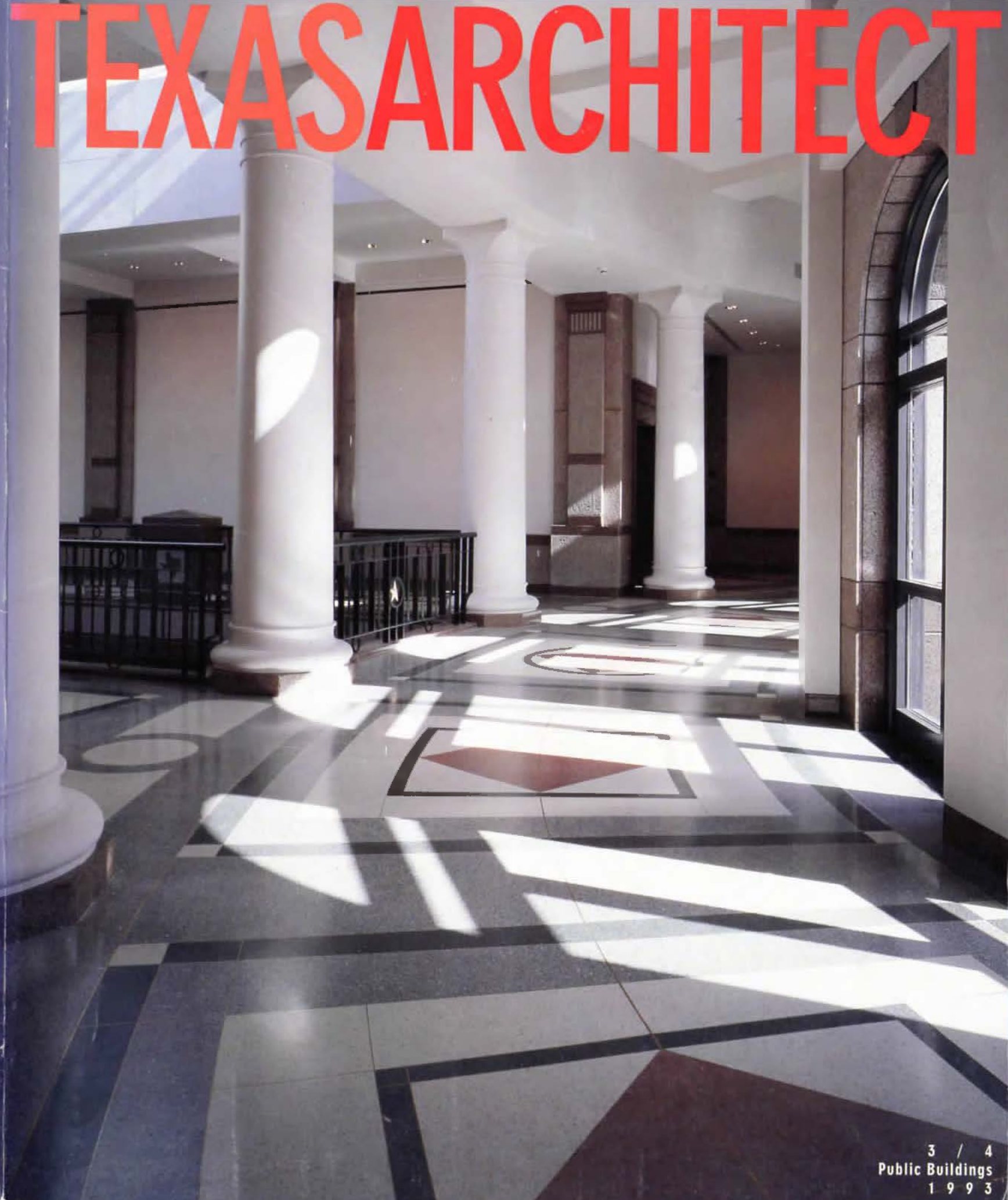


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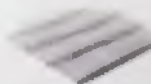


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Public Buildings
1993

On the cover: Interior of the central gallery at the new Texas Capitol Extension in Austin (see pp.42-45). Photograph by Joe Aker of Aker Photography, Houston.

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Public Projects, Public Policy

THE AGENCIES, boards, departments, and committees that charge architects with the commissions to design public building have expectations and budgets as varied as the constituencies they represent. On the high end, there is the Federal Reserve Bank, with the budget and the will to fund a new headquarters in Dallas that portrays its powerful role in the nation's monetary system. At the opposite extreme, perhaps paradoxically, is the Bureau of Engraving, which wanted a no-nonsense factory combination of manufacturing space and offices for its new North Texas plant. In between are other groups, ranging from the constantly fractious (like the Texas Legislature, which has recently moved into the new Capitol Extension in Austin) to the merely difficult (the city councils in Dallas and San Antonio, which funded, respectively, the Southeast Dallas Police Station and the San Antonio Alamodome). In this issue we present the work of six different firms who designed in response to the needs of six different public clients, showcasing a range of recent public work in Texas.

Also in this issue is Associate Editor Susan Williamson's News story about the low-income housing crisis in Texas. It presents the findings of a report by a Washington, D.C.-based advocacy group about the national need for low-income housing. The report shows that the four cities in the country with the worst quality of housing for low-income families are in a single state: Texas. The cities are Dallas, Fort Worth-Arlington, Houston, and San Antonio, which also rank among the worst in availability and affordability of such housing.

I chose the projects for the feature section because of interest in one or more aspects of the projects—plans, materials, details, overall design. I had no thought, when choosing them, that these government projects would overlap so shockingly with the news about low-income housing and the almost complete abdication of responsibility by local, state, and federal officials in the matter. It is time to ask more questions about the priorities for public spending at every level of government in Texas.

Joel Warren Barna

UPCOMING ISSUES:

We invite submissions to *TEXAS ARCHITECT* for all our upcoming issues. Scheduled issue themes for the remainder of 1993 include

APRIL: PRACTICE ANNUAL (deadline past)
 "The Quality Movement and Architecture"

MAY/JUN (submissions deadline 26 Feb)
 "Health Care: Responding to the funding crisis"

JUL/AUG (submissions deadline 1 Apr)
 "New Museums in Texas"

SEP/OCT (submissions deadline 1 Jun)
 "Annual Review of Texas Architecture"

NOV/DEC (submissions deadline 1 Aug)
 "New Churches for a New Decade"

We also need stories about new architectural projects, historic preservation, urban design, zoning, mass transit and highway development, competitions, and education for our NEWS and SURVEY sections. In addition, we are looking for stories about innovations in technique and management for our SMALL PRACTICE ISSUES section.

If you can help us with any of these topics, please call *TEXAS ARCHITECT* at 512/478-7386. **JWB**

Letters

THE JAN/FEB 1993 issue of *Texas Architect* is superb! Your article, "Competitions and Brokers," broaches an issue that has plagued this profession for years on end. That followed by Jack McGinty's Laws, Regs, and Red Tape (to be a regular feature, yet!) gave me hope that eventually architects will come down from the atelier and learn to slug it out in the street with those who use and abuse us so handily. Practice has become equal in importance to Design in the minds of architects who want to survive. Keep it up!

Then there was good friend Frank Welch's excellent dissertation on Philip Johnson and his Texas connections. Robin Leach's "Lifestyles of the Rich and Famous" has certainly missed out! I have always wondered if Philip ever waited in line after 10 p.m. to explain his qualifications to a country school board or a Methodist church with the desire to build a Gothic cathedral for \$75,000.

Heck, I even liked the book reviews! Frank Lloyd Wright's complex life and James Pratt's marvelous "Dallas Visions for Community"

are worth anybody's time. Good work! Now, if you only had a humor column on the back page. . .

David R. Braden, FAIA
Dallas

Editor's note:
The photograph of the Botanical Research Institute of Texas (right) in Fort Worth, designed



by Halbach•Dietz Architects of Fort Worth, was omitted from page 17 of *TA* Jan/Feb 1993.

THE CREDITS FOR the Lower Colorado River Authority General Office Complex (*TA* Jan/Feb 1993, p. 63) were omitted. They are: ARCHITECT: RTG Partners, Inc., Austin; CONSULTANTS: The Broussard Group (landscape architect); Datum Engineering (structural); Michael E. James and Associates (mechanical, electrical, and plumbing); Murfee Engineering Company (civil); Jancom, Incorporated, (telecommunications); Proline Video (audio/video)

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— Frank Welch, FAIA, Dallas

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News

House of Pain 8
WASHINGTON, D.C. A national study of low-income housing ranks Texas cities near the bottom in several categories.

A Cooperative Effort 8
AUSTIN Texas architects must work together to protect their interests during this legislative season.

A Roadside Attraction 9
DALLAS HOK's work on the reconstruction of North Central Expressway may mean more work for architects statewide.

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Rising from the ashes 14
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AUSTIN A collection of architectural drawings of Mayan sites has been donated to UT Austin.

The Zoning Game 21
HOUSTON AIA /Houston is concerned about the city's proposed zoning ordinance.

House of Pain

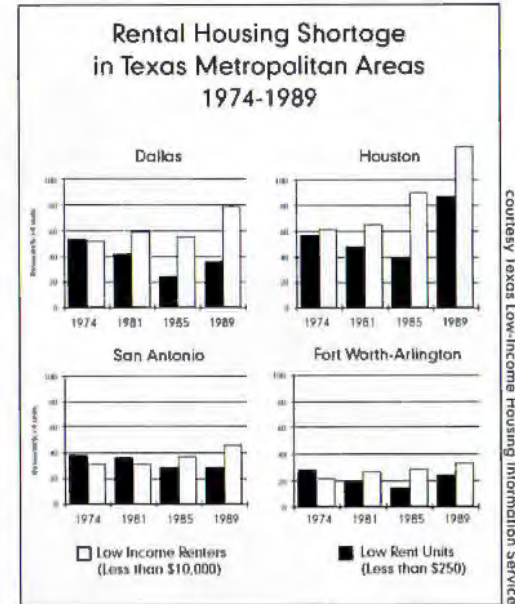
WASHINGTON, D.C. The quality of low-income housing in four Texas cities is the worst in the nation, and the same four cities rank among the worst in availability and affordability of such housing, according to a national study published late last year.

The study, prepared by the Center on Budget and Policy Priorities, of Washington, D.C., ranks four Texas metropolitan areas—Dallas, Fort Worth-Arlington, Houston, and San Antonio—at or near the bottom in a number of measurements of low-income housing availability, affordability, and quality. The study was based on a survey of housing conditions in 44 metropolitan areas sponsored by the U.S. Department of Housing and Urban Development. The study draws on information collected between 1986 and 1989.

According to the study, affordability and availability pose the same problems in the Sunbelt cities of Texas as they do in the Northeast, says John Henneberger of the Texas Low Income Housing Information Service, an Austin-based group that analyzed the study's findings. The study lets Texas compare itself to other areas, he says, and the obvious conclusion is that Texas is coming up short.

Large numbers of poor Texans, both renters and homeowners, live in physically deficient housing, the study says. (A household was considered poor if its annual income was \$10,000 or less, in 1989 dollars.) The four Texas cities included in the study ranked first through fourth in the rate of owner-occupied housing found to be physically deficient (in descending

order, San Antonio, Fort Worth-Arlington, Dallas, and Houston). The 44-area median was approximately 6 percent, while in all four Texas cities the rate was greater than 30 percent; in



The rental housing shortage in Texas cities for households earning \$10,000 or less (in 1989 dollars) rose sharply from 1975 to 1989.

San Antonio, more than 50 percent of housing occupied by low-income homeowners was substandard. In addition, three of the ten cities

"Housing," continued on page 12

Setting priorities

AUSTIN During this legislative season, Texas architects need to work to help educate their elected officials about the issues, says Ronnie Wooten, chairman of the Texas Society of Architects' (TSA) Government Affairs Committee. Such involvement is the only way TSA's legislative priorities can be met, he adds.

The priorities recommended by the Government Affairs Committee for this session of the Texas legislature, which runs through May, are

- to obtain a change to the state's Elimination of Architectural Barriers program to allow locally contracted reviewers (including architects) to examine and approve plans for EAB compliance;
- to support passage of fire safety officials' initiative to allow county adoption of building codes;

- to address indoor-air-quality issues;
- to support funding of public building programs to improve the state's infrastructure;
- to support improved funding for the arts;
- to avoid a professional services tax;
- to address issues related to the Practice Act, including fees charged by the Texas Board of Architectural Examiners, particularly for those not actively practicing architecture; and clarification of an architect's required role in publicly funded building projects; and

• to protect qualification-based selection; Wooten says bills supporting bidding for architectural services are expected to be introduced.

With the practice of architecture under pressure from a number of sides, this legislative session may be the most important in years, Wooten says, and involvement of Texas architects at all levels is critical. *Susan Williamson*

A Roadside Attraction

DALLAS The Texas Department of Transportation broke with tradition when it hired an architecture firm to work on the reconstruction of 10 miles of North Central Expressway in



A team led by HOK developed design guidelines for all visible elements of the North Central project. The unusual partnership between architects and the Department of Transportation may set new standards for the state's urban highways.

Dallas, but the experience has been so successful that it may change the way the department does business across the state.

In the past, the Department of Transportation has rarely hired architects to work on its projects, said John Kelly, North Central project manager for the DOT. However, a long controversy about how to increase North Central's capacity led to a negotiated agreement that included a commitment to employ a design team to oversee the visual aspects of the job. The DOT and the city of Dallas in 1987 hired the Dallas office of Hellmuth, Obata & Kassabaum to prepare a design plan for the North Central project; the reconstructed expressway will replace an obsolete four-lane road with an eight-lane facility from downtown north to I-635. Construction began on the first of five segments in 1989 and should be completed by 1997.

HOK worked with landscape architects the Slaney Santana Group of Dallas, urban designers Carr Lynch of Boston, and civil engineers from Lockwood Andrews + Newnam of Houston; the team defined design guidelines for all visible elements of the new expressway: retaining walls, bridges, lights, signage, streetscape, and landscape. The HOK team developed a design that provides continuity for the entire 10 miles of the project, but that also allows for variations reflecting the changing character of the areas through which the expressway passes, according to Dave Retzsch, HOK project manager. The \$10 million allocated by DOT and the city to pay for these "amenities" was spent on el-

ements with the most impact, Retzsch said; HOK also worked with major property owners and civic organizations to supplement the project with additional landscape and streetscape development.

A state official says that HOK's work on the reconstruction of North Central Expressway in Dallas may open doors for architects statewide.

The DOT's Kelly said that, although there was some initial skepticism about adding architects to the team, the results have been gratifying. "We feel like we're in the process of creating new standards here," he said. "We've learned things from this process that I think may end up being applied across the state."

Kelly said that he foresees more willingness on the part of the DOT to contract with design firms in the initial stages of a project, "rather than just doing the bare minimum" by hiring someone to add landscaping or other final touches at the end of a project.

The passage of the federal Intermodal Surface Transportation Efficiency Act (see "News," *TA*, Mar/Apr 1992) may also increase involvement of architects in highway design projects, Kelly said. Ten percent of ISTEA allocations are earmarked for "enhancements," just the kind of things HOK and the rest of the design team added to the North Central project. "I think ISTEA will prove to be a vehicle to getting this kind of design input into future projects," Kelly said. *SW*

OF NOTE

UT names new architecture dean

The University of Texas announced in January that Lawrence Speck will be the new dean of the university's School of Architecture. Speck, a UT faculty member since 1975, has served as interim dean since June. He currently holds the Roland G. Roessner Centennial Professorship and was founding director of UT's Center for the Study of American Architecture. Speck replaces Hal Box, FAIA, who resigned as dean last spring after serving for 16 years.

Rep. Brooks honored by AIA

U.S. Rep. Jack Brooks of Beaumont is the 1993 recipient of the American Institute of Architects' Thomas Jefferson Award for Public Architecture. Brooks, an AIA honorary member, has been committed to public architecture for 20 years, the jury said, beginning in 1972 with his championing of the law requiring federal agencies to use qualifications-based selection of architecture services.

Piano to design new Menil space

Houston's Menil Collection has commissioned Italian architect Renzo Piano to design a new gallery to be located on land adjacent to the existing museum, the HOUSTON CHRONICLE reported in January. The gallery will house works by abstract painter Cy Twombly. Piano designed the main museum building, completed in 1987.

P/A honors two in Texas

Two Texas firms were among 20 winners in the 40th annual P/A Awards program. James Pratt Architecture/Urban Design, Inc., of Dallas, won a citation for urban design for "Dallas Visions for Community," a 50-year plan for urban Dallas (see "Survey," *TA*, Jan/Feb 1993). Rob Civitello & L. Philip Schawe/OAD, of Houston, won a citation for architectural design for a riverside vacation house in Comal County. The projects were published in the January issue of PROGRESSIVE ARCHITECTURE.

5th Annual Graphics Competition

**Entry
Deadline:
April 30,
1993,
5:00 p.m.**

The *Texas Architect* Graphics Competition recognizes outstanding work by Texas architects as exhibited in drawings, renderings, sketches, and other two-dimensional media. Entrants are judged on the quality, style, and effectiveness of graphic design and presentation, rather than on the merits of any projects or details presented.

Facing Page: "San Fernando at Midsummer," a winning entry in the 1st Annual Graphics Competition, rendered by Matthew K. Morris, AIA, of San Antonio.

CATEGORIES:

- **ARCHITECTURAL DELINEATION.**

Renderings and presentation drawings produced for an actual project, built or unbuilt.

