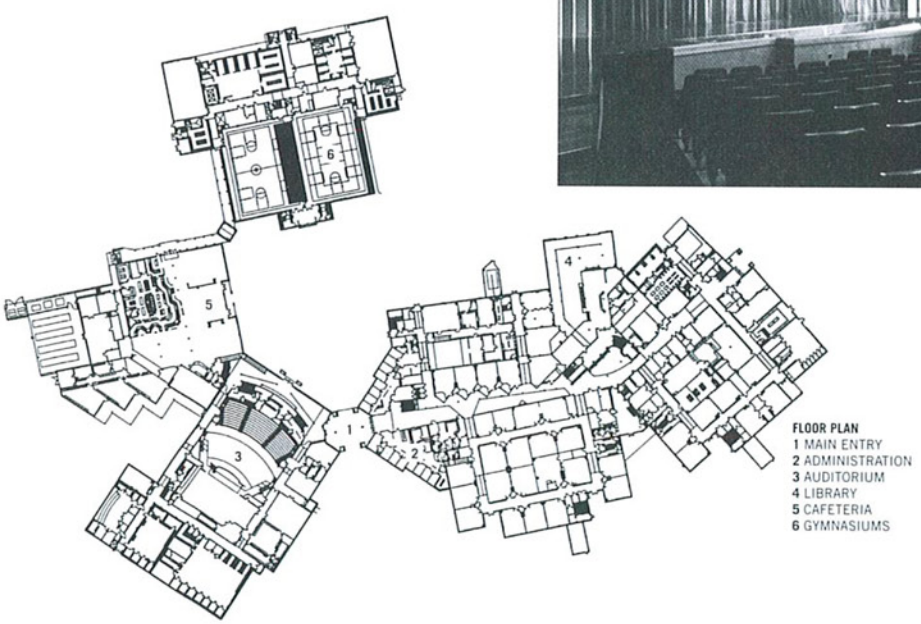
Birdville ISD Fine Arts/Athlectics Complex, Birdville ISD, SHW Group, Inc.
Pasadena High School, Pasadena ISD, Bay Architects

Process of Planning Award

Hightower Elementary School, Plano ISD, SHW Group
Terrell Elementary School, Denison ISD, HLM Design

Ronald Reagan High School





FLOOR PLAN
1 MAIN ENTRY
2 ADMINISTRATION
3 AUDITORIUM
4 LIBRARY
5 CAFETERIA
6 GYMNASIUMS

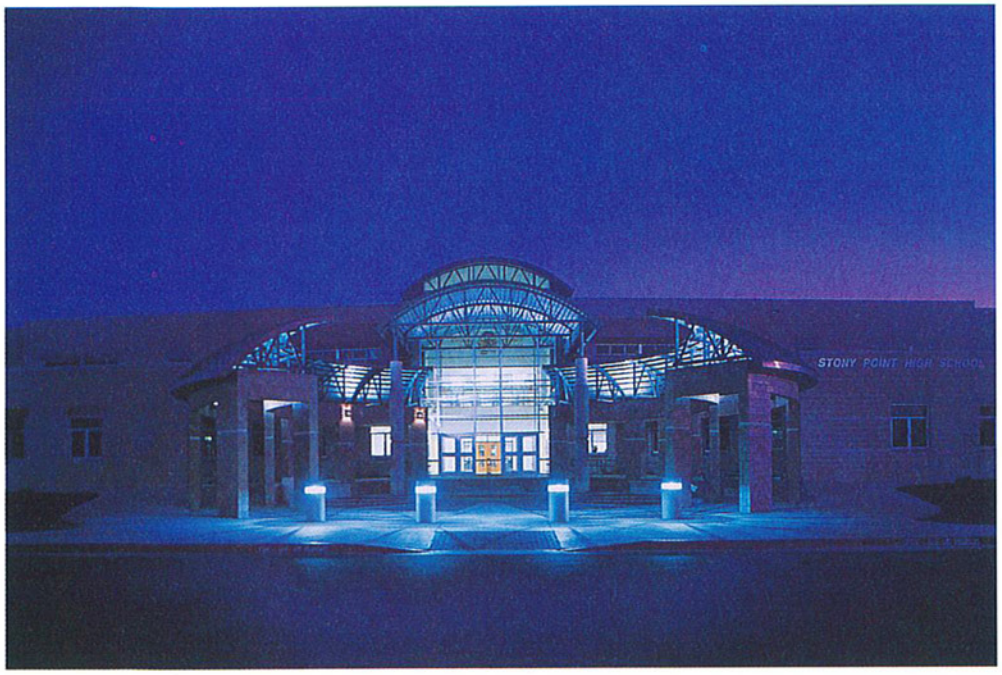
PROJECT Ronald Reagan High School, San Antonio
CLIENT North East Independent School District
ARCHITECT Pfluger Associates Architects, P.L.L.C., O'Neill Conrad Oppelt, Inc.
CONTRACTOR Spaw-Glass Contractors, Inc.
CONSULTANTS Pape-Dawson (civil); Danysh & Associates (structural); HMG & Associates (MEP); The Kent Chatagnier Company (roofing); Boner Associates (acoustical); Robert Simpson & Associates (food service)
PHOTOGRAPHER Richard W. Payne, FAIA

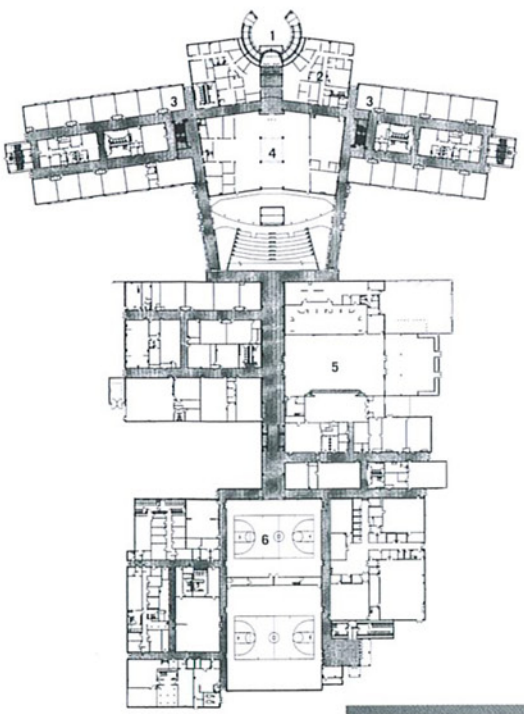
Caudill Award Winner

The facility is one of the first new major high schools in Texas to creatively combine inexpensive, low-maintenance, indigenous materials with sustainable, energy-efficient features. To cut costs and minimize the use of manufactured materials, structural systems were left exposed. As a result, the interiors and exteriors feature the design elements of the structure, not layers of finishes. (top) Concrete columns and beams were rubbed, sealed, and exposed. Steel column capitals and struts were painted a subdued green as a reference to the oak trees outside. (The site is part of an eighty-three-acre nature preserve.) Also, acoustical galvanized metal roof decks and HVAC ductwork were exposed in public areas. (center left) Primarily for reasons relating to site layout, code compliance, and economy, the school was divided into three major building components— a learning center, a physical education building, and a fine arts facility. The three buildings are arranged around a large outdoor commons area that takes advantage of some of the site's best trees. The entrance portal to the school serves two major purposes: as entry for students during school hours and as an after-hours entrance for the public attending events in the gymnasium, auditorium, and cafeteria. (center right) In the auditorium, by exposing the structural roof between the acoustical clouds fabricated from dry-wall materials, the designers were able to reduce costs by not having to fire-treat exposed structural roof systems.

RESOURCES FLOORING: Mannington; PHYSICAL-EDUCATION FLOORING: Robbins; CERAMIC TILE: Dal-Tile; STAINED CONCRETE FLOORING: L.M. Scofield; BRICK/MASONRY: Featherlite; CABINETS: Woodarts; CEILINGS: Armstrong; DOORS: Tex-Steel, VT Industries; ELEVATORS: Dover; INSULATION: Owens Corning; MOVABLE PARTITIONS/WALLS: Modernfold; TOILET PARTITIONS: Santana; PAINT: Sherwin Williams; ROOFING: Carlisle; WINDOWS: Alenco (All Seasons Commercial); LIGHTING: Lithonia; FIRE/LIFE-SAFETY SYSTEMS: EST; AUDITORIUM/ASSEMBLY: Irwin Seating; SCIENCE LAB EQUIPMENT: Kewaunee; PHOTO LAB EQUIPMENT: Kreolab; THEATRICAL EQUIPMENT: Texas Scenic Company; ACOUSTICAL DOORS: Overly; SOUND MODULES: Wenger; WASHROOM ACCESSORIES: Bobrick; WASHROOM FIXTURES: Bradley; WASHROOM/SHOWER PARTITIONS: Capitol Partition; ATHLETIC EQUIPMENT: Porter; BLEACHERS/GRANDSTANDS: Hussey; COMMUNICATIONS SYSTEMS: Dukane; CLOCKS/TIME MANAGEMENT: Dukane; ADA/COMPLIANCE EQUIPMENT: Garaventa; CHALKBOARDS: Best-Rite; LOCKERS: Republic Steel; MARKERBOARDS: Best-Rite; SIGNAGE: Metal Arts; WIRE MANAGEMENT: Wiremold

Stony Point High School





FLOOR PLAN
1 ENTRY
2 ADMINISTRATION
3 CLASSROOMS
4 LIBRARY
5 CAFETERIA
6 GYM

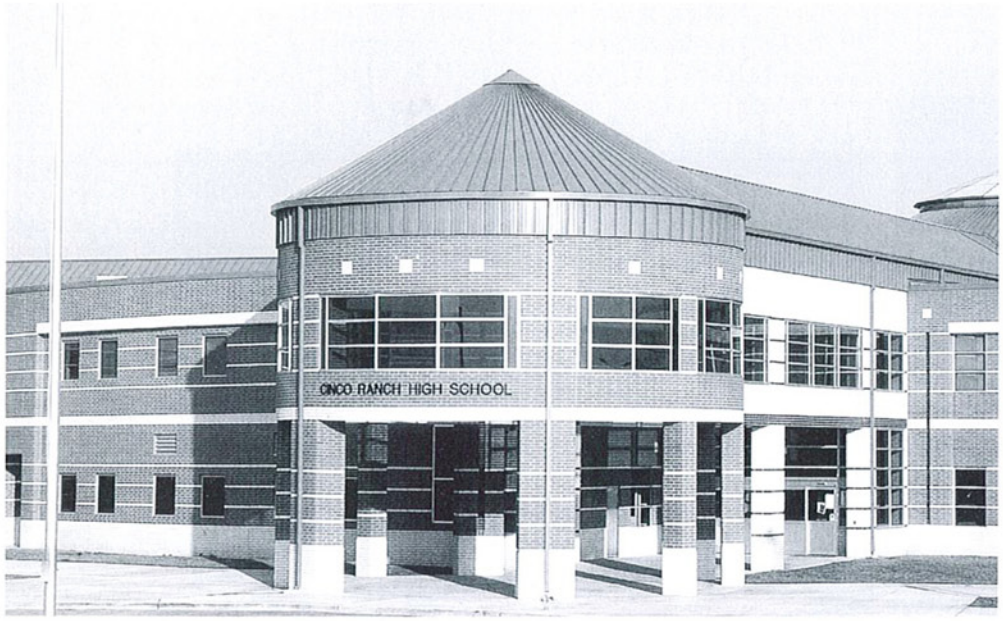
PROJECT Stony Point High School, Round Rock
CLIENT Round Rock Independent School District
ARCHITECT BLGY, Inc.
CONTRACTOR American Constructors, Inc.
CONSULTANTS Fisher Hagood, Inc. (civil); Datum Engineering, Inc. (structural); Hendrix Consulting Engineers (MEP); Alexander Boedy Associates (landscape)
PHOTOGRAPHER Greg Hursley

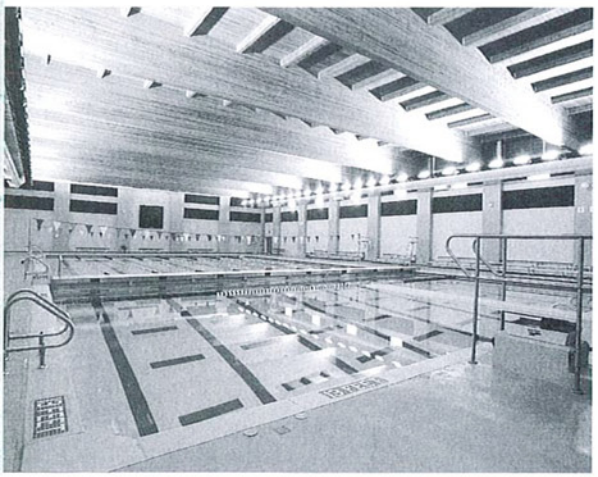
Value Award

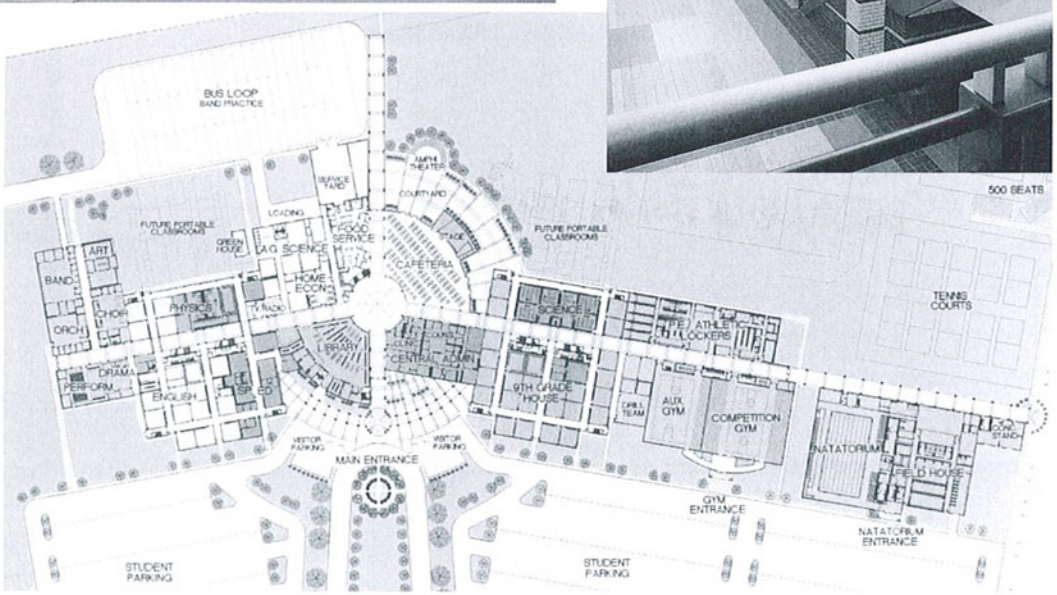
(top) Stony Point High School's main entrance appears to gesture with open arms to welcome visitors. The entrance's exposed barrel-vaulted roof trusses and glass wall of the main entrance reflect the influence of high-tech industries located in and around Round Rock. Core spaces such as the library, cafeteria, and locker rooms are designed for possible future expansion to keep up with the growing school district. Masterplanned for 3,200 students, capacity is currently 2,500. (center) Inside, natural light shines through clerestory windows to brighten corridors. Energy-efficient three-way fluorescent lights are used throughout the school to take advantage of the abundance of natural light available in most spaces. Vinyl composition tile in the school's colors create interesting patterns in the corridors and cafeteria. (bottom) A sloping site prompted the design of two separate buildings with different floor elevations. A courtyard is located between the north and south buildings, and enclosed bridges along each edge of the courtyard connect the two buildings. The courtyard is a popular gathering place for students and staff. The two-story north building consists of classroom wings to the east and west with the media center in the middle. The south building is organized along a wide circulation mall that begins at the courtyard and extends to a glass-block window looking into the gym. The 333,000-square-foot school was bid in the last quarter of 1997 for a per-square-foot cost of $107 including site work, or $87 excluding site work.