- **WORKING DRAWINGS.** Any drawing from construction documents for an actual project, built or unbuilt.

- **CONCEPT AND IMAGINATION.**

Conceptual sketches, schematic drawings and diagrams, and drawings of imaginary projects or places.

- **SKETCH BOOKS.** Drawings and sketches of landscapes, cityscapes, and existing buildings, spaces, and building details. Sketches may be entered individually, as a group, or as a complete sketch book.

- **PUBLICATION GRAPHICS.** Actual printed pieces of books, reports, studies, proposals, magazines, brochures, and similar printed media.

- **BUSINESS GRAPHICS.** Actual printed pieces of corporate and personal stationery, logos, announcements, advertisements, cards, posters, and similar printed media.

Each entry must be submitted in only one category. *Texas Architect* reserves the right to reclassify inappropriately labeled entries.

MATERIALS. For *Architectural Delineation*, *Working Drawings*, *Concept and Imagination* categories, submit one slide for each entry. A second, detail slide of the same artwork can be included. High-quality duplicate slides are acceptable. The original work or an original 35mm slide or 4x5 transparency must be available for publication should the entry receive an award.

Entries in the *Sketch Books* category may be entered in one of three ways: (1) one slide of a single sketch or collection of sketches; (2) the original sketch book, for judging in its entirety; (3) the original sketch book, tagged for selected sketch(es) to be judged.

For *Publication Graphics* and *Business Graphics*, submit each entry mounted on one 20x30-inch foam-core or rigid illustration board, leaving a two-inch margin on all sides for hanging. Do not use glass. Heavy publications or graphics that are larger than 20x30 inches need not be mounted.

An entry that violates any rule may be disqualified. TSA staff will endeavor to resolve entry problems. However, entrants may not be notified of disqualifications, and in no case will entry fees be refunded.

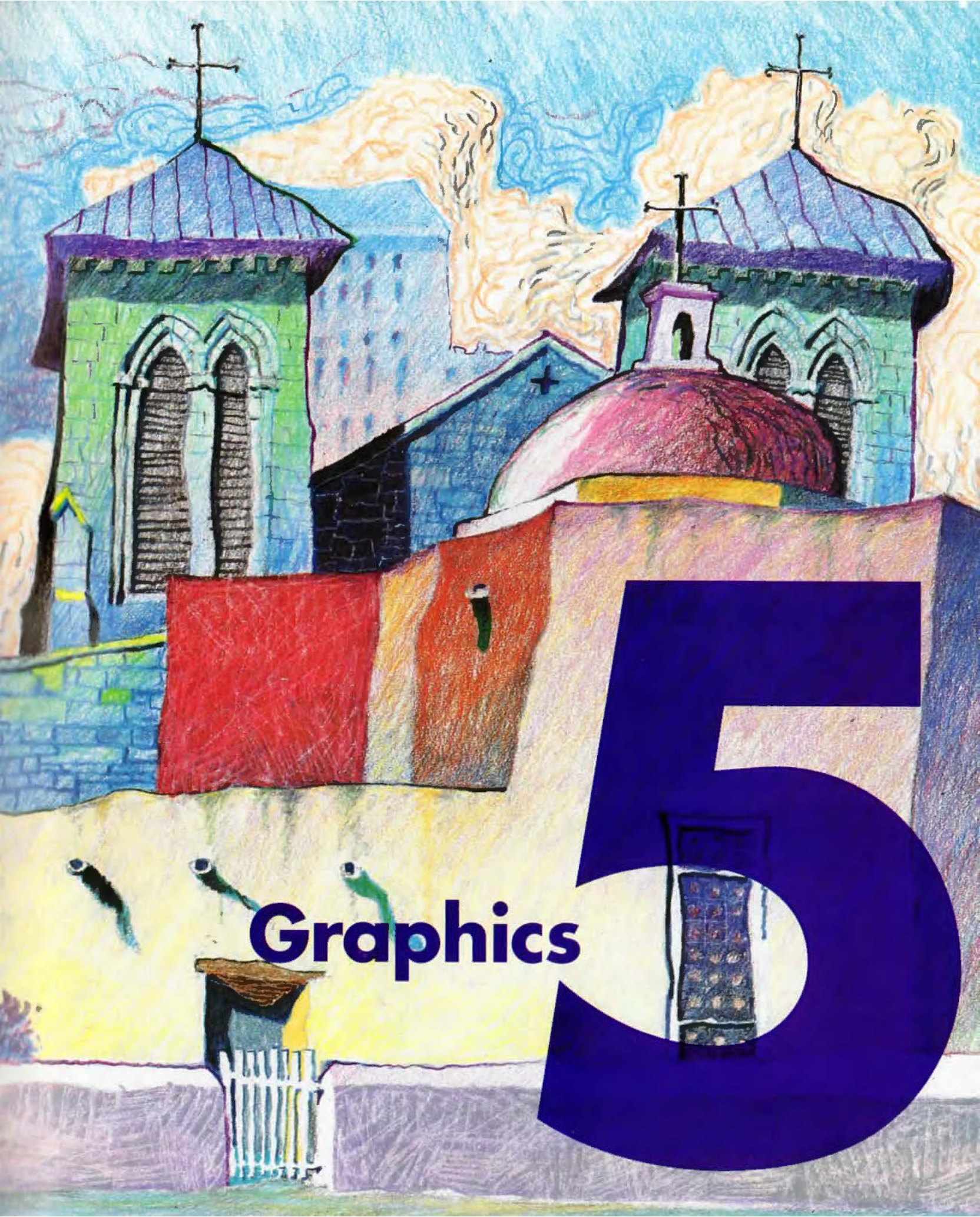
ELIGIBILITY. Eligible work must have been produced by (1) a current member, associate, or professional affiliate of the Texas Society of Architects, (2) an architect registered with the Texas Board of Architectural Examiners, or (3) a currently enrolled architecture student at the University of Houston, Prairie View A&M University, Rice University, Texas A&M University, University of Texas at Arlington, University of Texas at Austin, or Texas Tech University.

AWARDS. Given in each category to as many entries as the judges feel merit award. Each entry is judged on its own merits. The judges can choose not to name a winner in a category if they feel no entries merit award. Winning entries will receive the following:

- Certificate of award.
- Publication in *Texas Architect*.
- Promotion to other publications.

ENTRY FEE. A fee of \$45 for each entry by a TSA member, \$30 for each student entry, or \$75 for each entry by an architectural graduate or registered Texas architect who is not a TSA member, must be included with your submission. After judging, an additional payment of \$75 will be required for each winning color entry to help offset the cost of four-color reproduction in *Texas Architect*.

DEADLINE. All entry materials must be received by *Texas Architect* no later than 5:00 p.m., April 30, 1993. Entries are to be mailed or delivered to: *Texas Architect*, 114 West Seventh Street, Suite 1400 (Norwood Tower, 14th Floor), Austin, Texas 78701.



Graphics

"Housing," continued from page 8

with the highest incidence of substandard low-income rental units were in Texas—San Antonio, the second highest, at 39 percent, Houston, third highest, at 32 percent, and Fort Worth-Arlington, ninth highest, at 20 percent. The 44-area median was just below 15 percent. (HUD defines a physically deficient dwelling as one that lacks hot or cold water, lacks a toilet, has malfunctioning heating equipment, or lacks electricity.)

The majority of poor Texans also paid more for this frequently inadequate housing than they could afford. Federal standards say that housing is affordable if it consumes no more than 30 percent of income. In Texas, most poor renters spent more than half of their income for housing—70 percent in Dallas, 69 percent in Houston, 59 percent in Fort Worth-Arlington, and 53 percent in San Antonio. The majority of poor homeowners also

faced affordability problems. In Houston, 84 percent of poor homeowners lived in unaffordable housing. In Dallas the rate was 75 percent, in Fort Worth-Arlington 64 percent, and in San Antonio 58 percent. Bad as these figures sound, they are below the U.S. average; nationwide, 84 percent of homeowners and 84 percent of renters lived in unaffordable housing.

The heart of the affordable housing crisis is revealed in statistics about availability of low-income housing. In 1974, the supply of low-income housing in Texas was greater than the demand for it in all areas except Houston, where there was a small shortfall. By the late 1980s, the need for low-income housing far outstripped the supply in all four Texas cities studied. The number of available units actually declined in all of the cities except Houston. However, the number of low-income renters increased at a much faster rate than the number of available units. The study found that, by the late 1980s, the nationwide ratio of low-income renters to available low-income units was 1.9 renters per unit. In Dallas, the ratio was 2.2, in



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San Antonio 1.6, and in both Houston and Fort Worth-Arlington 1.4 renters per unit.

The housing situation in Texas has reached its current state after years of budget cutting at the federal level and even more years of planning failure at the state and local level, says Henneberger. "The federal government for 12 years has punted to the state and local governments," he says. During the 1980s, federal housing budgets were cut as much as 90 percent compared to late-1970s levels. In other parts of the country, state and local entities picked up at least part of the housing burden, having developed programs of their own as well as systems for delivering the federal funds still available.

In Texas, Henneberger says, those programs and delivery systems were never developed. Texas depended completely on federal funds and programs and, following the federal budget cuts of the 1980s, low-income housing in Texas fell through the cracks. "There's no organized lobby for poor people's issues in Texas. No one has cared enough to get the bureaucracy in motion on these housing issues," he says.

In fact, Henneberger says, Texas is not taking advantage of the limited federal funds that are available. Funds allocated to the state are often returned when the responsible state agency fails to distribute the money, he says.

This failure to keep potential federal funds in the state is one reason why the poor in Texas receive such a low rate of government housing assistance compared to the national average.

Houston had the lowest rate of housing assistance per capita of any city in the country, the study found. The poor are not the only victims of this funding failure, Henneberger says. Low-income housing funds coming into the state would pay for construction of low-income housing and that would benefit the whole economy, giving business to everyone from architects to lumber yards. *SW*

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Rising from the ashes

HILLSBORO The historic Hill County Courthouse was heavily damaged by fire on New Year's Day, leaving its clock tower collapsed and its interior gutted. The Associated Press initially reported that the courthouse was totally destroyed, but later review showed that the building is salvageable.

Although insurance will not cover the total cost of restoration, the county is "planning very decisively to rebuild," said Hill County Judge Tommy Walker. Initial structural engineering reports show that the walls are basically sound and that, although most of the wood and plaster was destroyed, the stone and mortar were mostly undamaged, he said. The county will do whatever it takes to "build it back better than ever," Walker said. As part of the rebuilding process, the county plans to install modern air conditioning, phone, and smoke detection systems.

The fire apparently started on the third floor, probably as the result of an electrical short, and moved up through the attic and into the bell tower, according to Gerron Hite, an architect with the Texas Historical Commission. The tower collapsed into the second-floor courtroom, leaving debris, including the 1,500-pound bell, in the ceiling of the first floor. Despite the extent of the damage, the county managed to salvage birth, death, and deed records



Courtesy: Texas Historical Commission

Hill County is committed to rebuilding its courthouse; the

historic structure was badly damaged by fire on New Year's Day.

going back more than 100 years, Walker said.

The Hill County Courthouse, completed in 1891, was designed by W.C. Dodson in an ornate interpretation of the Second Empire style for which he was known. Built of rusticated white limestone with contrasting smooth-cut limestone detailing for openings, cornices, and stringcourses, the building rose three stories to a mansard roof and was crowned with a graceful tower. The entrance was framed with two-story banded and fluted columns, topped by a pediment that was destroyed in the fire.

The Historical Commission will review restoration plans as they are developed, Hite said. State law requires such review for changes to any of the state's historic courthouses. *SW*

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"Renzo Piano: Selected Projects"

This exhibition, organized by the Architectural League of New York, will examine the work of Italian architect **Piano**, designer of Houston's **Menil Collection** and the **Centre Georges Pompidou** in Paris. **Richmond Hall, Menil Collection, Houston (713/520-8512), MAR. 11 TO MAY 30**

"Sustainable Community Solutions"

The AIA and the International Union of Architects are sponsoring an international competition focused on environmentally conscious building design. A total of \$50,000 in prizes will be awarded in three categories: energy and resource efficiency; healthy buildings and materials; and land use and urban ecology. **Sustainable Community Solutions, AIA (1735 New York Ave., N.W., Washington, D.C. 20006), DEADLINE: APR. 1 (REGISTRATION); MAY 1 (SUBMISSION)**

"Art from Sacred Landscapes"

This exhibition of pre-Columbian art and cultural objects—300 works of art from 17 cultures—examines the bond between these ancient cultures and their environments. **Museum of Fine Arts, Houston (713/639-7300), THROUGH APR. 18**

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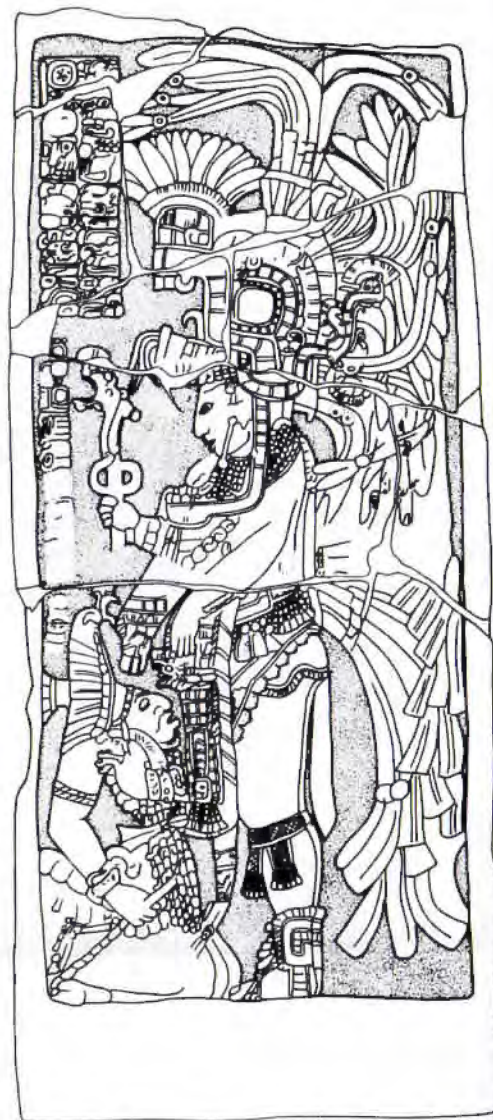
Mayan Treasures at UT

AUSTIN The historian George F. Andrews has announced his intention to donate his "Architectural Data Bank for the Lowland Maya" to the Architectural Drawings Collection at the University of Texas at Austin. This important research resource, one of the most comprehensive and detailed records of lowland Mayan architecture, includes documentation of more than 800 structures from 224 archaeological sites in the lowland Mayan area.

George F. Andrews, a professor emeritus of architecture at the University of Oregon, has devoted the last 32 years to documenting Mayan sites. Andrews first became interested in Mayan architecture after visiting a site in the late 1950s. Upon his return to the U.S., he found that there was very little information available about Mayan architecture. Accompanied by his wife, Gerrie, he began a lifetime of work to document as many sites as possible in the lower Mayan region in and around the Yucatan peninsula. "My idea was to visit all of the lower-region Maya areas and record everything I could, [which] turned out to be a very substantial project because the area is approximately the size of Oregon," Andrews says.

Andrews is the author of numerous works on Mayan architecture, including *Architecture and Archaeology* (1985) and the seminal study, *Maya Cities: Placemaking and Urbanization* (1975). In addition, he has published studies of individual sites, including Comalcalco in the Mexican state of Tabasco, and Edzna in the state of Campeche. Excavation at Edzna was begun in 1958 under Andrews's leadership and has continued periodically since that time. Andrews was recently awarded a silver medal by the Center for Architectural and Urban Investigations in the Postgraduate School of Architecture at the National Autonomous University of Mexico; he is the first U.S. citizen to be so honored.

The collection that Andrews has agreed to donate to UT includes approximately 2,000 measured drawings; 15,000 negatives and slides; and 5,000 typescript pages of descriptive data on the sites, including information about interior and exterior architecture, decorative features, and construction details. Andrews took great care in recording and organizing the material; he produced both drawings and descriptive data in a standardized format, thus providing comparative information for a multitude of sites. Most of the material is from sites



Drawing of stela from Bonampak, a Mayan site, part of the Architectural Data Bank donated to UT Austin

located in the central portion of the Yucatan peninsula, including the Puuc, Chenes-Puuc, Chenes, and Rio Bec regions. Sites such as Uxmal, Chichen Itza, Palenque, and Tikal are extensively documented.

By making this information available to scholars, Andrews will have made a significant contribution that will further the course of Mayan scholarship. The material offers a wealth of information for a variety of disciplines, including architectural history, anthropology, and archaeology, as well as the study of Maya hieroglyphics, a speciality of Linda Schele at the University of Texas' Mayan Workshops.

Lila Knight

Contributing editor Lila Knight is curator of the Architectural Drawings Collection of the University of Texas at Austin School of Architecture.

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Use the entry form at right (or a photocopy) to enter the 5th Annual Graphics Competition. The official Call for Entries is on pages 10 and 11 of this issue. Last year's winners were profiled in the July/August, September/October, and November/December 1992 Issues. Call Roy Don Tilley at 512/478-7386 if you have any questions about your entry(ies) or eligibility.

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Please type or print all information requested and sign the form in the space provided. This form (or a photocopy) must be attached to each entry. One check for the total fees must be attached to one entry.