RESOURCES FENCES, GATES, AND HARDWARE: Allied Tube & Conduit Fence Division; PRECAST ARCHITECTURAL CONCRETE: Fritchman & Assoc., Inc.; CEMENTIOUS DECKS: G.L. Nettles, Inc.; MASONRY UNITS: Featherlite; ARCHITECTURAL WOODWORK: Fixture Concepts, Inc.; MEMBRANE ROOFING: Soprema; METAL ROOFING: Berridge; METAL DOORS AND FRAMES: Pearland Industries; WOOD AND PLASTIC DOORS AND FRAMES: VT Industries; SPECIALTY DOORS: Cookson Rolling Doors; ENTRANCES AND STOREFRONTS: EFCO Corp. (BGR Specialties, supplier); METAL WINDOWS: EFCO Corp. (BGR Specialties, supplier); GYPSUM BOARD FRAMING AND ACCESSORIES: National Gypsum Co.; TILE: Florida Tile; TERRAZZO: American Terrazzo Co.; ACOUSTICAL CEILINGS: USG Interiors, Inc.; ATHLETIC WOOD FLOORING: Connor Floor System; ACOUSTICAL WALL TREATMENTS: Tectum, Inc.; PAINTS: Sherwin Williams; SIGNAGE AND GRAPHICS: City Stamp and Seal; LABORATORY CASEWORK: Sheldon

Cinco Ranch High School







PROJECT Cinco Ranch High School, Katy
CLIENT Katy Independent School District
ARCHITECT PBK Architects, Inc.
CONTRACTOR Pepper-Lawson Construction
CONSULTANTS CHPA (MEP building); Shah Smith (MEP central planning); Jones/Borne (structural); WSBC (civil); Lamb & Barger (civil-playfields); The Brown Co. (food service); Lawrence Hans & Assoc. (pool)
PHOTOGRAPHER Jud Haggard

Design Award

Completed in 1999, Cinco Ranch High School is located on sixty-six acres and serves 2,400 students. Because the facility was planned as a relatively large school, expandability was less of an issue than long-term flexibility. The school's two main wings connect to a central rotunda (top), considered the heart of the campus and the location of the cafeteria, library, and administration offices. The rotunda's flooring includes an 800-square-foot mosaic of the school's mascot, a stylized cougar, created with more than 1,000 one-inch-square colored tiles. In the natatorium (center left), a dehumidification unit preserves energy by recirculating the pool's water to cool the building, a feature that also extends the lifeline of the structure. A state-of-the-art automation system controls and monitors all HVAC and lighting controls in all campus buildings and is programmable to the most efficient energy usage schedule. The choice of materials used on the project reflect the desire for a long-term, low maintenance life cycle. In the main mall (center right), durable tile pavers were installed. The flooring is less expensive than terrazzo and requires minimal maintenance without the need for sealing and/or waxing. The campus' windows are constructed with solar shaded glass to reduce heat gain, and thermally insulated roofing skylights that extend above the main mall are both attractive and create a pleasant interior atmosphere. Brick "banding" incorporates the school's trademark maroon color.

RESOURCES CONCRETE: T.A.S.; ATHLETIC AND RECREATIONAL SURFACING: Vibrawhirl; CEMENTITIOUS DECKS: Siplast; MASONRY UNITS: Acme; RAILINGS AND HANDRAILS: Bludau Fabricators; GLUED-LAMINATED TIMBER: RM Dodgers; LAMINATES: WilsonArt; MEMBRANE ROOFING: Johns Manville; METAL ROOFING: MBCI; WOOD AND PLASTIC DOORS AND FRAMES: Door Pro; ENTRANCES AND STOREFRONTS: Theut Glass; UNIT SKYLIGHTS: Kalwall; GYPSUM BOARD FRAMING AND ACCESSORIES: USG; GYPSUM FABRICATIONS: USG; TILE: American Olean; ACOUSTICAL CEILINGS: Armstrong; WOOD FLOORING: Robbins; FLUID APPLIED FLOORING: Atlas; WALL COVERINGS: Koroseal; PAINTS: ICI; LETTERS AND PLAQUES, SIGNAGE AND GRAPHICS: South Texas Graphics

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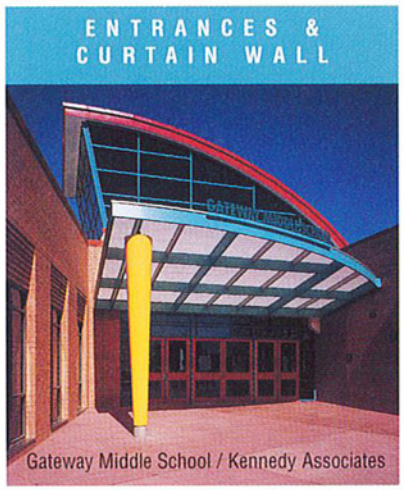

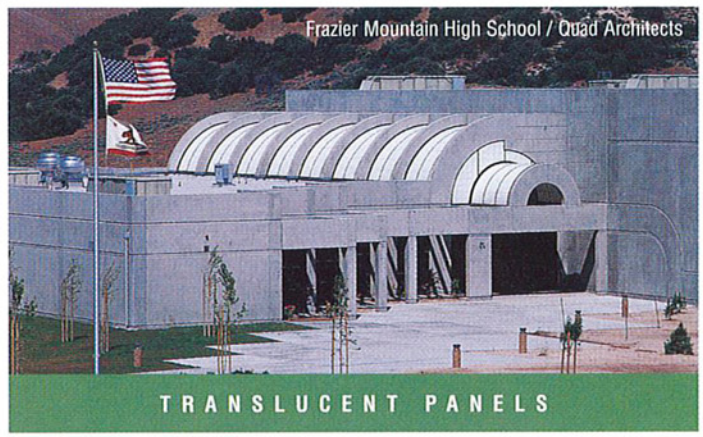

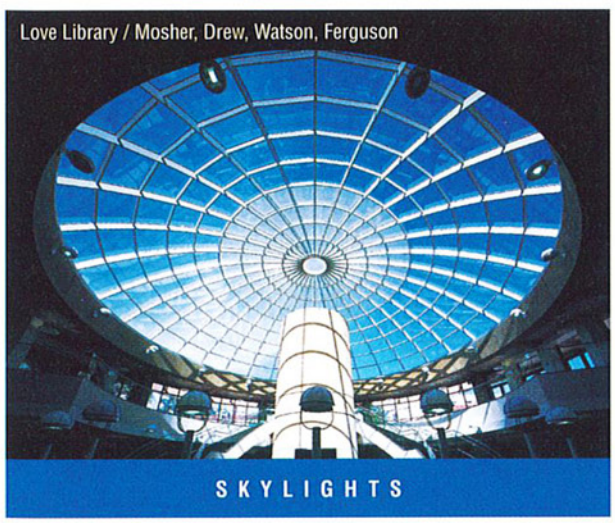

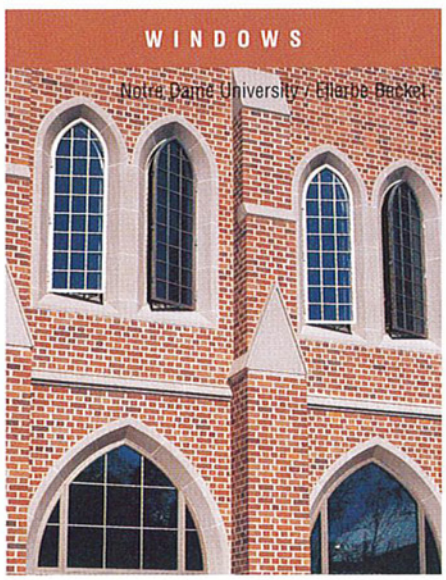

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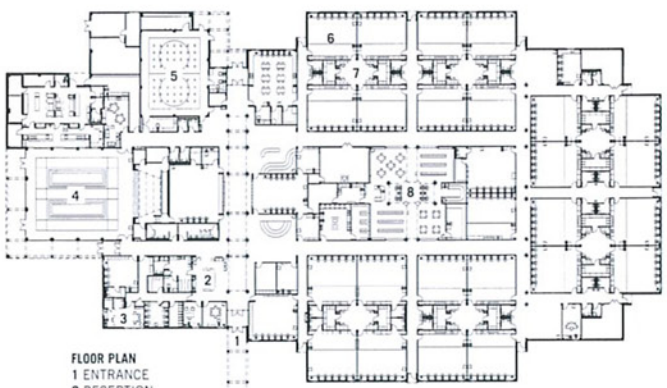
Harvey Mitchell Elementary School



FLOOR PLAN
1 ENTRANCE
2 RECEPTION
3 PRINCIPAL
4 CAFETORIUM
5 MULTIPURPOSE
6 CLASSROOM
7 TEACHER PLANNING
8 MEDIA CENTER

PROJECT Harvey Mitchell Elementary School, Bryan
CLIENT Bryan Independent School District
ARCHITECT SBWV Architects, Inc.
CONTRACTOR Bryan Construction Company
CONSULTANTS Walter P. Moore and Associates, Inc. (structural); R. H. George and Associates, Inc. (MEP); Kling Engineering & Surveying (civil); Brown & Co (food service); Wrightson, Johnson, Haddon & Williams, Inc. (acoustical)
PHOTOGRAPHER SBWV Architects, Inc.

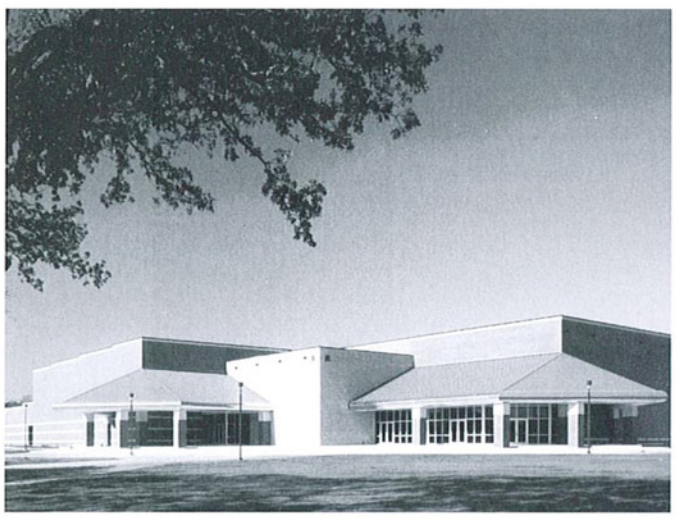
Educational Appropriateness Award

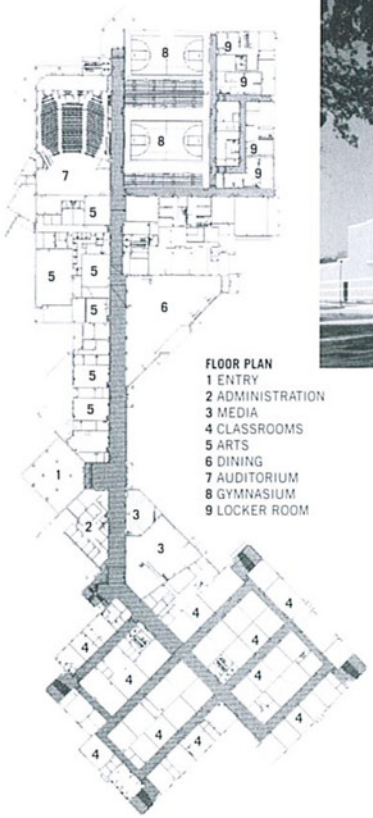
As a prototype designed to be duplicated on several other sites, Harvey Mitchell Elementary School is efficiently organized, energy conservative, easily maintainable, and equipped for current and future technology. The campus plan separates the various types of school traffic (automobiles, school buses, bicycles, pedestrians, and service vehicles) and situates playground space to be connected to future neighborhood park facilities. Inside, the classrooms are clustered in pods around the media center (top), which is fully networked to allow students to engage in distance learning and other Internet communication. Each pod contains four classrooms, a teacher-planning center, storage facilities, and student restrooms. This arrangement allows for various class configurations. The noisy areas of the school, such as the cafetorium and multipurpose room (center), are grouped together and kept separate from the quiet areas of academic instruction. Along with parking lots, these areas are easily accessible by members of the school's neighborhood for use after school hours. Materials were appropriately chosen for each educational space of the school (bottom). Some examples include CMU walls in high-impact areas, acoustical treatment in noise and music spaces, carpet on two-thirds of the typical classroom floor, and VCT at the sink/wet activity area.