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A Question of Zoning

HOUSTON Although AIA/Houston has supported plans for implementation of a zoning ordinance in Houston, the chapter in December made a public statement about its concerns regarding the ordinance development process.

The original goal of that process was to create zoning in tune with Houston and the unique way it operates, chapter president Frank Douglas, FAIA, told the city's Planning and Zoning Commission. That goal has not been met, he said. The process, particularly the development of zoning maps, was rushed, and the result, he said, is a lack of understanding of the big picture and an emphasis on parochial rather than community-wide interests.

The chapter is concerned that the impact of the zoning ordinance on property values in the city has not been sufficiently analyzed, Douglas told the commission. Houston's financial stability depends on property tax receipts, he said, and thus also on knowing, at least in a broad sense, what the zoning impact will be on property values.

The chapter also questions whether adequate funds have been allocated for enforce-

ment of the proposed ordinance, Douglas said, and believes that those funds must be identified before the ordinance is adopted.

Other areas of concern include the effect the ordinance will have on other public entities; the lack of public comment and input about the zoning maps that have been prepared; the restrictive nature of the regulations on the individual land owner and small developer; the fail-

ure to incorporate the 20 separate land-use ordinances referenced by the zoning ordinance into the zoning document itself; and the failure to prepare models of the real impact the zoning regulations will have on existing and future development in Houston.

The zoning ordinance had been scheduled for City Council action early this year, but that vote was delayed. *SW*

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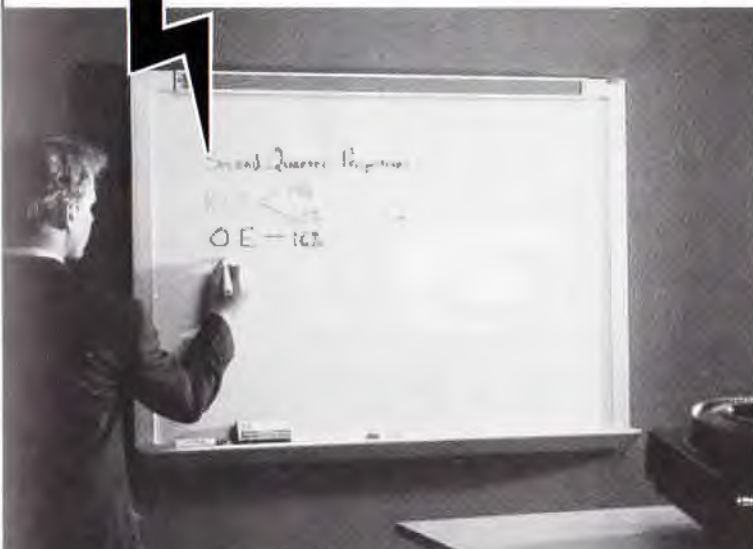
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ARCHITECTURAL PRACTICE

The *White Budd* Verdict

THE COURT CASE called *Major-Gladys Drive Joint Venture v. The White Budd Van Ness Partnership* constitutes a Sword of Damocles hanging over the head of every architect in Texas. The case originated when the Beaumont-based architects (now Budd Beets Harden Kolflat) approved a contractor's cost-savings proposal to substitute "C-tile" pavers for patterned concrete paving in a shopping center. The substituted pavers failed, and the owner sued both the architect and the contractor. Prior to trial, the owner settled with the contractor, who was dismissed from the suit.

The trial court found against the architect, and when the architect appealed, the Beaumont Court of Appeals, in September 1990, issued an opinion that changed the legal environment for every architect in Texas. The Court of Appeals upheld the trial court verdict and stated that the Texas Deceptive Trade Practices Act (DTPA) applied to professional architectural services. The Texas Supreme Court refused to rehear the case when the architects appealed.

Reading the Beaumont Court of Appeals's opinion with an architect's logic is a distressing exercise, but too many Texas architects are ignorant of what the case means and what they need to do in response.

As I was reading the court documents about the architect's appeal to the Supreme Court, the feature of the case that struck me most forcefully was that the Texas Supreme Court refused to overturn the Beaumont Appeals Court's decision *solely on the grounds that the lawyers for the architects filed a brief that exceeded 50 pages*. This apparently means that the Court rejected the architect's appeal without so much as weighing the arguments, or even reading them. Can they do this? You bet. It stretches credulity to know that such a rule supersedes truth and justice, but it is even more unbelievable that an attorney did not know about or believe the Supreme Court's 50-page rule (the lawyers then refiled the brief in smaller type, but the court rejected this as a subterfuge). In any case, the Supreme Court's rejection left the Beaumont Appeals Court's decision standing, although it was in conflict with an Austin Appeals Court decision in *Chapman v. Wilson* in

which a suit against a dentist was summarily dismissed on the grounds that professional services are exempt from claims under the DTPA.

The common issue in *White Budd* and *Chapman v. Wilson* is the proposition that there is an implied warranty that professional services will be provided in what is legally described as "a good and workmanlike manner,"—legality being a far cry from the common-sense understanding of such a phrase—and that failure to do so violates the DTPA.

Buck Dyess, as fine a lawyer as ever was, taught us at Rice in the '50s that the standard of care to which an architect or other professional must adhere to avoid malpractice consisted of exercising the same level of skill and judgment that was the norm for other architects in the area doing similar work.

The DTPA is different. Its stated purpose is to protect consumers against false, misleading, and deceptive business practices, unconscionable actions, and breaches of warranty. Furthermore, the law states these as strict liability provisions, requiring only proof of misrepresentations, even innocent misrepresentations, and requiring no proof of intent to deceive.

So what did the architect do that the dentist didn't? Aside from letting a contractor talk an owner into using C-tile instead of concrete pavers *they lived in Beaumont instead of Austin*, where the state appeals court, it seems, would have held in their favor.

The legal linchpin of White Budd's defense was that the implied warranty of good and workmanlike performance of services does not apply to professional services in which the essence of the transaction is the exercise of professional judgment.

The Beaumont Appeals Court shot down that argument, but did so by citing a case, *Melody Home Mfg. Co. v. Barnes*, that would seem to have almost nothing to do with White Budd's argument. The *Melody Home* case concerns the manufacturer of modular prefabricated homes. The court, in citing it, leapt the gap between pre-fab construction and architecture in a single bound. In *Melody Home*, accord-

"The *White Budd* case," continued on page 26



Courtroom detail, Ellis County Courthouse, by R. Greg Hurstley

Reading the court's opinion in WHITE BUDD is a distressing exercise, but too many Texas architects are ignorant of what the case means and how they need to respond.

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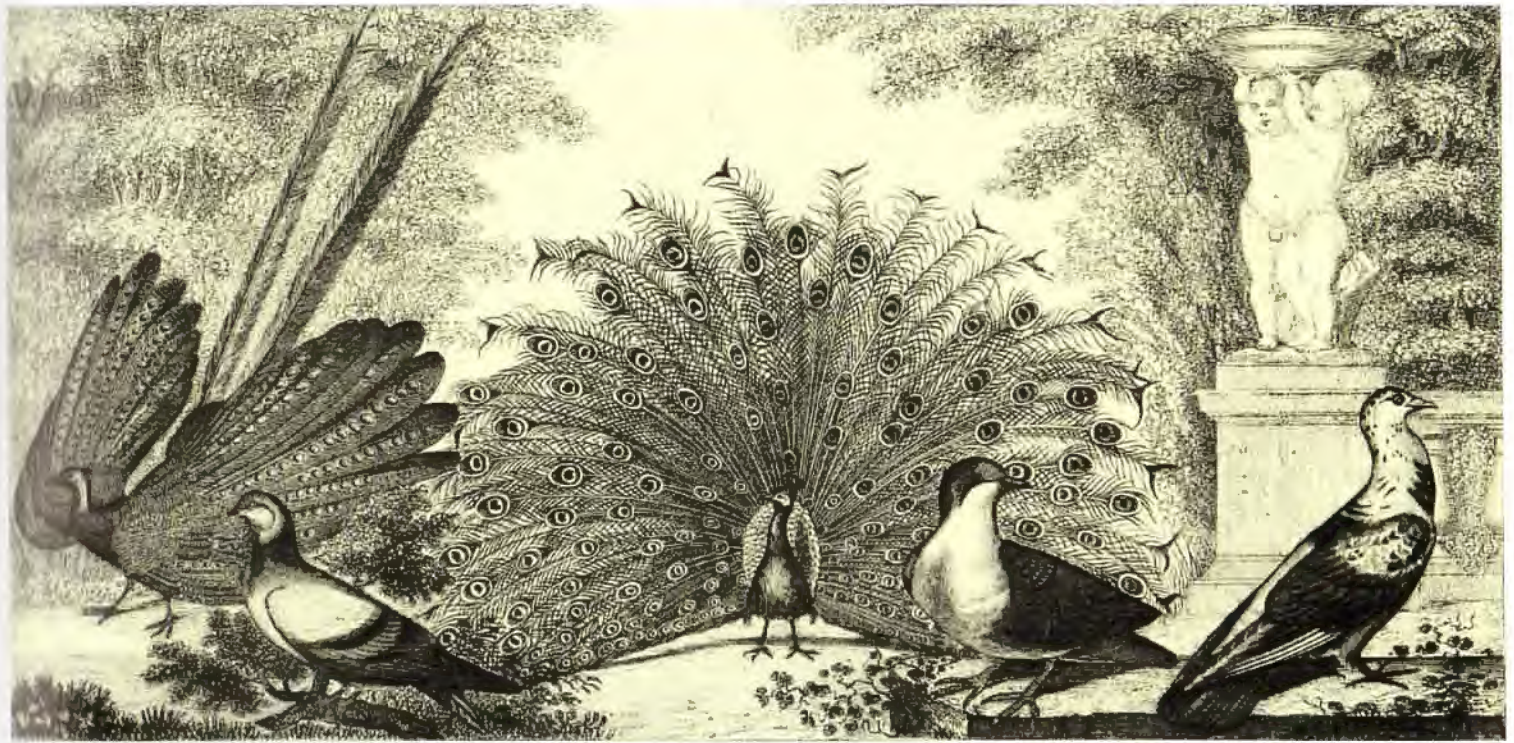
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Call for Entries

Celebrating its 39th year, the expanded TSA Design Awards Program seeks to recognize outstanding architectural projects by architects who practice in Texas and to promote public interest in architectural excellence. In the past, winning projects have been selected from every region of the state, as well as from other countries and

states. Winners have come from one-person offices and large firms and have ranged from simple one-room buildings to elaborate high-rise offices. This year all architects who are registered in Texas are invited to submit one or more entries for consideration by this year's jury. Out-of-state architects must enter Texas projects.

Judging will take place in June at the TSA Office in Austin. Winners and their clients will be honored by a special Awards Gala at the TSA Annual Meeting, September 16-18, 1993, in Fort Worth. Winning projects will be publicized statewide and featured in the September/October 1993 issue of *Texas Architect* magazine.

Look for full details in the May/June 1993 issue.

39th Annual TSA Design Awards

"The White Budd case," continued from page 22

ing to the Beaumont Court, the Texas Supreme Court had "forcefully noted that, during recent decades, the United States has shifted from a goods oriented to a service oriented economy and that, with this basic change, there has resulted a marked decrease in the quality of services."

Going on to cite Texas Supreme Court Justice Nowell in a 1968 case, they quoted his reasoning as applied to *White Budd*: "That court best serves the law which recognizes that the rules of law which grew up in a remote generation may, in the fullness of experience, be found to serve another generation badly, and which discards the old rule when it finds another rule of law represents what should be according to the established and settled judgment of society and no considerable property rights have become vested under the old rule."

Got that? In other words, they were extending the DTPA to professional services in order to redress a perceived, unrelated societal ill.

Aside from the outrage we might feel at the implication that our centuries-old profession

has no property rights vested in the learned exercise of its professional judgment and that our value to society is similar to that of a mobile home manufacturer, what can we learn from this? I suggest several things:

- Society is changing. We live in a world of increasing consumer expectations and we remain static at our own peril. Our performance must improve. There were some narrow fact issues in this case that resulted in jury findings of "unconscionable actions" on the part of the architect that may make the situation atypical.

- Performance in defending ourselves must also improve: Notably absent from the record was any offering of expert testimony by the defendant as to the role of the architect and the standard of care. At the same time, a key element in this case was the expert testimony for the plaintiff by an engineer who had spent his career in contracting. The Beaumont Appeals Court ruled that the fields of architecture, engineering, and construction overlap and intertwine to such an extent that this witness was perfectly qualified to state, without rebuttal,

that the architect's performance in the case failed to meet the standard of care.

- Reliance upon the law to protect us from unfair results is risky and speculative at best. The understanding of lawyers and judges about what architects do varies from county to county. We not only must perform better, we must do a better job of educating society as to the value of architecture.

- In the near term, we should, as a profession, bring our best efforts to bear on seeking a favorable Texas Supreme Court ruling on the issue of implied warranty. To do so will require the identification of a proper case and an effort by TSA to educate the lawyers involved and, if necessary, to bring informed testimony as to the distinction between trade practices and the application of learned professional judgment.

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John M. McGinty, FAIA

John M. McGinty of Houston is managing principal of American Construction Investigations, a forensic consulting firm.

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1993 Honors Program Call for Nominations

Each year since 1971 the Texas Society of Architects recognizes individuals and organizations outside the profession of architecture who share its commitment to the quality of life in Texas. Accomplishments by past honorees have included roadside beautification, wildlife conservation, open space protection, passage of laws protecting the public's health, safety, and welfare, downtown revitalization, preservation of historic buildings and sites, public-school programs emphasizing environmental concern, museum programs and exhibits about community architecture, and reporting, publications, and articles promoting the appreciation of the built and natural environment. In addition, TSA honors its exceptional members and distinguished Texas architectural educators for leadership and achievement.

Award Categories

Honorary Membership

Awarded to an individual for long-term association with architects and architecture in providing a better quality of life in Texas.

Citation of Honor

Awarded to groups or organizations whose activities make significant contributions to the goals of the architectural profession for improvement of the natural or built environment in Texas.

John G. Flowers Award

Awarded in memory of TSA's first executive vice president. Recognizes an individual or organization for excellence in promotion of architecture through the media.

Llewelyn W. Pitts Award

TSA's highest honor, awarded in memory of Llewelyn W. Pitts, FAIA, who served as TSA president in 1961 and was an influential and dedicated AIA leader. Recognizes a distinguished member for lifetime leadership and achievement in the profession of architecture and the community. Although no formal nominations are accepted, suggestions may be directed to the Honors Committee.

Distinguished Achievement in Architectural Education Award

Awarded to a distinguished architectural educator who has inspired others to excellence in architecture. Nominee must be a current or former member of the faculty of one of the seven accredited Texas schools of architecture, living at the time of nomination, and a full-time educator for at least five years. Criteria for selection will include evidence of the following: teaching of great depth, having a cumulative effect on a long line of students; teaching of great breadth, having influenced a wide range of students; and the ability to maintain relevance through the years by directing students toward the future while drawing on the past.

William W. Caudill, FAIA, Award for Young Professional Achievement in Recognition of Outstanding Service in Leadership Development

Awarded in memory of William W. Caudill, FAIA, recipient of the 1985 AIA Gold Medal and a pioneer of architectural design, practice, and education. Recognizes a TSA member who exemplifies qualities of leadership and service to the organization and community. Must be an AIA member in good standing and an active member of the local AIA chapter and TSA for a minimum of two years, not to exceed ten years (40 years of age is a recommended maximum for a nominee). The individual should be a role model to the organization with these qualities: goes beyond the call of duty in service to the profession; influences improvement in the organization at the state level; encourages participation among fellow members and nonmembers; exemplifies qualities of leadership; and exemplifies qualities of professional practice.

Nomination

Each nominee's submission should include: (1) completion of the nomination form; (2) illustrations (photos, publicity releases, other graphic material); (3) letters of recommendation from individuals outside the architectural profession (mandatory for Honorary Members limited to five letters; optional for other nominations); (4) letter of recommendation from chapter president (mandatory for Young Professional Achievement Award; optional for other nominations); (5) photograph of nominee (mandatory for Honorary Membership, John G. Flowers Award, Llewelyn W. Pitts Award, Educator Award, and Young Professional Achievement Award). Include all material in 8 1/2" x 11" plastic sleeves and submit in a ring binder. Reduce all oversize material to fit within sleeve.

Selection

The TSA Honors Committee will meet on June 11, 1993, to review submissions. After the TSA Board has taken action on the Honors Committee recommendations, winners will be notified by a letter from the TSA President. News releases will be originated by TSA.

Presentation

Awards will be presented during TSA's 54th Annual Meeting at The Worthington Hotel in Fort Worth, September 16-19, 1993.