LISA MATSUMOTO

RESOURCES CONCRETE PAVEMENT: Texcon; FENCES/GATES: Astro Fence; PRECAST SLAB: Gate Concrete Products; BRICK: Acme; CMU: Featherlite Corporation; METAL DECKING: Wheeling; LAMINATES: WilsonArt; WATERPROOFING: York Manufacturing, Inc.; DAMPPROOFING: Fortress; BUILDING INSULATION: CertainTeed Corporation; SHEET METAL: Berridge Manufacturing Co.; SHEET METAL ROOFING: Architectural Building Components; BUILDING SEALANTS: Tremco, Inc.; METAL DOORS AND FRAMES: Tex-Steel Corp.; PLASTIC LAMINATE FACED WOOD DOORS: Buell Door Co.; OVERHEAD COILING GRILLES: The Cookson Company; ALUMINUM ENTRANCES/STOREFRONTS: Vistawall Architectural Products; GLASS: PPG Industries, Inc.; GYPSUM BOARD: United States Gypsum Company; TILE: Dal-Tile Corporation; ACOUSTICAL CEILINGS: USG Interiors, Inc.; ACOUSTICAL WALL TREATMENT: Wall Technology; RESILIENT TILE: Azrock; PAINTS: Sherwin Williams; TOILET PARTITIONS: Turan Partition Corporation; GRAPHICS: South Texas Graphics; LOCKERS: Penco Products, Inc.; CASEWORK: Keystone Millwork

Birdville High School



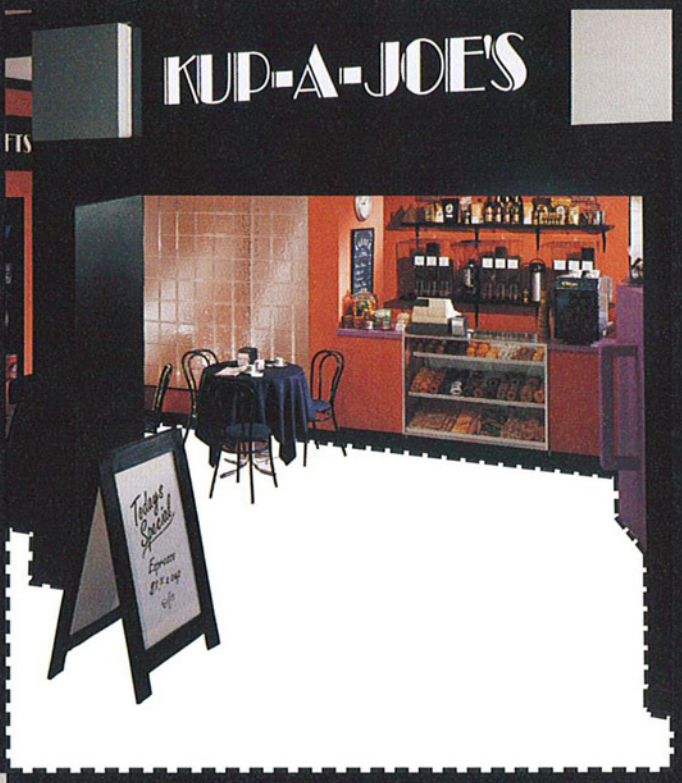


PROJECT Birdville High School, North Richland Hills
CLIENT Birdville Independent School District
ARCHITECT SHW Group, Inc.
CONTRACTOR Charter Builders, Inc.
CONSULTANTS Don Penn Consulting Engineers (MEP); Intertech Design, Inc. (structural); Schrickel, Rollins & Associates (civil); Texas Scenic Company (theatrical); Worrell Design Group (food service); Boner Associates, Inc. (acoustical)
PHOTOGRAPHER Michael French

Caudill Award

The teacher-student relationship was the driving force behind the design of Birdville High School. The school is divided into wings, each organized as a "neighborhood" according to grade level, a concept which school officials believe fosters stronger bonds between students and their teachers as well as their classmates. A voluminous "main street" corridor (top) leads to administration offices, the dining area, and the library media center. Walls of burnished concrete block are attractive, durable, and easily maintained. The lack of lockers is readily apparent after entering the front doors. "Taking away lockers takes away opportunities for mischief," says Debbie Tribble, the school's principal. "There are fewer class interruptions, fewer excuses. Students are safer and tardiness is way down." A blend of brick and concrete block on the exterior (center) complements the surrounding residential and commercial developments. Metal roofing is employed over some entrances. A spacious canopy defines the school's main entry (bottom) where the architects used translucent roofing materials. The school is organized to provide isolated access to a 150-seat lecture hall used by the community for group meetings, distance learning, and other after-hour activities. Other spaces on campus, including two gymnasiums and an 850-seat auditorium, can be made available without jeopardizing security of other areas.

RESOURCES BRICK/MASONRY: Acme; CABINETS: Terrill Manufacturing; CEILINGS: Armstrong; CERAMIC TILE: Dale Tile; DOORS: Halgren; ELEVATORS: Dover; INSULATION: Johns Manville; PAINT: Porter Paints, Sherwin Williams; ROOFING: MBCI; WINDOWS: Vistawall; FLOORING: Azrock; PHYSICAL EDUCATION FLOORING: Ponder; INDOOR LIGHTING: Bega, Lithonia Reloc; EMERGENCY LIGHTING: Lithonia; FIRE/LIFE SAFETY SYSTEMS: Fire Control Instruments; ATHLETIC EQUIPMENT: Performance Sports Systems; BLEACHERS/GRANDSTANDS: Irwin Seating; SCOREBOARDS/CLOCKS: Spectrum; ADA/COMPLIANCE EQUIPMENT: Lift Aid, Inc.; DRAPERIES/BLINDS: Levelor; LOCKERS: List Industries; SIGNAGE: Benchmark Signs



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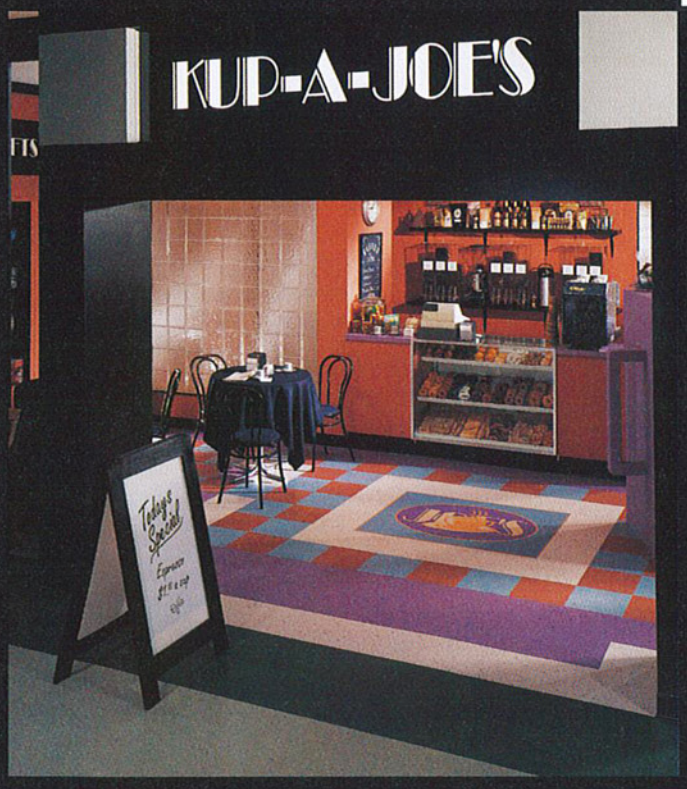

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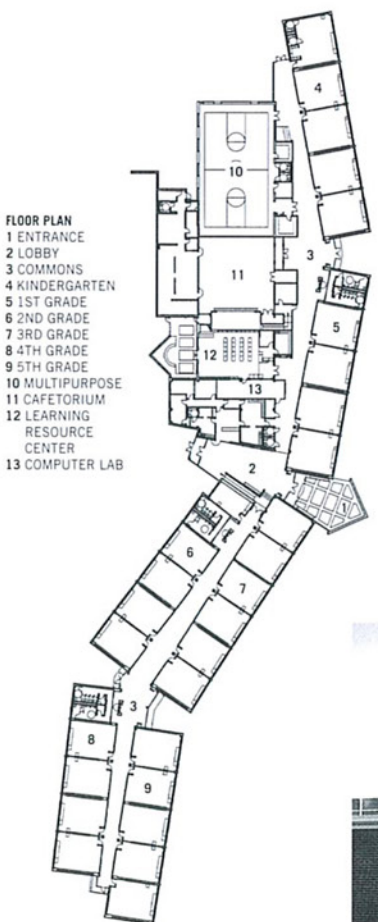
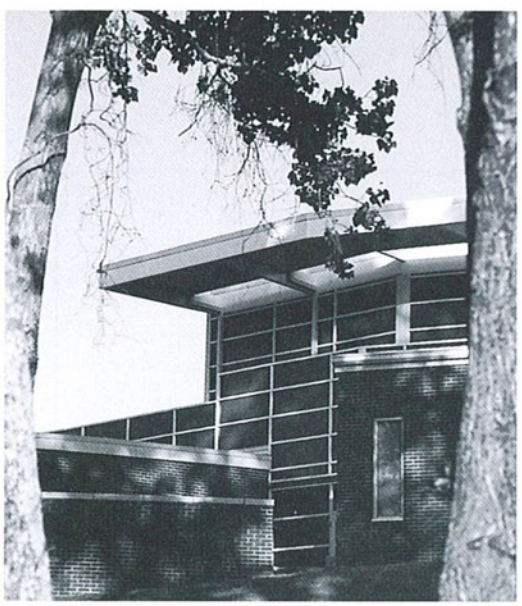
Terrell Elementary School





PROJECT Terrell Elementary School, Denison
CLIENT Denison Independent School District
ARCHITECT HLM Design
CONTRACTOR Fenix Constructors, Inc.
CONSULTANTS TMBP Consulting Engineers, Inc. (structural); Koegel & Associates (MEP); Halff Associates (civil)
PHOTOGRAPHER Craig Blackmon

Process of Planning Award

Built to replace an older facility, Terrell Elementary School has become a community landmark and the defining image for the neighborhood. The project, thanks to the involvement of Denison residents during the early stages of development, became a major exercise in urban renewal. Creative planning and design produced a school that has rejuvenated an entire neighborhood which was in a serious state of decline, and for a cost of $71.21 per square foot. (top) Dark red brick recalls the old school and contrasts with the green rolling hills surrounding the campus. Accent white limestone CMU and white-painted metal trim and window mullions set off the deep-blue insulating glass. (center) Texas red granite-like burnished CMU is used at the larger scale gymnasium, cafetorium block, and along with the complementary colored red brick, completes the palette to give the building a solid, permanent presence on the site. (bottom) To strengthen the connection to the community, the school has an indoor/outdoor space named for and dedicated to the alumni of the school building that previously stood on the site. The earlier facility was the town's "black school" which, after civil rights reform, was integrated and became a neighborhood elementary school. The lobby and courtyard will be used for various educational and community activities. Class reunions, which have become annual community events, will also be held in these spaces. The deck is paved with bricks engraved with the names of hundreds of individuals who helped make the new school a reality.

RESOURCES CEMENTITIOUS WOOD FIBER DECK: Tectum, Inc.; CELLULAR CONCRETE INSULATING FILL: Siplast "Insulcel"; INTEGRALLY COLORED CMU: Jewell Concrete Products, Inc.; FACE BRICK: Acme Brick; CORRUGATED METAL ROOF DECKING: Wheeling Corrugating Company; METAL WALL PANELS & SOFFIT PANELS: MBCI; MODIFIED BITUMEN SHEET ROOFING: Soprema Roofing & Waterproofing (Conner-Legrand, representative); PIPE SUPPORTS: Miro Industries; HOLLOW METAL DOORS AND FRAMES: Ceco Door Products; PLASTIC FACED WOOD DOORS: Vancouver Door Co.; ENTRANCES AND STOREFRONTS: U.S. Aluminum; CERAMIC FLOOR AND WALL TILE: Dal-Tile; ACOUSTICAL CEILINGS: USG Interiors; ATHLETIC FLOORING: Robbins Sports Surfaces; ACOUSTICAL WALL TREATMENTS: Conwed Designscape; PAINTS: ICI Dulux

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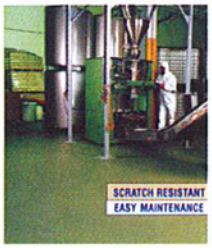

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"E-Studios" continued from page 23

like interactivity. Flueckiger stayed up late to talk and see (via Web Cam) his students through Microsoft NetMeeting while each design developed. He later returned to Lubbock to complete the semester.

During the course of this experiment, the students and the teachers quickly learned to appreciate the advantages and to sense some of the additional possibilities of the new e-studio. Students could immediately begin project research directly from their studio desk with instant access to library catalogs, inter-library loan requests, the Avery Index, and online searches. Just as the Internet can expand the scope and sources of research material, the medium offers a variety of means of communication that can be integrated with design media.

The students' computer skills developed rapidly, as their computers were available continuously and used during each studio class meeting. Some computer classes offer techniques of using specific programs providing skill development, but this type of "tools" approach typically has its limits. The e-studio was not geared towards specific programs or methods, but promoted integration through diversification. Design excellence is ultimately measured in terms of content and potential, not mere technical prowess.

As each semester progressed, we observed not just a change in the appearance of design drawings, but also a radical change in the process of the architectural design review. Traditionally, design reviews are held in a classroom setting where students presented their work, typically standing in front of presentation materials (drawings, sketches, models) and an audience of teachers and peers. More often than not, these presentations include last-minute, hurried modifications and additions—not to mention a little performance anxiety. By posting the presentation on the Internet, however, the student can be, and must be, more thorough and focused, as the presentation can be more carefully reviewed and the content repeatedly scrutinized. This includes the design work as well as written design intentions, concerns, and research findings, as well as the graphic format of the presentation itself. Likewise, the format allows – even necessitates – a more thorough critique. Reviewers have more time to review the presentation, read comments from others, and compose their own comments. In addition, an interested observer from halfway across the country or halfway around the world can log on and offer a perspective not so easily procured within the familiar setting of the classroom. (Still, we recommend that traditional design reviews continue to occur since in-person performance remains an important aspect of the architect's professional role.)

As a long-term design project develops, the advantages of electronic presentations and drawings become increasingly apparent. A student may easily save and access design explorations, variations, and alternative versions as the project evolves. Educational discussions and interaction between the student and teacher can refer to design materials from any stage in the design. Work can be retrieved quickly, compared with, and overlaid against the current design developments.

Obviously, computers and the Internet are becoming increasingly important in higher education. At Texas Tech, the architecture faculty is trying to incorporate and employ both in meaningful ways. The projects represented here are just the beginning of what we believe will become part of every architecture design studio within a few years. In our studios, we observed a smooth transition from traditional pencil-and-paper drawing to the digital world and back again. Traditional media need not remain distinct from digital media—when understood in terms of process, the two can go hand in hand towards developing a student's (and a design's) potential.

This process certainly enriches the students' learning experience. Moreover, we are convinced that involving the College of Architecture at Texas Tech with the global community via the World Wide Web enriches people's knowledge on both ends of the server connection.

Urs Peter Flueckiger is a lecturer and Robert D. Perl is an associate professor in the College of Architecture at Texas Tech University.