Submission Deadline

All nominations must be received in the TSA Office no later than 5:00 p.m. on Tuesday, June 1, 1993. Nominations should be sent to:

TSA Honors Committee
c/o Texas Society of Architects
114 West Seventh, Suite 1400
Austin, Texas 78701
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Spring 1993

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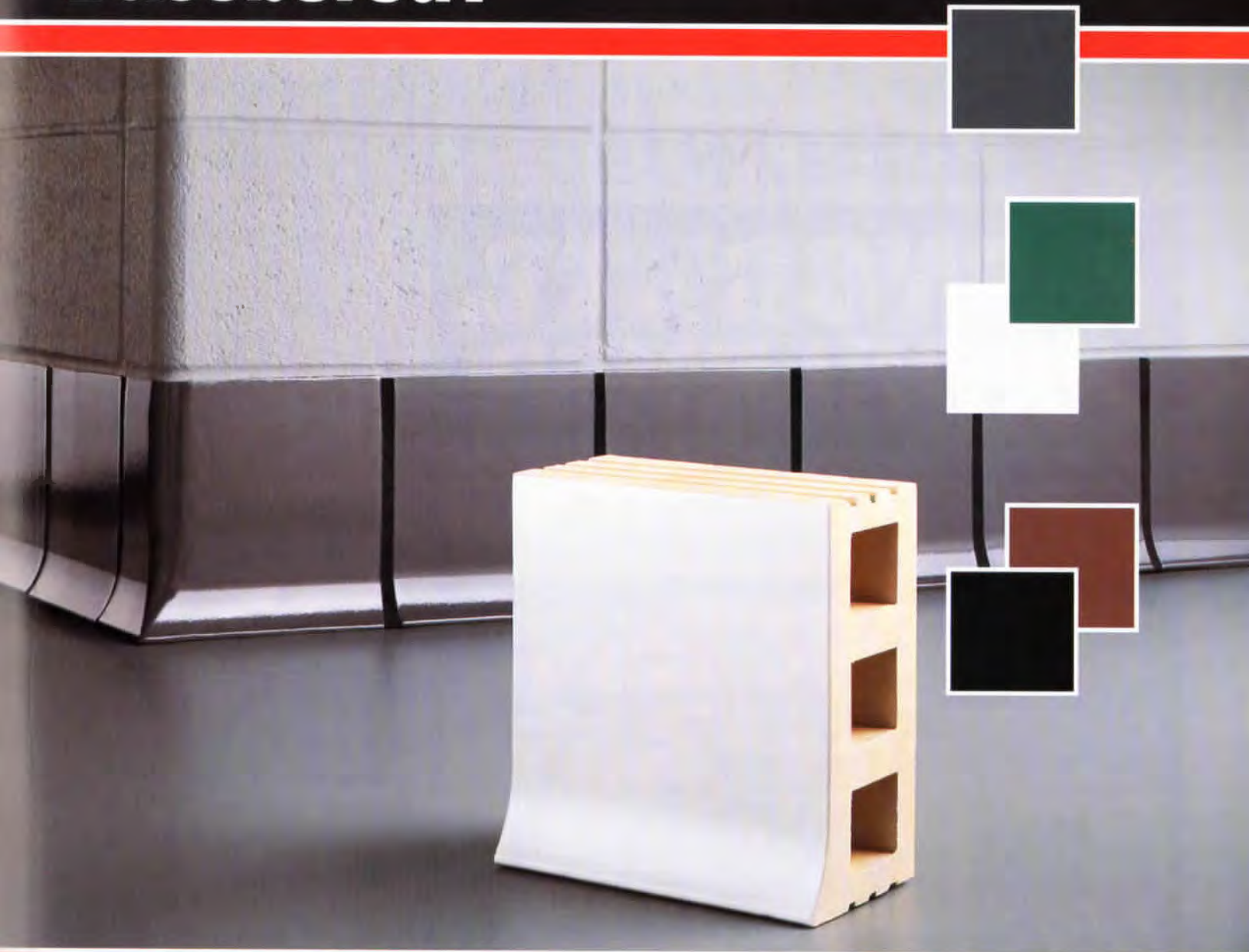
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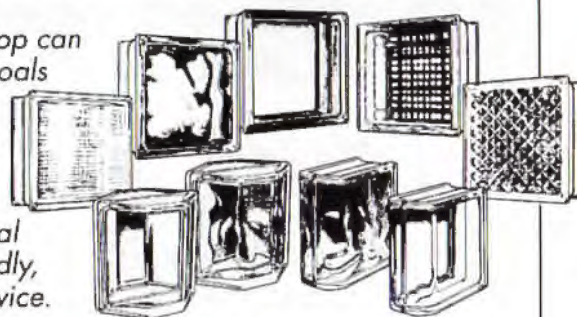
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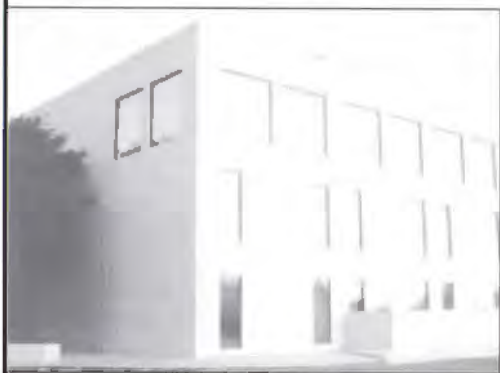


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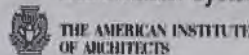
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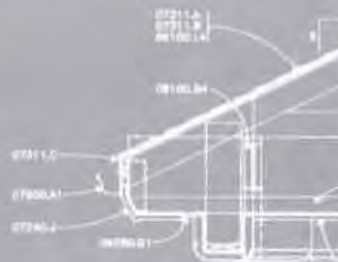
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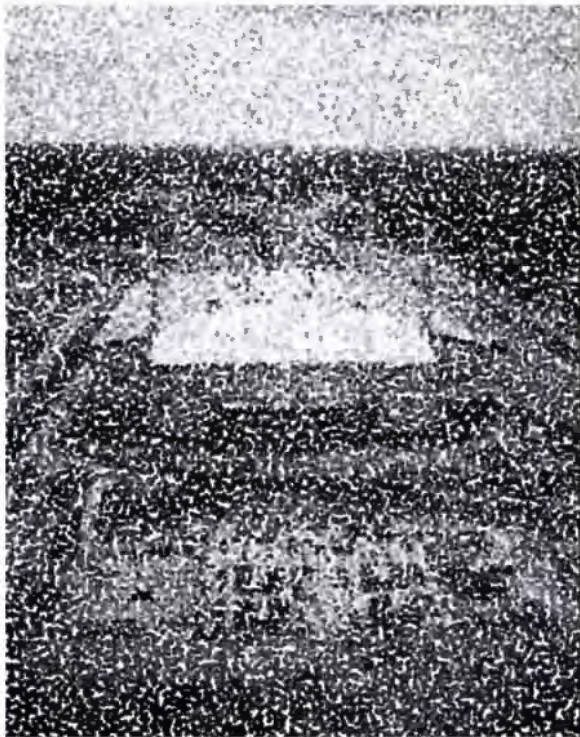
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Public Buildings



IN THIS ISSUE we present a selection of new projects for public clients in Texas, including the Texas Capitol Extension in Austin (top right), the Federal Reserve Bank headquarters in Dallas (top left), the San Antonio Alamodome (left), the Western Currency Facility for the federal Bureau of Engraving and Printing near Fort Worth (above), the Irving Criminal Justice Center in Irving, and the Southeast Dallas Police Station. With a wide range of physical and social contexts and a variety of budgets and programming priorities, these projects provide a sampling of new publicly funded architecture in Texas. *Joel Warren Barna*

Buried Treasure

by Joel Warren Barna

THE QUIET, SKYLIT underground building called the Capitol Extension is the first phase completed of the three-phase restoration and expansion of the 104-year-old Texas State Capitol in Austin; the project began in 1988, following a decision by state officials to spend \$149 million to deal with chronic overcrowding and the threat of a disastrous fire in the historic building. Changed plans and higher bids later resulted in a total budget of \$180 million. Restoration of the Capitol's exterior is nearly complete, and work on the interior is scheduled for completion in 1994.

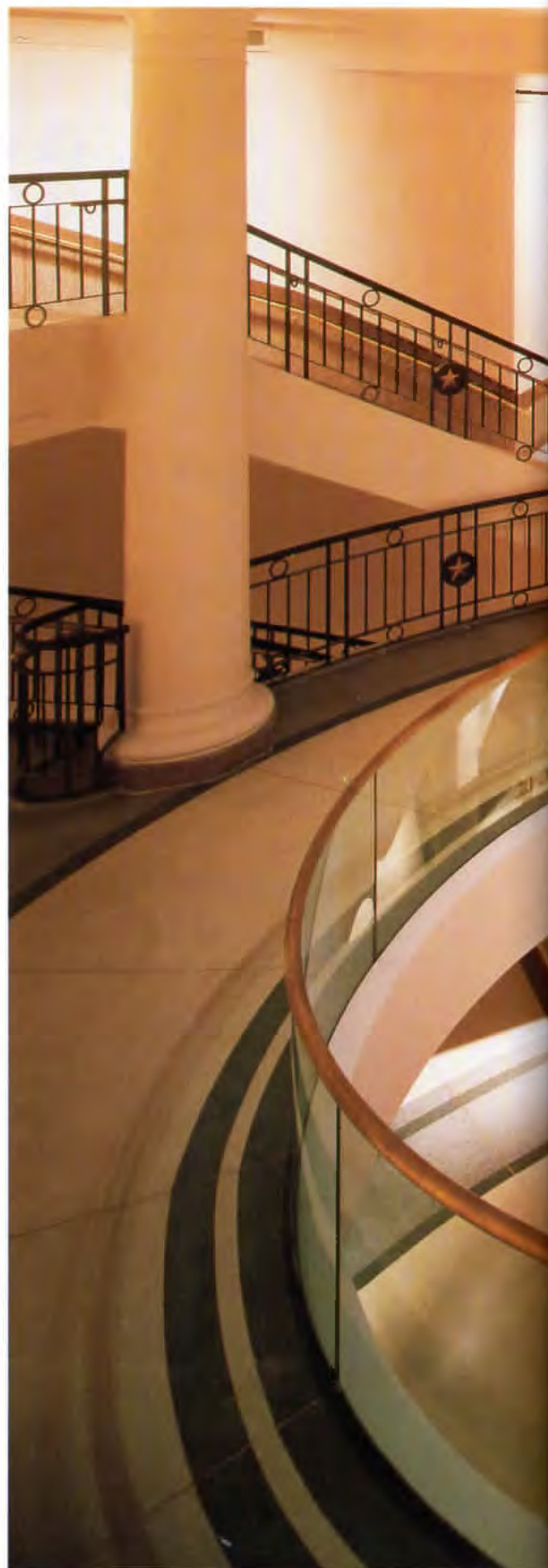
Architects for the overall project are a joint venture of 3D/I of Houston and Ford, Powell & Carson, Inc., of San Antonio; 3D/I is lead architect for the extension itself. The decision was made early on to build below ground. A massive hole was dug on the Capitol's north side, and construction was begun on the \$63.6-million extension, which measures 615,000 square feet in two office levels and two levels of parking for up to 681 cars. The office levels contain space for 12 state senators, 99 state representatives, the Legislative Budget Board, 16 committee rooms, 49 committee-staff suites, an

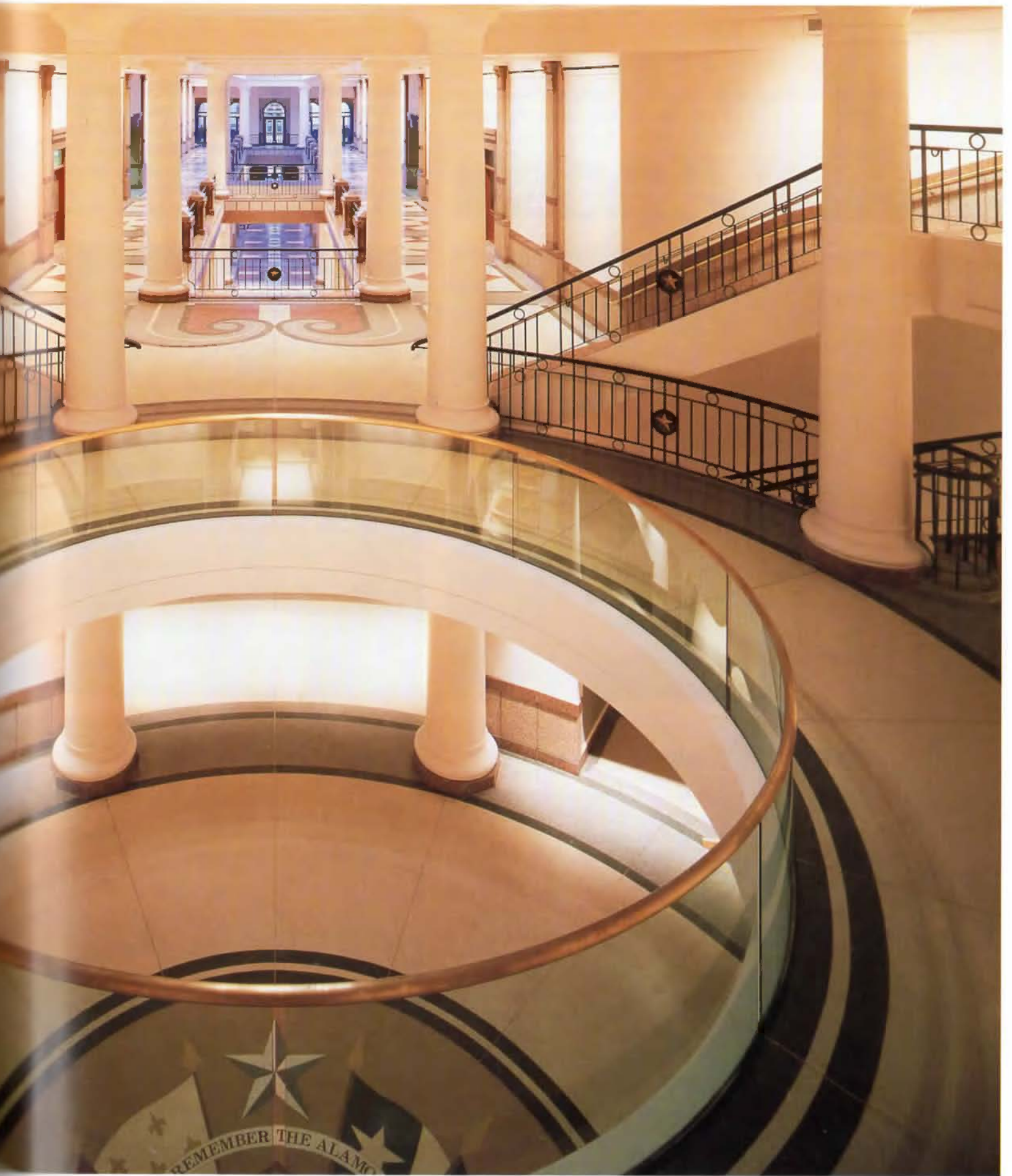
Right: The first of two rotundas that spatially unite the Capitol Extension showcases the obverse of the state's seal in terrazzo.

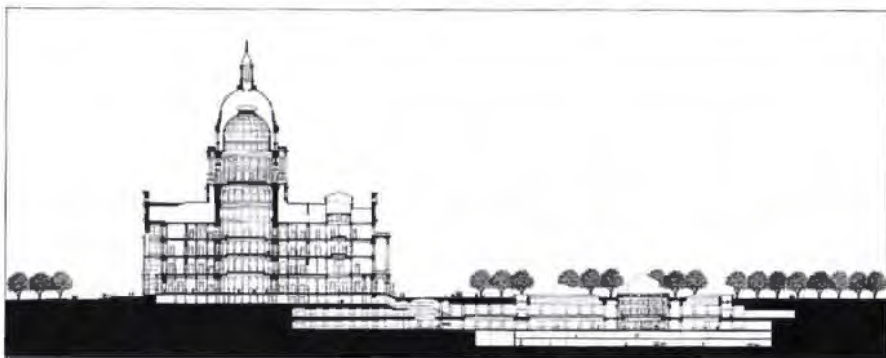
Below: Senate Finance hearing room



Photographs by Joe Aker Photography





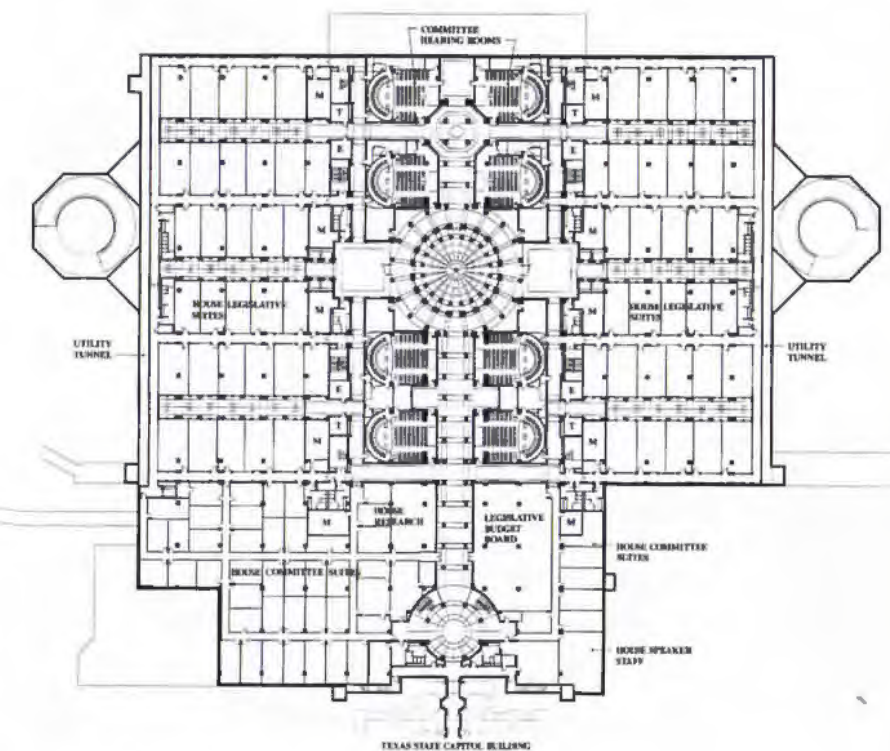
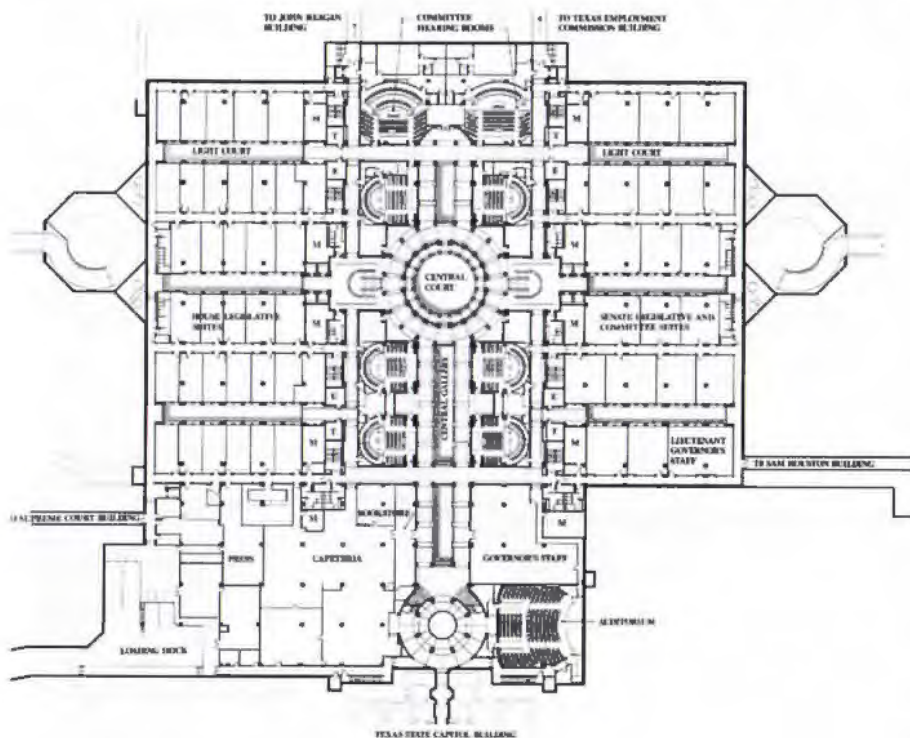


Left: north-south section, with the Extension's two office levels and two parking levels

end are large hearing rooms of the House Appropriations and Senate Finance Committees.

Center left: Plan of level one; at the north

Bottom left: plan of underground level two



auditorium, a cafeteria, a press area, bookstore, and, for the time being, the offices and staffs of the Governor, Lt. Governor, and Speaker of the House.

According to Kirby Keahey, FAIA, project director, the aim was to provide contemporary services for the Legislature in a setting compatible with the historic Capitol to which it is connected. Spatial relationships to the Capitol were maintained; it is the same distance from the Extension to the legislative chambers in the Capitol as it is from one end of the Capitol to the other. In addition, tunnels connect the Extension to four other nearby state office buildings. Hearing rooms and support spaces in the Extension are bigger than equivalent spaces had been in the subdivided Capitol, air conditioning and plumbing are better, and everyone will—at least in theory—have more spacious offices, Keahey says. At the same time, the architects were working under a strict budget, and had to adjust materials and construction to keep costs in line.

The central spaces of the extension, a long north-south gallery under skylights that provide glimpses of the Capitol dome, along with other



Facing page, bottom right: East-west corridors used frequently by the public are detailed in granite and wood, like those in the Capitol.

Below left: An open-air rotunda, faced in granite, provides a major orientation point for the central corridor, as well eye-level contact with the outside.

Bottom left: Skylights bring light to east-west corridors opening to the offices of state legislators, their staffs, and other state officials.

Below: A skylit spine runs north-south, helping orient visitors to the underground space by providing an impressive view of the Texas Capitol.



public corridors, are detailed in granite or oak, with colorful terrazzo floors—materials that echo those in the Capitol. The central corridor is lined with simplified versions of columns found in the Capitol, recreated by using thin but visually convincing covers for the Extension's concrete structural piers. The south end of this main corridor is marked by a rotunda that centers on a terrazzo floor seal, the obverse of the official state seal under the Capitol dome. The north end is punctuated by a 40-foot-high open-air rotunda that lights the colonnade around it. East-west corridors leading to legislative and staff offices are detailed with molding over gypsum board, a cost-cutting measure; each of these offices opens onto a sunlight-filled, glass-covered court.

Says Bill Cryer, the Governor's press secretary, who recently moved into the Extension, "It's amazing how much light there is down here."

Already, spaces are filling in past their planned capacity, and some offices have been plugged into windowless spaces. At least now the legislators and their staffs have more space to work with. **TA**

PROJECT *Texas Capitol Extension and Preservation, Austin*

CLIENT *State Preservation Board, Dealey Herndon, executive director*

ARCHITECTS *3D/International, Inc., Houston; Ford, Powell & Carson, Inc., San Antonio, in joint venture (Project team for extension: Kirby M. Keaby, FALA, project director; G. Norman Hoover, FALA, extension design principal; C. K. Pang, project designer; Ray McClure, project architect; Lance Hu, Rick Fals, Marissa Yu, Brad Glaesmann, Ed Tuffis, Ginny Mullins*

CONTRACTOR *Sparw-Glass, Houston, excavation contractor; Charter Builders, Inc., Dallas, building contractor*

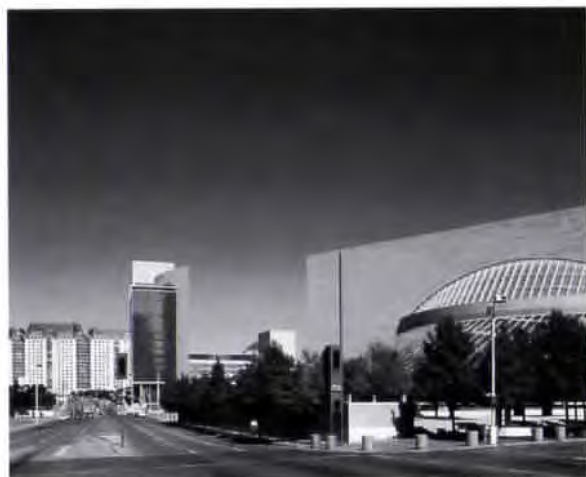
CONSULTANTS *The Datum/Moore Partnership, Dallas and Houston (structural); Walter P. Moore & Associates, Houston (traffic); 3D/I Engineering, Houston (mechanical, electrical, and plumbing engineering and estimating); S. A. Garza Engineers, Inc., Austin (civil); E. L. Fly & Associates, San Antonio (landscape architects); The Architects Office Corporation, Austin (excavation coordination); George Sexton Associates, Washington, D.C. (lighting); Mulhauser/McCleary Associates, Inc., Houston (food service); Consul Ltd., Houston (telecommunications); Rolf Jensen & Associates, Inc., Houston (life safety); Joiner & Company, Arlington (acoustics); Fuller Dyal & Stamper, Inc., Austin (graphics)*



Richard Payne, FAIA

The Power and The Glory

by Willis Winters



BlackmonWinters

The new federal reserve takes its place among the landmarks of Pearl Street: Texas Commerce Tower, The Meyerson Center, and the Crescent.

THE NEW BUILDING for the Federal Reserve Bank of Dallas marks the emergence into public view of an important institution that had been virtually hidden in its previous downtown location. Whether public understanding of the Federal Reserve's mysterious actions will change is an open question, but the physical contrast between the bank's old and new quarters could not be more startling. After vacating its former home of 71 years—a dark, neoclassical edifice designed by Graham, Anderson, White and Probst of Chicago—the new Fed now enjoys unsurpassed public visibility due to its pivotal site on Woodall Rogers Freeway, north of downtown.

The site, eight acres on Pearl Street, occupies a sort of middle-ground between the downtown high-rise landscape, across the freeway two blocks to the south, and Philip Johnson's Crescent office building, a block north. Equally important contextually are the site's adjacencies to the Dallas Arts District (I.M. Pei's Morton H. Meyerson Symphony Center is directly across the freeway) and the historic State-Thomas neighborhood, with its emerging residential development along McKinney Avenue. Pearl Street—all four blocks of it—stretching from the Crescent past the Fed, the Mort (as the symphony center is called), and Santuario Guadalupe, to Texas Commerce Bank Tower and beyond, now has enough landmarks in place to become one of Dallas' great public boulevards. With each end of Pearl firmly anchored by significant tall monuments, the Federal Reserve Bank provides the final critical plug into what was formerly a desolate strip of surface parking, vacant property, and machine shops, along with the charred foundations of Trinity Methodist Church.



Richard Payne, FAIA



Richard Payne, FAIA

Facing page: facing downtown Dallas across the Woodall Rogers Freeway, the Federal Reserve in effect extends downtown northward.

Above: The double-height stone and glass lobby, with its stunning views of downtown, is the only part of the building open to the public.

Left: The boardroom is detailed in a style inspired by the early-20th-century Craftsman movement.

At 764,000 square feet, the Federal Reserve Bank is a behemoth, befitting a giant federal corporation with peculiar and disparate functional requirements. The program generated a ground-floor area of 250,000 square feet to accommodate extensive check-handling and delivery services, in addition to the vaults and related money-handling facilities. This six-acre footprint occupies three-fourths of the site (the remaining two acres are for future expansion) and creates a "piano nobile" level organized around the smaller of two rooftop gardens. This courtyard is enclosed on three and a half sides by a floor of employee amenities—cafeteria and lounge, auditorium, training facility and conference center, and fitness and daycare centers, in addition to a linear gallery; the opening on its southwest corner provides stunning framed views of downtown. As the building continues to rise above level two to accommodate more standard office functions, it steps back and reconfigures in two-floor increments, first forming a "C" open to the south, then an "L" and finally culminating with the upper eight floors of the office tower on the

west. This basic configuration of a large ground floor (and roof-top garden) with gradually diminishing mid-rise floors and an office tower is not new within the Federal Reserve System. In the last fifteen years, two other significant bank facilities—those in Boston (Hugh Stubbins, 1977) and San Francisco (SOM, 1983)—have followed this model, with varying degrees of success.

Beyond meeting the client's stringent functional requirements, the building also succeeds in fulfilling the Federal Reserve System's prime directive governing the design of new buildings—to portray "stability, dignity and security."

Working within these guidelines, the design team (Sikes, Jennings, Kelly & Brewer, Houston; Kohn Pedersen Fox Associates, New York; and associate architect John S. Chase, FAIA, Dallas and Houston) has achieved a scenographic, sometimes whimsical, composition through the use of scale manipulation and shifted geometry, in addition to an articulate, if slightly contrived, architectural vocabulary. Contextual clues are abundant. The office tower is shifted off the axis of the lower floors to acknowledge both the directional views towards downtown and the importance of the freeway intersection. A giant curving slab of masonry defines the eastern half of the tower, echoing the curve of the Meyerson's lobby. Bank and symphony center also share exterior cladding (limestone from the same quarry in Indiana, with the same rectangular cut) accented by a gray granite base; an off-white aluminum curtain wall system; and in the interior public spaces, raw, highly polished concrete structure and travertine flooring. Since designer Bill Pedersen worked for Pei on the East Building of the National Gallery of Art, it's no surprise, also, to find the projecting corner of the tower's curving masonry precisely detailed to a razor-sharp edge.

Rising above an imposing stone base is a city in miniature, rendered with simple volumetric shapes, each differing in material and fenestration. When viewed from the Woodall Rogers canyon, this picturesque composition assumes the character of a fortified castle, complete with drawbridge (the Pearl Street overpass), an allusion not inappropriate to either the building type or this site. The palette of limestone cladding and crisply-detailed curtainwall with reflective glass provides dramatic visual contrasts throughout the complex. Whereas the two materials are used to define and isolate different masses of the sprawling base, they are deftly blended together on the office tower to produce a singular soaring image that has become the bank's most striking characteristic. Vertical emphasis on the tower and the mid-rise office blocks is achieved

Facing page, top:
The elevated central courtyard presents other controlled views of downtown.

Facing page, below:
plans

Right: The Federal Reserve Bank presents a tall limestone wall to the low-scale State-Thomas neighborhood.

Below right: The elevations facing the courtyard are arranged in picturesque compositions of massing and materials.



BlackmonWinters Photography



BlackmonWinters Photography

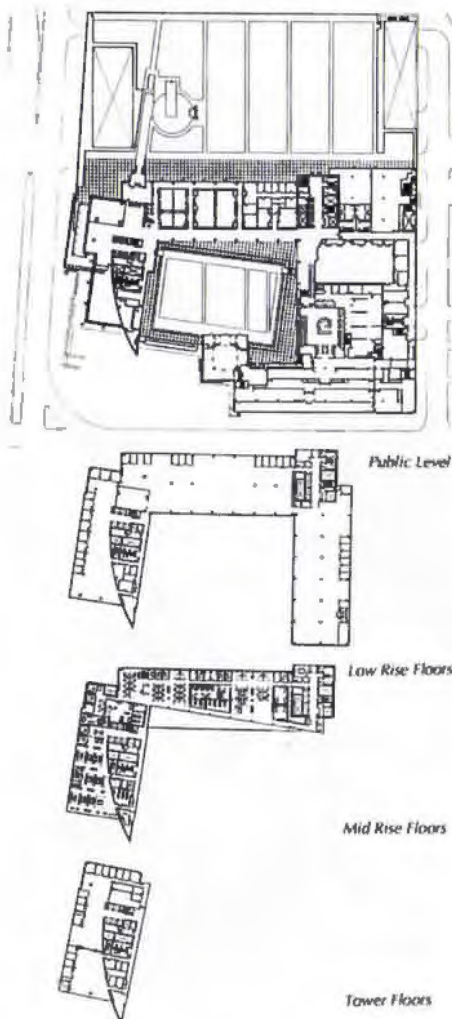
through narrowly spaced limestone and aluminum fins with contrasting aluminum mullions on the curtainwall. There is a bonus with this fenestration system: when viewed from an oblique angle, the projecting fins make the building appear solid and secure; when viewed straight-on, the fins tend to disappear, and the building seems to be predominantly glass, and therefore more hospitable.

This is not to say that the Fed is overly friendly for anyone but its employees, however. It is an object better viewed from a distance than from the adjacent sidewalk. Only at the base of the office tower does one find glass and any elements with reduced scale; an imposing limestone wall (needed for security) wraps the remainder of the complex at the ground level. This wall, while contributing to the scenic composition facing downtown, turns a blank face to the State-Thomas neighborhood.

For a public building, the Federal Reserve Bank offers up very little of its floor space for civic encounters. Only those wishing to purchase T-bills or trade securities have any reason to enter the beautifully-detailed stone and glass lobby, with its pan-



Richard Payne, FAIA



oramas of downtown. More fortunate are the 1,200 Fed employees, who enjoy one of the better corporate work environments in the city, including the two impressive roof-top gardens designed by the SWA Group. Employees actually come to work each morning through the expansive north garden, ascending from the underground parking garage via elevator to a circular roof-top pavilion, then moving through an open-air passageway into the second level of the office tower. The interiors, by Kohn Pedersen Fox & Conway with Sikes, Jennings, Kelly & Brewer, are elegant. Memorable spaces, in addition to those on the second floor, include somewhat whimsical, craftsman-inspired executive offices and board room, in addition to a cash vault of epic dimensions.

The Federal Reserve Bank is public only in its role as a government institution. By nature and in fact, it is as inward-oriented and security-conscious as any private corporation with both physical and electronic assets to protect. The new building does embrace a certain public-spiritedness, however, by virtue of its prominent, unconstricted location and the expansive and highly picturesque design solution provided by its architects. It also addresses the public realm through its ultimate ability to communicate the sheer power of its client, in a way that few buildings ever accomplish. **TA**

Architect Willis Winters of Dallas is a principal of BlackmanWinters Photography, Irving.

PROJECT Federal Reserve Bank of Dallas

ARCHITECTS Kohn Pedersen Fox Associates, New York; and Sikes, Jennings, Kelly & Brewer, Houston; (Project team: Benjamin E. Brewer, Jr., FAIA, principal in charge; William Pedersen, FAIA, design principal; Robert Kuykendahl, project manager; Roxsan Okan-Vick, project architect; Richard Clarke, project designer); Associate architect: John S. Chase, FAIA, Dallas and Houston

INTERIOR ARCHITECTS

Kohn Pedersen Fox & Conway and Sikes, Jennings, Kelly & Brewer (Miguel Valcarcel, principal-in-charge; Robert Hartwig, project manager)

CONTRACTOR Austin Commercial, Dallas

CONSULTANTS SWA Group,

Houston (landscape architects); Datum-Moore Consulting Engineers, Houston and Dallas (structural); Blum Consulting Engineers, Dallas (mechanical, electrical, and plumbing); Carter and Burgess, Fort Worth (civil); Douglas Harding, Houston (graphics); Knight O'Connor, Houston (security); Rolf Jensen, Houston (life safety)

Law and Order

by Joel Warren Barna

RAPID POPULATION GROWTH has meant increasing stress on the police and courts services provided by the City of Irving, the town just east of Dallas best known as home of Las Colinas and Texas Stadium. The new Irving Criminal Justice Center, designed by the Dallas office of Hellmuth, Obata & Kassabaum, was built to meet that need. The complex, combining jail, police station, and municipal courts, was built on a 9.7-acre site near the historic center of Irving, a district of one- and two-story turn-of-the-century commercial structures and houses. The justice center links this district with a city hall-public library building that was constructed in the 1980s.