Circle 81 on the reader inquiry card

Circle 104 on the reader inquiry card

Circle 8 on the reader inquiry card

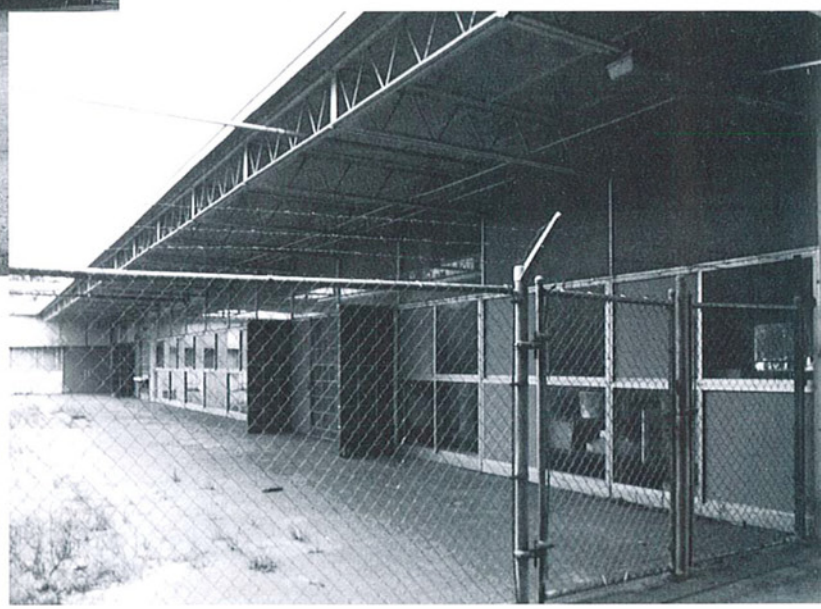
Circle 74 on the reader inquiry card

Marketplace

Marketplace

Ill-Fated Prize-Winner

Once in the vanguard, time may be running out for a landmark of the modern architectural era



Barthelme's design for West Columbia Elementary was radically new in 1951. (top) A barrel-vaulted breezeway runs along the front entrance. (bottom) Classrooms open directly onto a courtyard now fenced for security reasons. Photos by Gerald Moorhead, FAIA.

WEST COLUMBIA ELEMENTARY SCHOOL IN WEST Columbia, sixty miles south of Houston, is living on borrowed time. Had a recent bond election not failed, the school would have been replaced. Yet the end may still be in sight. Designed by Donald Barthelme & Associates of Houston and completed in 1951, the school is a Texas architectural landmark. It won first prize at the São Paulo Biennale of 1954 and was featured in two national architecture exhibitions, the Museum of Modern Art's "Built in USA" of 1952 and the American Institute of Architects' "Ten Buildings in America's Future" of 1957.

The postwar period was one of the great eras of Texas architecture. Small-town public schools, such as West Columbia's, are among its outstanding monuments. Caudill Rowlett Scott built an international practice on the innovative schools they designed in the 1950s. Cocke, Bowman & York of Harlingen, Fehr & Granger of Austin, and E. Davis Wilcox of Tyler were other architects whose designs were regularly published in the architectural press in the 1950s, when Texas school architecture represented the cutting edge.

What makes buildings such as West Columbia vulnerable today is their vanguard attributes. They are lightly built, with lots of exposed structure and extensive areas of operable windows. They are open in plan, strung out expansively across their sites. They do not lend themselves to air-conditioning, low maintenance, or secure policing. As a result, the Laredo Independent School District is planning to demolish *all* of its CRS-designed school buildings of the 1950s and early 1960s.

Drexel Turner, visiting professor of architecture at the University of Houston, and his student Karen Hudson propose nominating Barthelme's West Columbia masterpiece to the National Register of Historic Places. Historic designation is only a symbolic gesture. But such a gesture could give the West Columbia Elementary School – and a decade's worth of extraordinary modern architecture in Texas – the dignity and respect it deserves. Public and private organizations working together might help save some of these treasures by surveying the state's architectural heritage as represented in its modern public school buildings and formulating plans to preserve the most significant examples. The State of Texas now awards grants to encourage the preservation of historic county courthouses. It should do the same to stimulate preservation of Texas's historic school buildings, especially its treasure trove of '50s modern architecture. The preservation and continued use of these cultural landmarks represent one more way that schools can construct "community" in Texas towns and cities.

STEPHEN FOX

Stephen Fox is a contributing editor for *Texas Architect*.

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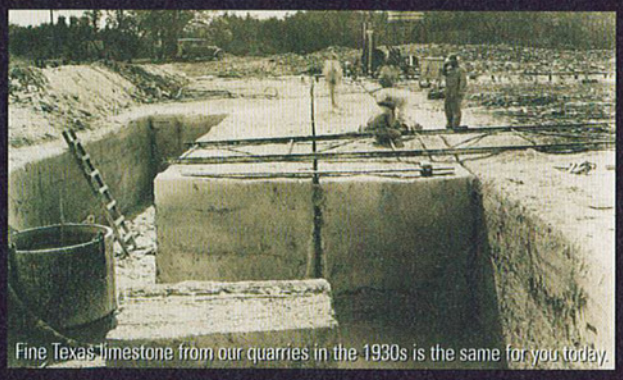

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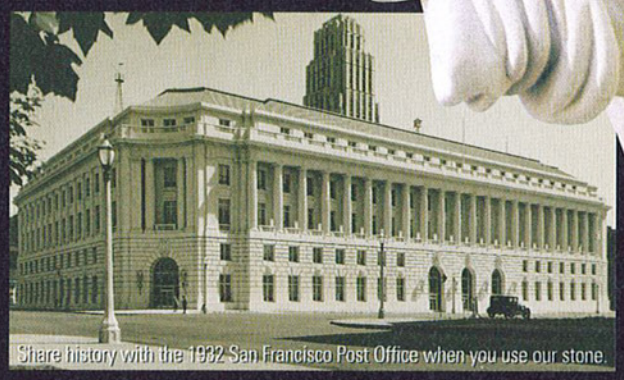

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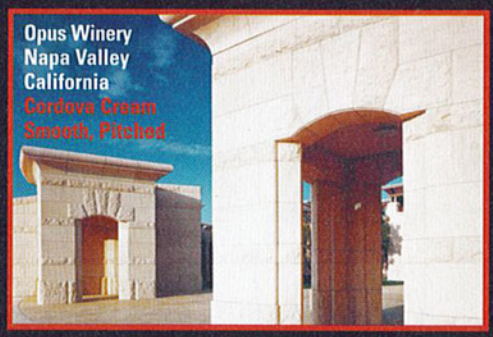

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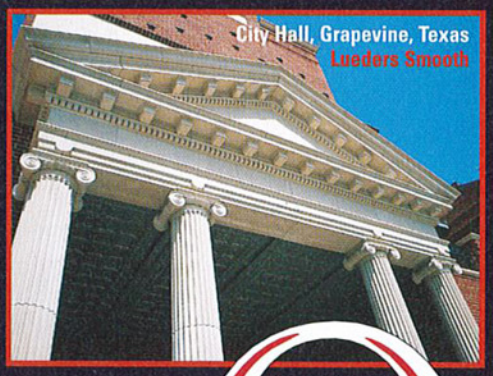
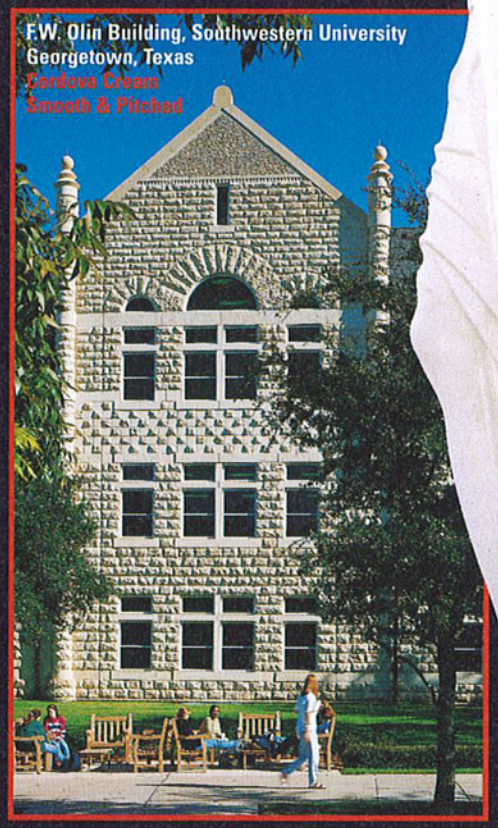