The new justice center uses brick, cast stone, and metal grillework to interpret the elements of generalized small-town Texas architecture, combining them with modern functional requirements.

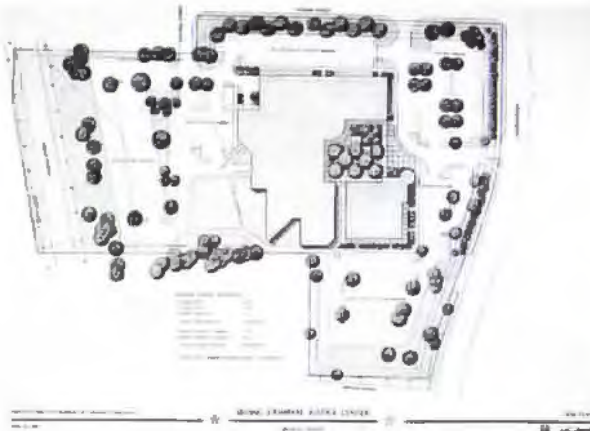
The architects achieved an urbanistic stroke by folding their complex around a courtyard that opens off Irving's uninflected street grid, creating a first-ever civic square.

City officials had emphasized that the police and judicial functions were to mesh, but that the jail and the courts should have separate entries. "They said they wanted people to have the feeling that they would get a fair shake, not that the courts and police were in cahoots," says Kirk Millican of HOK, project designer for the complex. HOK responded by creating curving circulation bays, facing each other across the plaza, for the entries.

Photographs by BlackmanWinters Photography



An early site plan (right) shows how a public plaza (above and far right) is enclosed by buildings in the Irving Criminal Justice Center.



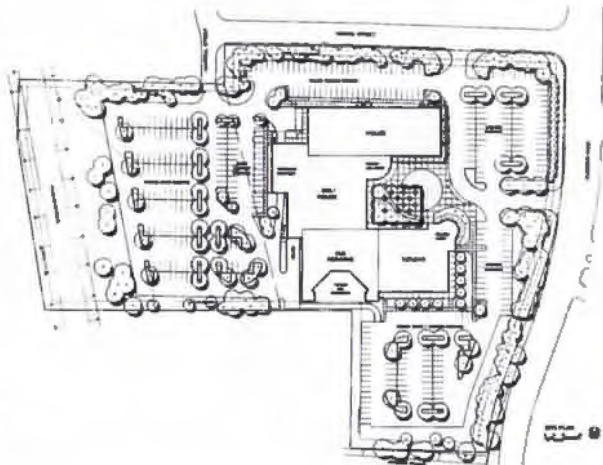
Facing page: The lobby of the municipal courts building is marked by a curved wall of shaded windows.







PROJECT Irving Criminal Justice Center, Irving
CLIENT City of Irving (Douglass Bales, Assistant City Manager)
ARCHITECT Hellmuth, Obata & Kassabaum (Project team, architecture: Dan Jenkins, principal-in-charge; Bill Lacey, design principal; Kirk Millican, project designer; John Kraskiewicz, project manager; and Bobby Carter, project coordinator; Project team, interiors: Molly McIntyre, Loretta Fulvio, and Terri Hogan; Landscape design: Mike Preston and Mark Bowers; Graphics: Michael Gilbreath; Lighting: Roberta Swatek)
CONTRACTOR Sparw-Glass, Inc., Houston
CONSULTANTS Datum-Moore, Inc., Houston and Dallas (structural and civil); Carl Erickson, Dallas (security)



Top: triangular interior of a dayroom in the Irving Criminal Justice Center's municipal jail

Above left: plan, showing interlocking footprint of the police station, the temporary and long-term jail buildings, and the municipal court



Above: A central monitoring station, with electronic equipment, allows surveillance of jail cells and dayrooms from a single point.

Facing page, top: Interior of a municipal courtroom; wood paneling and lighting separate the jury box and bench from the rest of the room.



The central entry bows out from the juncture of the police station and jail; it is fronted by a double-height gridded wall of glass. Behind it on the first floor is the department's community-services division and jail-visitation area. Upstairs are the offices for detectives. Most of the police officers and all of the prisoners enter the building from the secured vehicular sallyport at the rear of the building, which leads to the intake center and temporary cells. Longer-term prisoners are housed in the jail, which is composed of four two-story pods of cells arranged around triangular dayrooms; personnel costs were a major concern, so a single guard in the central control station can keep the entire jail under surveillance.

The courts entry, behind a wall of glass block, features an imposing stairway framed by radiating columns. The first-floor lobby is devoted to teller windows for paying fines. The courtroom level, upstairs, is linked by elevator to the jail and by corridor to the police station. Efficient inner circulation and civic presence make the new justice center a welcome addition to Irving's townscape. **TA**



Above: a conference room in the Irving Police Station

Dome Alone

by Susan Williamson

Right: north elevation, with transit station under construction in foreground

Below right: north-south section

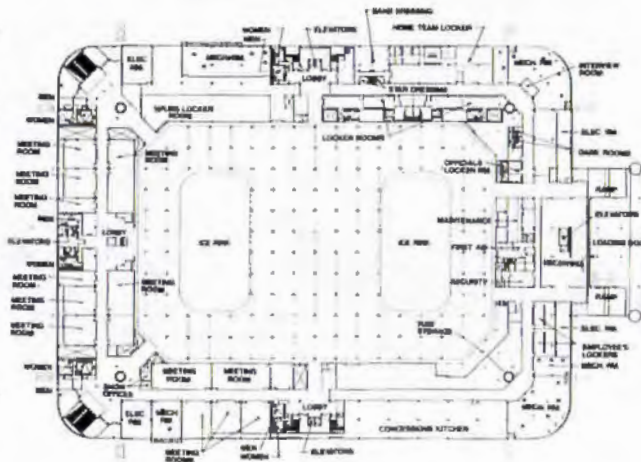
PROJECT Alamodome (multi-purpose stadium), San Antonio

CLIENT VIA Metropolitan Transit Authority and City of San Antonio

DESIGN TEAM Marmon Mok, San Antonio (design prime; architecture; interior design; mechanical, electrical, and plumbing); HOK Sports Facilities Group, Kansas City, Mo. (architecture); and W.E. Simpson Company, Inc., San Antonio (civil and structural)

PROJECT MANAGER Day & Zimmerman, Inc., San Antonio

CONSULTANTS Aranda, Inc. (surveying); E.L. Fly & Associates (landscape planning); GGC Engineers (site utilities); Grant Engineering (drainage); Haywood Jordan McCowan (architect for City Water Board Central Plant Building); M-E Engineers, Inc. (mechanical); Martin-Martin (structural); McChesney Design (graphics); George W. Muery Services, Inc. (surveying); Curtis Neal & Associates (ductwork and general lighting); Andrew Perez Associates (site development); Dean H. Phillips (programming); Raba-Kistner Consultants, Inc. (soils testing); James T. Rodriguez Consulting Engineers, Inc. (fire detection, alarm stations, plumbing); Wilbur Smith Associates (traffic); Somerville-Gonzalez & Associates (civil); Structural Engineering Associates, Inc. (site structural); Wrightson, Johnson, Haddon & Williams, Inc. (acoustics)



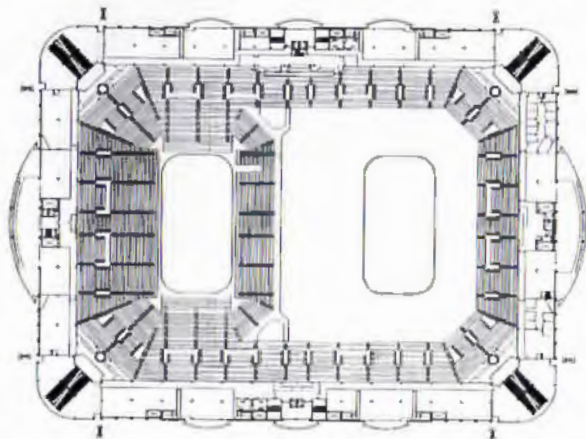
THE TOWER OF THE AMERICAS has some competition on the San Antonio skyline these days: the four towers of the Alamodome, which rise 300 feet into the sky across the interstate from downtown.

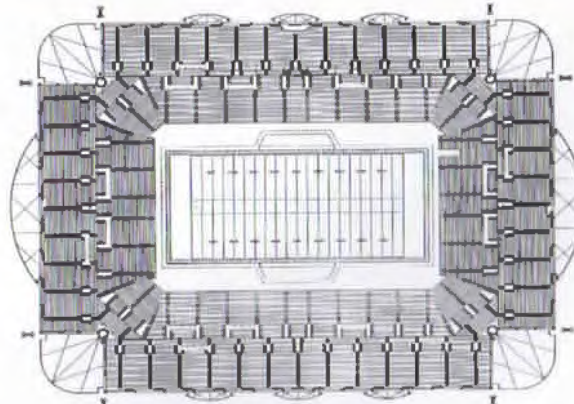
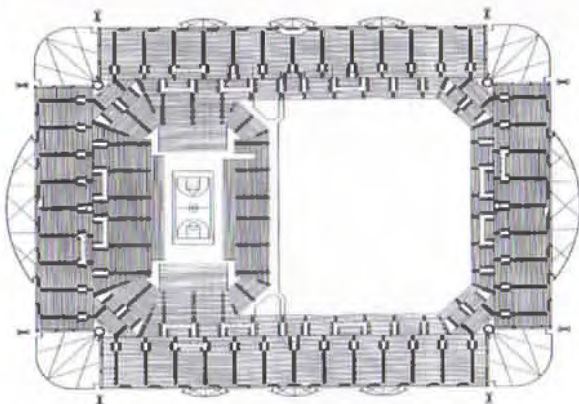
The towers are the central feature of the Alamodome's innovative suspended roof structure, which leaves the interior column-free. High-strength cables connect the towers to points on the roof and are then anchored to concrete piers sunk 90 feet into the ground.

The stadium was built to meet NFL requirements, and, although hopes for an NFL expansion team were dashed last year, a Canadian Football League team will shortly take up residence. Other sports, from basketball (the Spurs move in next season) to ice skating, can also be accommodated, as well as concerts, conferences, and other similar events.

The exterior combines walls of horizontally banded, multicolored masonry with exposed steel trusses set under the eaves of the standing-seam metal roof; blue glass curtainwalls open the entryways on the north and south, the four corner circulation areas, and three bays on the east and west elevations to views of the surrounding city.

The architects compensated for the stadium's isolation on the freeway's east side by developing pedestrian links to the westside Convention Center and Hemisfair Plaza. A VIA transit station on the north end of the site provides a connection to the historic St. Paul Square area. City officials hope these linkages spur economic development around the stadium. **TA**



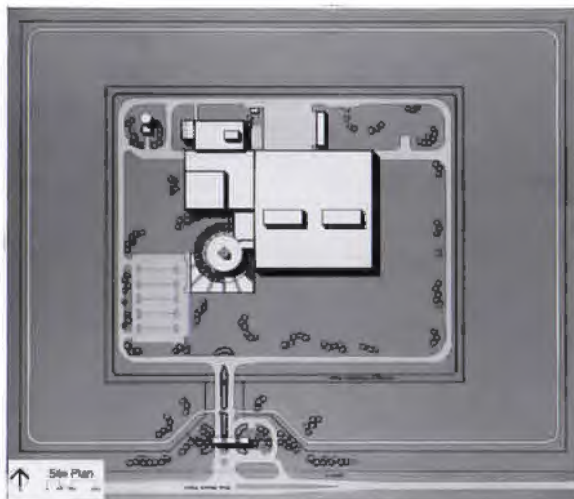


Above: The Alamo-dome's towers and materials address the downtown context.

Bottom, left to right: configuration plans—exhibitions (field level); hockey seating (lower level); basketball seating (upper level); and football seating (upper level)

Below: Architects Kirk Voich Gist of Fort Worth brought drama to the entry of the Western Currency Facility, setting it under a pyramidal skylight that centers on the Bureau of Engraving's seal.

Right: site plan



Money Factory

by Susan Williamson

THE WESTERN CURRENCY FACILITY is essentially a \$66-million manufacturing plant, but the program that faced Kirk Voich Gist, Inc., of Fort Worth, was complicated enough for a fortress, with good reason. The Western Currency Facility's product is money, U.S. currency to be exact, and the project required resolution of a complex set of industrial-design and planning issues.

Some of those issues included the need for a high degree of physical security, for treatment of hazardous waste and air emissions, and for creation of a pleasant working environment. The program required areas where currency is printed, examined, packaged, and shipped, as well as a 19,000-square-foot Federal Reserve vault. In addition, complete employee support facilities and a large administrative complex were required.

Kirk Voich Gist responded to this list of requirements by organizing the facility around the production process, while at the same time drawing clear distinctions between various functional areas. The administration and entry complex looks like a separate volume from the manufacturing plant; it is further distinguished by its facing of white concrete and its round, pyramid-topped form. The production building, a simple rectangle of rusticated, sandblasted gray concrete, is set back on the site.

The two-story administrative and entry area is the focal point of the facility. Set in a large granite-paved plaza, the circular building is topped by a black glass pyramidal skylight; the floor under the skylight is inlaid with a seal of the Bureau of Engraving and Printing. Offices on two levels surround the open lobby area, while other employee-support areas are housed in a building to the rear of the lobby.

Working conditions in the production portion of the facility were not neglected; high-efficiency lighting, acoustical treatment, and the use of bright color and graphics were included in the design. **TA**

PROJECT Western Currency Facility, Fort Worth
CLIENT U.S. Department of the Treasury, Bureau of Engraving & Printing

ARCHITECT Kirk Voich Gist, Inc., Fort Worth
CONTRACTOR Thomas S. Byrne Construction, Inc., Fort Worth; Walker Construction Co.; Hensel Phelps Construction Co.

CONSULTANTS Carter & Burgess, Inc., Fort Worth (mechanical, electrical, and plumbing); Entertech, Inc. (environmental and waste treatment); EG&G Security Design (security)



Left: The entry opens onto a broad plaza.

Below: Kirk Voich Gist adhered to a straightforward arrangement of functions, with the manufacturing space set back on the site and all the office functions clustered around the entry.



Photographs by James F. Wilson

Station House

by Johanna Rowe

THE \$2.5-MILLION Southeast Dallas Police Facility, designed by Brinkley Sargent Architects of Dallas, was completed in 1990. Approximately 200 patrolmen, criminal investigators, and administrators are located in the facility, which includes all police functions except prisoner processing and holding. The building is centered around a circular station officers' area, which is directly connected to public, staff, and watch entries, and which acts as a hinge joining all the departments. An automobile-servicing area which provides fueling and car repair is also a part of the police facility. The 12-acre site was master planned to include future expansion space for other city departments. **TA**

Facing page: Brinkley Sargent Architects of Dallas used brick, precast concrete, and glass for the public entry of the Southeast Dallas Police Facility.

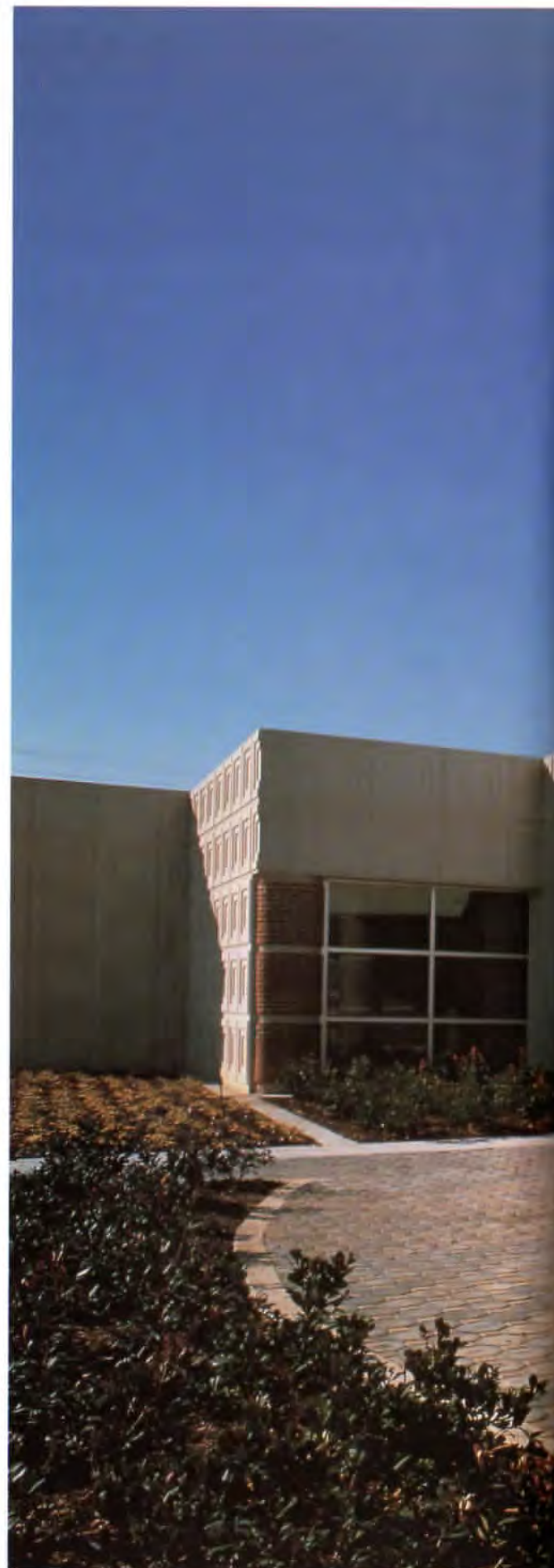
Below: The entry lobby forms a hinge between the various departments housed in the building.

PROJECT Southeast Dallas Police Facility
CLIENT City of Dallas (Jay McCulley, Department of Public Works)
ARCHITECT Brinkley Sargent Architects, Dallas
CONTRACTOR C & L Stone, Cedar Hill
CONSULTANTS Slaney Santana Group, Dallas (landscape architects); Brackett/Davis/Drake, Dallas (structural); Campos Engineering, Inc., Dallas (mechanical and electrical); Construction Cost Management, Fort Worth (cost estimating); ZBS Studio, Dallas (interiors)



KEY TO PLAN

- 1 PUBLIC ENTRY
- 2 STATION OFFICER
- 3 REPORT WRITING
- 4 BUILDING INSPECTION
- 5 CRIMINAL INVESTIGATION DIVISION
- 6 PATROL
- 7 BREAK AREA
- 8 WORKOUT
- 9 MECHANICAL
- 10 BRIEFING
- 11 ADMINISTRATION
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HOK's DART Prototypes

URBAN TRANSIT Recent months have brought Dallas Area Rapid Transit (DART) waves of internal disruption, local political turmoil, and renewed threats to its operations and funding base, including the filing of bills by Dallas-area state legislators that would all but demolish the agency. But DART is pressing ahead with preparations for the first phase of its ambitious planned regional rail and bus system.

Work on the design standards for DART's 20-mile light-rail line has been completed by DART's Principal Section Design team; prime design consultant is Huitz-Zolars Engineers of Dallas. The Dallas office of Hellmuth, Obata & Kassabaum (HOK), as architectural design consultant for the team, has designed a prototype light-rail station for the DART line.

The design calls for each of the stations to be 300 feet long, to accommodate the three-car

three stations; one will be located at the Dallas Convention Center and one will be at Union Station, where the light-rail system will connect with the DART commuter-rail system and



model photographs by Blackmon/Winters Photography



PROTOTYPICAL STATION STUDY

HOK has designed prototype stations for the first leg of DART's planned light-rail system. Above and below: A model shows the curved arched canopies spanning the tracks. Left: A rendering shows how the stations will fit in a near-town neighborhood.

trains that DART will run on the north-south light-rail starter line. Unlike light-rail stations in other cities, which are often little more than sidewalk shelters, the new DART prototypes will feature low-level platforms and arched canopies spanning the tracks from platform to platform. The design guidelines call for the canopies to be constructed of standing-seam metal, set in painted curved structural-steel trusses. The designers say that the open-air canopies, which will cover the boarding areas at each station, will create a sense of arrival and departure at the stations, as well as a sense of place within each station's neighborhood. According to HOK, DART will contract with other architects who will adapt the prototype design by varying colors and finishes according to criteria established for DART by HOK.

HOK is also providing the final design for



other rail lines. In addition, HOK is preparing site plans for all the station sites on the starter line and analyzing the development potential of the best locations. *Joel Warren Barna*



of the new design. Completion of this initial phase is due in December 1993.

The architects addressed the center's long-standing need for an east-west lobby connection by designing a new concourse that will run along the north side of the complex and, eventually, link the public spaces and functional areas from the existing lobby to the southwest end of the expansion.

When all phases of the expansion are complete, a total of 639,750 square feet of exhibit hall space, in six new modules, will be provided. Meeting spaces will be grouped around each module, allowing the exhibit halls to work independently of one another. All of the exhibition areas will also be combinable, creating a single million-square-foot space; up to 12 of the meeting rooms will also be joinable.

continued next page

Dallas Convention Center

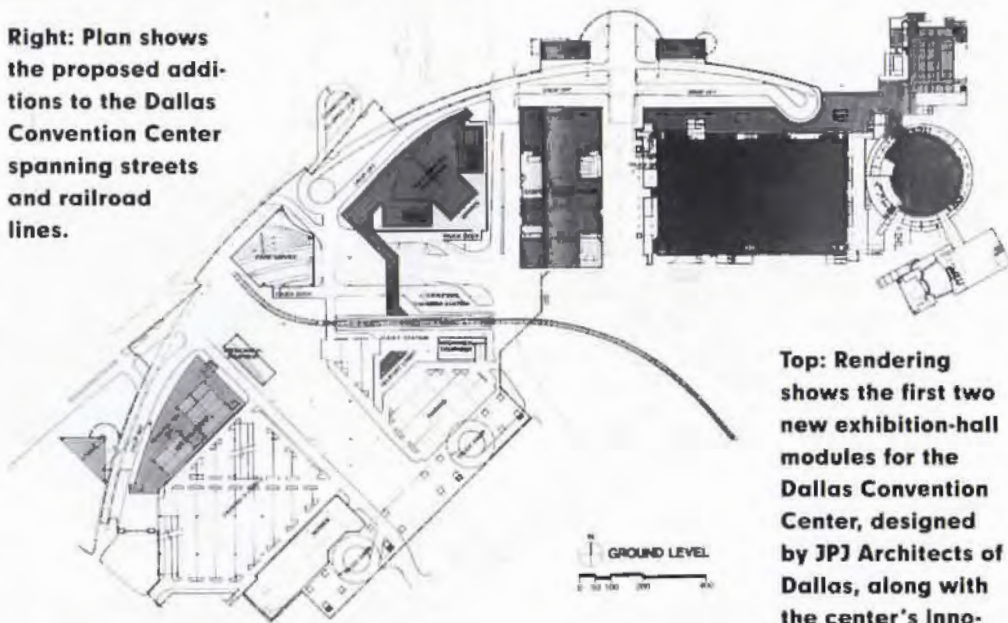
IN PROGRESS The design team for the new Dallas Convention Center includes JPJ Architects, Inc., of Dallas; Loschky Marquardt & Nesholm, of Seattle, Wash.; and John S. Chase Architects, Inc., of Houston.

The new complex, at completion, will total over 3 million square feet and include a new main ballroom, a multi-purpose auditorium, six new exhibition areas, a Dallas Area Rapid Transit (DART) light-rail station, and a vertiport.

The first phase of the convention center, designed by George Dahl, opened in 1957; it was greatly expanded in 1973 and 1984, in additions by Omniplan of Dallas. City of Dallas officials realized that, to compete for large national conventions, an expansion of the existing convention center would be necessary. This demand for more space precipitated the initiation of a Master Plan study. Completed in 1990, the study proposed increasing the convention center's exhibition space from 300,000 to 1 million square feet and to include expanded meeting rooms, ballrooms, public areas, transit connections, and support facilities.

The first phase of the project will include a portion of the vertiport facility, the planned DART light-rail station, and two new exhibition-hall areas. Each new exhibition area consists of a 100,000-square-foot rotated square; the rotation allows for later addition of four exhibition halls without disturbing the continuity

Right: Plan shows the proposed additions to the Dallas Convention Center spanning streets and railroad lines.



Top: Rendering shows the first two new exhibition-hall modules for the Dallas Convention Center, designed by JPJ Architects of Dallas, along with the center's innovative vertiport facility; this phase is scheduled for completion in December 1993.



Left: After completion of the six-module expansion, the center will stretch over 10 city blocks.

Dallas Convention Center, continued from p. 61

Although the expanded convention center will be more than 10 city blocks in length, area traffic routes will remain the same. Arrival lobbies, the DART light-rail station, meeting rooms, parking and support areas will be situated at grade between the streets, the DART tracks, and other existing railroad lines. The exhibition halls will span the streets, leaving the traffic pattern undisturbed.

One especially interesting aspect of the new convention center is its emphasis on aircraft access to the center itself. The vertiport, which will accommodate both helicopters and tilt-rotor aircraft, is a major part of the plan. The vertiport area is to be located on an elevated platform above the truck docks on the south side of the building and will connect to the DART light-rail station; it will include space for aircraft rollways, parking and loading stalls, and service areas, along with public lobbies and concourses. This placement allows for direct aircraft access from the FAA-approved flight paths above the adjacent highways.

Separate segments of the building are designed to relate in massing and orientation to their immediate surroundings. For example, the new ballroom and the lobbies on the north side of the complex focus on Griffin Street as a visual link to downtown and will be integrated with park spaces planned for the future. Meeting rooms and lobbies on the northwest side relate to the Jefferson Street viaduct and the Reunion district, while the southwest end is made up of distinct forms that can be seen from various locations on the surrounding roadways. The public concourse will work to tie these segments into a cohesive whole. **Johanna Rowe**

PROJECT *Dallas Convention Center Expansion*
CLIENT *City of Dallas (Ramon F. Miguez, Director, Department of Public Works; Cliff Murphy, Project Manager, Facilities Planning and Construction; Jerry Barsbop, Director of Convention and Event Services, Department of Convention and Event Services; Danny Bruce, Director, Department of Aviation)*
ARCHITECTS *JPJ Architects, Inc., Dallas; Losecky Marquardt & Nesholm, Seattle, Wash.; and John S. Chase Architects, Inc., Houston*
CONTRACTOR *Huber Hunt Nichols*
CONSTRUCTION MANAGER *Austin Commercial*
CONSULTANTS *Datum Engineering (structural); Blum Consulting Engineers and Campos Engineering (mechanical, electrical); Albert A. Half Associates (civil); SWA Group and Thompson Landscape Architects (urban design, landscape architecture); DeShazo, Starek & Tang (traffic/transportation); Pamela Hull Wilson Lighting Consultant (lighting)*
RENDERINGS *Erik van der Palen*

Reclaiming the Heights

NEIGHBORHOODS In the pre-World War II residential areas of many Texas cities, the change from a pattern of owner-occupied homes to one of absentee landlords and run-down rental properties, then to crack houses and vacant lots, has seemed unstoppable. But in Houston's historic Heights area, activists including architect Kelly Thompson-Frater have created an innovative mechanism that they hope will help arrest destructive changes in their neighborhood's fabric.

Their creation is Redeveco, a corporation designed for reclaiming local properties. The organization buys houses and parcels of land one at a time from absentee owners and brings them up to marketable standards. The properties are then sold to new owners.

Our goal, says Kelly Thompson-Frater, is "to make the Heights a community that is physically safe for ourselves and financially safe for the sizeable investments we have in our homes and businesses."

According to Thompson-Frater, the major obstacle to maintaining the fabric of the



Redeveco's first project

Heights has been "slum lords"—absentee owners of dilapidated properties that "generate wonderful cash flow," while driving down the property values of the surrounding neighborhood. Because of the condition of such properties, she adds, they don't qualify for conventional financing; this has meant that they are typically sold, for cash, in what she calls a "slum-lord-to-slum-lord chain."

Other groups, including the Houston Heights Association (IHA), the Heights Chamber of Commerce, and the Houston Preservation Alliance, have worked hard to restore the area's historic character in the last decade. One group, Friends in Deed, was formed to investigate reinstating deed restrictions (prohibiting absentee ownership or use for rental property, for example) that had

Persian Patterns

IRANIAN CITIES: FORMATION AND DEVELOPMENT
 by Masoud Kheirabadi
 University of Texas Press
 (Austin, 1991)
 196 pgs., 27 illus., \$27.50

BOOKS Masoud Kheirabadi has prepared a useful introduction to the study of traditional (pre-industrial, pre-World War II) Iranian cities. The full range of influences on the formation and development of the cities of the mountain regions and the central plateau are presented. Responses to the environment, trade routes and commerce, and the religious and social-political structures of Islam are discussed. The major premise of the book is that no one factor is dominant but that all are interwoven. The author rejects the accepted concept that these cities were composed according to an Islamic city model developed by an earlier generation of scholars; instead, Kheirabadi favors a more diversified, interdisciplinary approach, with religion forming only part of the picture.

The basic characteristics of Iranian cities include compact plans, uniform building

IRANIAN CITIES

Formation and Development
 MASOUD KHEIRABADI



heights, a hierarchy of street size and usage, courtyard housing types, and a pattern that combines interdependence and separation of public and private areas.

The book is, however, only an outline introducing the issues. Individual cities, their histories, and patterns and cycles of growth are not discussed. No time frames are given, so we do not learn when the cities were formed

nor what the particular influences during different periods were. That detailed analysis is left to others.

The one factor that is neglected is the effect of extraterritorial influences. Since the history of the cities is not a part of this study, we do not know if ideas were drawn from other cultures. A look at the city plans presented by the author, and at the so-called Islamic city model, reveal the possibility of Roman influence: The essentially rectilinear city organization, ordered by major cross street that focus on the mosque, bazaar, and other public structures, appears to be a direct translation of the colonial Roman castrum, with its *cardo* and *decumanus* and its

lapsed on properties in the area, and to enforce the deed restrictions on the few properties to which they still applied. But, says Thompson-Frater, even these efforts were hampered by the area's many dilapidated properties, most of which had lapsed deed restrictions. Texas law permits deed restrictions for an area to be reestablished by a vote of 51 percent of the property owners; this was impossible because of the large number of absentee-owned properties.

The law provides that deed restrictions can be reinstated on a property when it is sold, however, and this led Redevo's organizers to develop their strategy of simply buying properties from slum lords. "We can fix up the buildings, and, just as important, reinstitute new deed restrictions," says Thompson-Frater.

Besides Kelly Thompson-Frater, the original shareholders in Redevo included her husband, financial planner Robert Frater; Patti and Richard Herdell; David Collins; Abel Joseph Dupuis, Jr., owner of the Yale Pharmacy, a Heights landmark, and Geneva Dupuis, treasurer of HHA; developer and HHA president

Bart Truxillo; investor Richard Markey and HHA officer Deborah Markey; Byron Pettit, chairman of Friends in Deeds; Nancy and Kenneth Williams; Carol Eckels Adams and Hill Adams; Tracy Englet and Kevin Englet; Nancy Nalence; and Kevin Willis.

Each of the shareholders (some of whom are couples rather than individuals) invested \$2,000 in the corporation and pledged guaranties for additional borrowed funds. The group then approached local lending institutions to discuss setting up financing for planned projects.

The group's first undertaking involved reworking two lots at the corner of 14th and Alston streets, with a two-story historic house that had been divided into apartments, along with a dilapidated four-plex and a garage. Redevo, with Tracy and Kevin Englet as project coordinators, negotiated a price and arranged financing, collateralized by the partners' seed money and guarantees, which was provided by Merchants Bank in the Heights.

After searching unsuccessfully for a buyer for the house on the site, they negotiated a deal

with a developer who was willing to buy the lots if the house were moved and the other buildings were demolished; he planned to build new houses compatible with others on the block. The outbuildings were torn down and the house was sold to new occupants, who moved it to their lot down the street. Deed restrictions will now protect the original lots from incompatible uses for 99 years. "We wanted to keep the house on the site, but this was the next best alternative. The new owners are restoring it. Several other renovation projects have now begun in the neighborhood," says Thompson-Frater.

Having succeeded with their first project (and having both raised capital and demonstrated their abilities to local lenders) the members of Redevo are planning to tackle something larger—"like an apartment complex," says Thompson-Frater. The group's continued success may constitute the most important missing piece to the puzzle of arresting neighborhood decay, providing a lesson for neighborhood activists throughout Texas. **JWB**

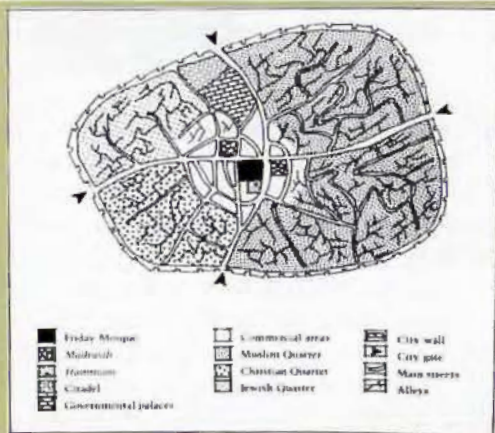


Illustration from **IRANIAN CITIES**

forum, baths, and temples. The hierarchy of street use from public to private is common to both city types. Most areas of Islamic expansion around the Mediterranean had also been Roman colonial lands, so the possibility of this influence on Persia cannot be ignored.

Kheirabadi provides a useful glossary of terms in Farsi and an extensive bibliography of works on the Iranian and Islamic city. Although brief, this book is an interesting introduction to material that is not often studied, and calls attention to issues that could profitably be considered in city planning. **Gerald Moorhead**

Waves and Light

**LASTING AALTO MASTERWORK:
THE LIBRARY AT
MOUNT ANGEL ABBEY**

by **Donald Canty**
**Mount Angel Abbey, Order of St.
Benedict, (Mount Angel, Ore., 1992)**
47 pgs., 37 illus., \$19.95 paperback

BOOKS Little has been published about Alvar Aalto's second work in the United States, the library at Mount Angel Abbey, built in 1970 in Mount Angel, Ore. Author Donald Canty, former editor of *Architecture* magazine, fills the gap with this small, handsome book, which is amply illustrated with plans and both period and new photographs.