City Hall, Grapevine, Texas
Lueders Smooth



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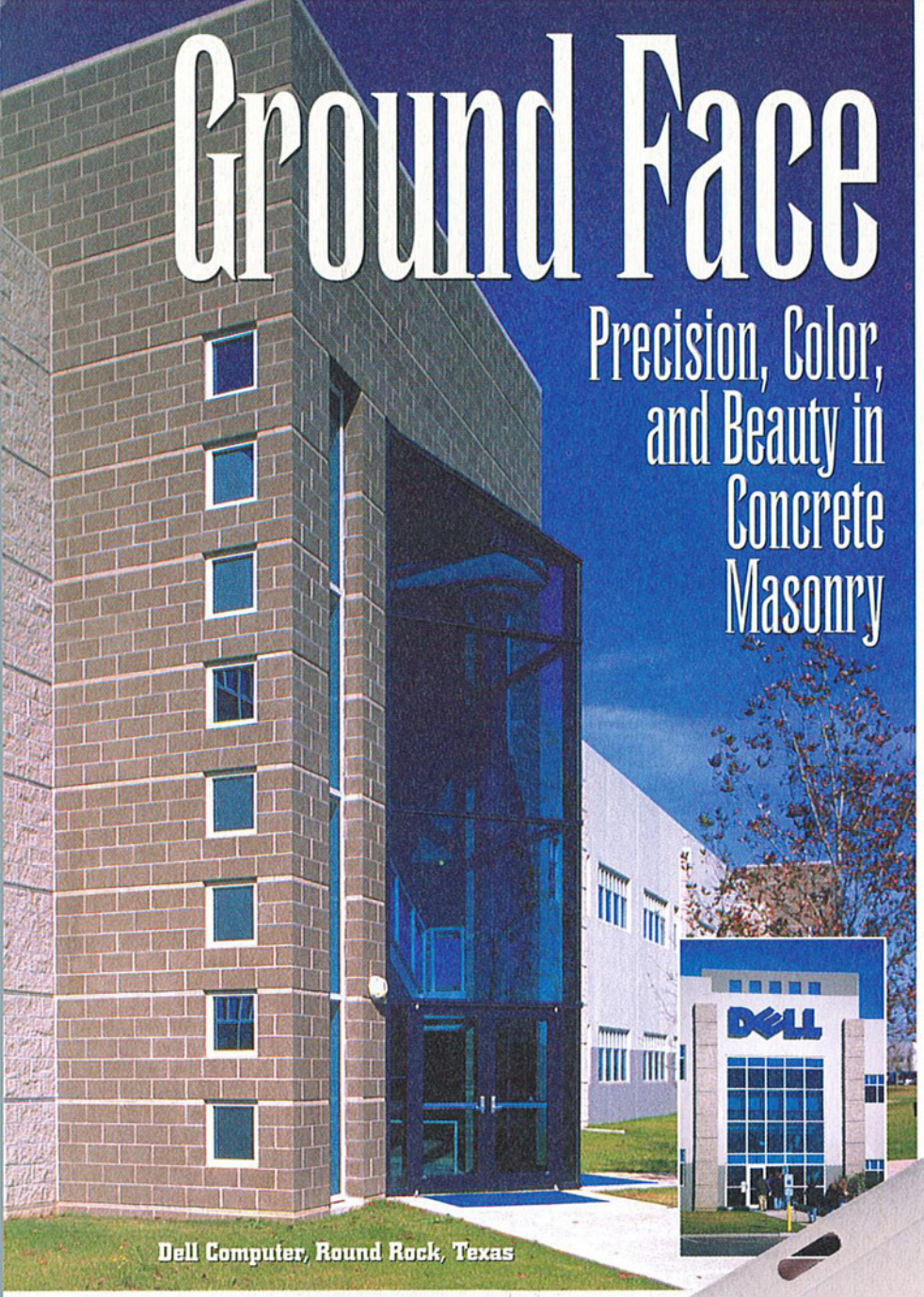
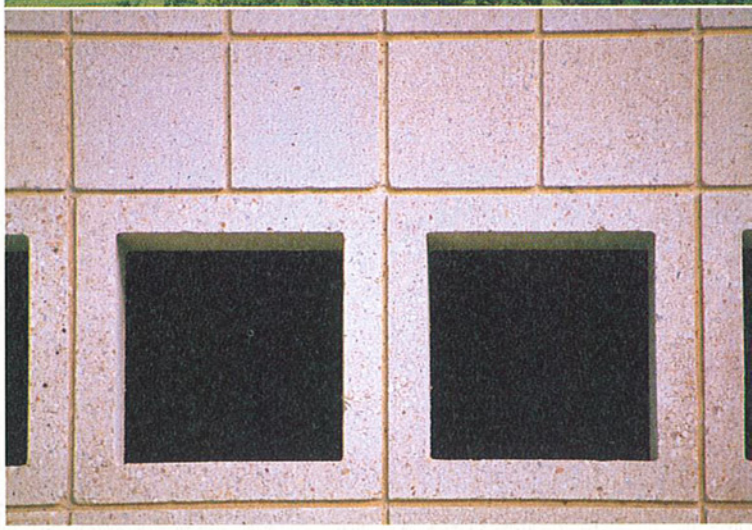
Ground Face

Precision, Color, and Beauty in Concrete Masonry



Dell Computer, Round Rock, Texas

Tollway Plaza, Dallas



Master the Fine Ground-Face Detail

Oldcastle Ground Face Concrete Masonry unlocks the rich, detailed beauty of concrete aggregate. Our state-of-the-art computer-controlled batch mixer creates a precise color mixture for Ground Face masonry. We grind the face of cured block to reveal the aggregate below. The result is an appealing finish for the full spectrum of construction, a rare combination of warmth and extreme durability. Use Ground Face masonry as the dominant facade material, or combine it with split-face or other concrete block to create intriguing accents on your next project. Count on Oldcastle companies Jewell and Eagle-Cordell for all your concrete masonry needs in Texas. Please call for more information about Ground Face masonry and our newly expanded product line and increased production capacity.

Please call to receive your Oldcastle multi-texture samples, each with a Ground Face, Split Face, and Decro-Face finish.

Oldcastle™
Architectural Products

Robinson High School, Waco, Texas

Oversize Ground Face units are now available in 16x16, 16x24, and 24x24 sizes! Please call for details.

Jewell Concrete Products
800-792-3216 P.O. Box 7115 · Waco, Tx 76714

Eagle-Cordell Concrete Products
800-933-5509 6415 W. Hardy St. · Houston, Tx 77022

Circle 18 on the reader inquiry card