The Mount Angel library shows similarities in plan and massing to Aalto's earlier designs for libraries in Otaniemi, Seinäjoki, and Rovaniemi. In each of these schemes, the idiosyncratic Aalto fan shape (or wave shape—*Aalto* means wave in Finnish), springs from a rectilinear background block. In all of these libraries, the fans contain radiating stacks and the central "hinges" are formed by the control desk and a "book pit" of sunken reading terraces.

But a larger issue unites all Aalto's libraries,

Lasting Aalto Masterwork



including those that have plan forms other than the block-fan grouping. This is the handling of natural light. Aalto recognized that a library is a place not only for storing books but for reading as

well, and he knew that comfortable lighting was essential. In his libraries, deep conical skylights bring diffused light into the central space, and clerestories reflect light off curved ceilings into the stacks and reading areas.

Despite the strong family resemblance it bears to its predecessors, the Mount Angel library is special. All of Aalto's other libraries are built on flat ground, so their internal level changes, especially their sunken reading areas, are modest. The Mount Angel site, however, is on the crest of a ridge where Aalto could use the slope for a much more dramatic cascade of concentric terraces projecting out into the fan. Emphasized by the curving clerestory overhead, the combined upward and downward vistas expand the contained space.

With its description of the project's history, Canty's little volume would be a good addition to any Aaltophile's library. **Gerald Moorhead**

Prize-winning Houston architect Gerald Moorhead, FALA, is a TA contributing editor.

Pro On ConDoc

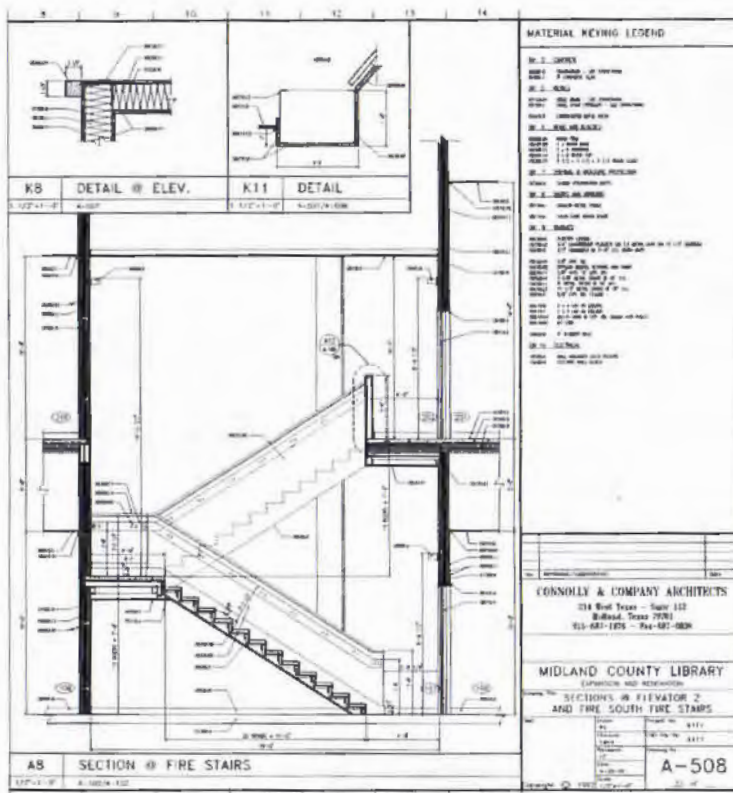
AFTER FIRST READING ABOUT CONDOC in 1985 in the AIA's now-defunct magazine *Architectural Technology*, and being besieged for several years afterwards with pamphlets advertising instructional seminars, our office finally decided to learn about this "new system for formatting and integrating construction documents." We began by attending the AIA's Professional Development Workshop on ConDoc at the 1990 national convention.

ConDoc so impressed us at the workshop that we purchased the corresponding software. Once it was installed, we elected to try the system on a commercial project that was ahead of schedule (This decision was made following the software user's axiom: Never try to use new software during a tough production schedule.)

During this initial production process, I showed the ConDoc'd drawings to local construction firm estimators for a gauge of their receptiveness to this new and unfamiliar system. Every one of them seemed unfazed by the new system, but didn't really see, at that time, how it might help them do their job better.

For us, the effect was immediately appreciable. Prior to the advent of ConDoc, our office had long grappled with the arbitrary organization of working-drawing notes. In the constant effort to improve construction documents, our noting formats had evolved over the years. Initially, we noted working drawings individually, then adopted keynoting. In keynoting, instead of rewriting a note, a number is referenced on the sidebar. The use of hand-lettered keynotes was later improved on by the easier-to-read typed sticky-back keynotes. However, we abandoned that particular hybrid of manual drafting/mechanical printing when we began using CADD. Nevertheless, the problem of how to effectively organize the keynotes on our drawings still remained until we discovered ConDoc.

ConDoc organizes keynotes according to CSI's 16-division format. The beauty of the ConDoc system is that each note has one and only one number for each item identified. For example, "09650.B—4-inch rubber base" would retain that keynote number throughout the project's documents.



Detail from a construction document produced with ConDoc software

time consuming, is far preferable to discovering an error or omission after the contract has been signed, which could potentially result in a difficult-to-explain change order.

Initially, we used ConDoc exclusively for commercial work, but we have gradually incorporated it into the drawings for all building types, including residential remodeling and addition projects. When introducing our firm

In addition to this familiar organization in the keynoting system, ConDoc also formats drawings so that information can be readily found by following prescribed sheet-and-coordinate notations. For the first time with construction documents, the complementary nature of drawings and specifications has a corresponding number connection so that notations for the graphic and the written information are effectively integrated.

This is where one of the great benefits of ConDoc has become clear to us and the contractors we work with. Before, keynotes could arbitrarily identify both material and assembly; with ConDoc, the numbered keynote identifies the material only, and the assembly process is described only in the specifications. General contractors have told us that, with ConDoc documents, their superintendents, project managers, estimators, and subcontractors are forced to follow specifications more carefully.

In our office, abiding by ConDoc provides an invaluable check system for producing coherent construction documents. The master keynote list at the beginning of the drawings can be used for an item-by-item review of the specifications. This allows the checker to make sure that every keynote is addressed in the specifications. This additional check, although

to potential clients, we use ConDoc as a marketing device, although this has produced mixed results—even experienced clients can't fully appreciate the benefits of the system.

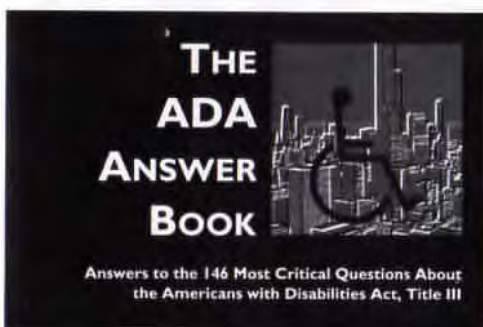
After using ConDoc for three years, I have found it to be beneficial for all involved. The owner benefits because the improved quality of the bidding documents can mean lower bids. The contractor can more clearly define the scope of work during bidding and avoid costly surprises. The architect saves time entering information and gains productivity in producing a contract with a much clearer set of construction documents. Since there is so much information that architects have to communicate, tools that help organize and integrate construction documents are essential. It appears that ConDoc will become an industry standard for organizing drawings, much as CSI's 16-division format became standard for specifications back in the 1960s, enabling all in the construction industry to communicate with each other more effectively.

Lawrence H. Connolly

Lawrence Connolly is principal of Connolly & Company Architects of Midland.

For information on ConDoc, call the AIA Professional Systems Division at 800/424-5080 x 75476

PRODUCTS AND INFORMATION



The Building Owners and Managers Association (BOMA) International has published an interpretation of the Americans with Disabilities Act (ADA), Title III. The ADA Answer Book answers 146 questions about the ADA.
Circle 56 on the reader inquiry card



Kroy's new Contemporary Directory can be lettered and updated easily, efficiently, and cost-effectively with any one of Kroy's in-house updating systems. The directory is wall-mounted in a tarnish-

resistant frame and carriers of extruded, powder-coated aluminum.

Circle 151 on the reader inquiry card

The **CadPLUS AE Design System** prepares architectural and engineering construction documents and 3D presentation models. The system also tracks assets, provides space-utilization calculations, and issues schedules and reports. CadPLUS runs transparently on AutoCAD Releases 11 and 12 and AutoCAD for Windows.
Circle 152 on the reader inquiry card

A new four-page brochure from **Celotex Corp.** explains the company's roof insulation product line; the brochure also describes the company's new 1-800 telephone service; a toll-free number provides additional information about Celotex roof insulation products.

Circle 38 on the reader inquiry card



Glen-Gery Brick has introduced a detectable warning surface paver developed in accordance with provisions of the Americans with Disabilities Act (ADA). The specially textured paver helps make the presence and location of areas such as crosswalks, curb cuts, ramps, and entrances easier to detect.

Circle 153 on the reader inquiry card

Azrock has introduced 13 new colors inspired by the natural world in its Custom Cortina line of vinyl composition tiles. Custom Cortina has mottled patterning distributed through the thickness of each tile. It

is suitable for high-traffic commercial, institutional, industrial, and residential areas.

Circle 154 on the reader inquiry card



Zap Industries, Inc., has introduced a new collection of contemporary furniture, including this bookcase, designed by Marc Ewing. Each piece is crafted of hardwood using book-matched veneers. All are offered in a variety of

aniline-dyed colors from neutrals to brights.

Circle 155 on the reader inquiry card



The new faux-wood finishes in Westinghouse Micarta's laminate collection are recommended for cabinetry, furniture, tabletops and counters, walls, and doors. The new finishes include mahogany, rosewood, cherry, walnut, teak, and oak.

Circle 156 on the reader inquiry card

Saving Energy and the Environment



Magna-Frame™ series casement and awning windows from **ALCOA VINYL WINDOWS** offer energy effi-

ciency, easy maintenance, good looks, and easy on-site installation.
CIRCLE 157 ON THE READER INQUIRY CARD

A new line of low-voltage landscape lights from **INTERMATIC** feature the energy efficiency of halogen bulbs plus a variety of contemporary styles. Available in angle, bollard, pyramid, and tier styles, the fixtures are constructed of heavy-duty cast aluminum.

CIRCLE 158 ON THE READER INQUIRY CARD



The **Storm Water Control System** from **PATTERSON ENVIRONMENTAL** offers an economical method for disposing of over 95 percent of storm water runoff for less than a penny per gallon.
CIRCLE 159 ON THE READER INQUIRY CARD



A new lever-actuated, slow-closing faucet from **CHICAGO FAUCETS** provides adherence to the latest Americans with Disabilities Act (ADA) accessibility standards and conserves water.

CIRCLE 160 ON THE READER INQUIRY CARD

Prairie Buffalograss and **609 Buffalograss** from the **TURF FARMS OF CRENshaw & DOGUET** thrive with minimal irrigation and are resistant to disease and temperature extremes. Both are low-growing without seed heads, a feature that minimizes or eliminates the need to mow.

CIRCLE 161 ON THE READER INQUIRY CARD

Resources: Manufacturers and Suppliers

Texas State Capitol Extension, pp. 42-45

Architectural woodwork: Robert Shaw; **Ornamental metal:** Berger Iron; **Terrazzo:** American Marble; National Marble; **Paint:** Pratt & Lambert; **Glued wall fabric:** Knoll International; **Door frames:** Eggers Industries; **Doors:** Algoma Hardwoods; The Maimon Co.; **Waterproofing:** American Colloid; American Hydrotec; **Kitchen equipment:** Custom Kitchen Equipment Co.; **Columns:** Casting Design, Inc.; **Granite:** Cold Spring Granite Corp.; Texas Granite; **Insulation:** Dow Styrofoam; USG; **Irrigation System:** Toro Co.; **Concrete framework:** Economy Forms Co.; **Skylights:** Bristolite; **Plaster:** USG; **Gold Bond;** **Graphics:** Roland Edwards Sign Co.; **Windows:** Arrow Glass; **Sealants:** Temco Sealants; **Hardware:** Hager, Schlage; **Ceilings:** Armstrong; **Drywall:** Merck Brothers Systems

Federal Reserve Bank, pp. 46-49

(The Federal Reserve Bank of Dallas does not endorse any of the companies or products listed here) **Concrete pavers:** Pavestone; **Limestone interior stonework:** Bybee; **Limestone:** Harding & Cogswell; **Limestone/precast panels, architectural precast:** Arkansas Precast; **Expansion joint covers:** Metalines, Millwork and Casework; Whitson Industries; **Architectural woodwork:** Interior Woodwork Corp./Knoll Group; **Waterproofing:** Carlisle Syntec Systems; **Roofing and pavers:** Firestone Building Products; **Hollow metal doors and frames:** Door Pro Systems; **Office front frames:** Fenestra; **Wood doors:** Weyerhaeuser and Dallas Door and Supply; **Security frames and glazing:** Chicago Bulletproof; **Hardware:** Schlage; **Skylight and entry storefront:** Super Sky Products; **Reflective glass:** Viracon; **Aluminum extrusions:** Tedlegar Aluminum; **Vestibule and connector panels:** Baker Metal Products; **Aluminum panels:** Alucobond Technologies; **Acoustical grid:** National Rolling Mills, Inc.; **Acoustical tile:** Armstrong World Industries; **Drywall reveals:** Gordon, Inc.; **Ceramic tile:** Dal Tile; **Quarry tile:** American Olean; **Poured rustic terrazzo:** American Terrazzo; **Carpet tile:** Lee's Carpet Mills; **Custom broadloom carpet:** Atlas Mills; **Access flooring:** GHP, Inc.; **Toilet partitions:** Global; **Toilet accessories:** Bradley; **Louvers:** Walco; **Operable walls:** Hufcor; **Window-washing equipment:** Highrise Systems; **Dock equipment:** Kelly/Miner and Associates; **Kitchen equipment:** Pronto; **Shooting-range equipment:** Caswell; **Cash destructor:** Sinclair; **Systems furniture:** The Knoll Group; **Window treatment:** Levelor; **Security system:** Software House; **Vault doors:** Mosler; **Elevator cabs:** Tyler Elevator Products; **Material handling system:** Eaton Kenway Corporation; **Plumbing fixtures:** American Standard; **Fire protection sprinkler heads:** Reliable Sprinkler Company; **Indirect lighting:** Peerless Lighting; **Building control system:** Johnson Controls

Irving Criminal Justice Center, pp. 50-52

Brick: Elgin-Butler; **Exterior glazing:** Guardian; **Glass block:** Pittsburgh-Corning; **Roofing:** Firestone Rubber Products; **Security system:** Cesco/Novent; **Security glazing:** Viracon; **Builder's hardware:** Sargeant; **Elevators:** Schindler; **Acoustical ceiling tile:** Armstrong; **Terrazzo:** American Terrazzo

Alamodome, pp. 54-55

Concrete: Schoenfield; **Reinforcing steel:** SMI; **Steel forms:** EFCO; CFCO; **Structural steel:** Crown Steel; **Steel joists:** Vulcraft; **Precast concrete:** Manco; **Joint sealant:** Sonneborn (Chem Rex); **Paint for steel:** Benjamin Moore; Sherwin Williams; **Miscellaneous steel:** Beck Steel; **Precast masonry:** Barrett; **Wall insulation:** Dow Styrofoam; **Standing-seam metal roof:** Steelite; **Metal wall panels:** Steelite; **Single-ply roofing:** J.P. Stevens (Hypalon); **Glass:** Tempglass; **Curtainwall panel system:** Alucobond; **Overhead doors:** Overhead Door Corp. of San Antonio; **Metal drywall studs:** Dietrich Industries; **Gypsum wall board:** USG; **Interior paint:** Sherwin Williams; **Interior wall covering:** Koroseal; B.E. Goodrich; **Dock leveler:** Rite Hite; **Carpet:** Prince St. Technologies; Patcraft; **Wood doors:** Fenestra; **Toilet accessories:** Bolbrick; **Folding partitions/operable walls:** Advanced Equipment; **Lockers:** List Industries; **Millwork:** Koehler Co.; **Hollow metal doors and frames:** Tex-Steel; **Hardware:** Sargeant; Soss; Stanley; Trimco; **Rixson-Fivemark;** Remko; National Guard Products; H.B. Ives; **Elevators and escalators:** Montgomery; **Plumbing fixtures:** Crane (Noland Distributors); **Drinking fountains:** Elkay; **Fire sprinkler system:** Grinnell; **Ice rink system:** Rothmar; **Air-handling units:** Trane; **Switchgear:** Westinghouse; **HVAC and lighting-control system:** Johnson Controls; **Light fixtures:** Redwine Krueger; **Structural frame;** precast concrete; **field level slab;** masonry; **hollow-metal doors, frames, hardware;** **Cherry Street improvements:** Lyda, Inc.; **Aluminum glazing**

systems: Arrow Glass Company, Inc.; **Graphics (signage):** ANDCO Industries Corp.; **Conveying systems, escalators, and elevators:** Montgomery Elevator Company; **Sound systems:** Proshow; **Upper deck seating:** Interkal, Inc.; John E. Clark Co.

Western Currency Facility, pp. 56-57

Steel joists: Vulcraft; **Skylight:** Wasco; **Roofing:** A/R Contractors; **Architectural precast concrete:** Western America; **Steel:** Continental; **Access flooring:** Hudson Building Systems; **Ceramic and quarry tile:** AG Keen; **Dumbwaiters and elevators:** ESCO Elevators; **Fireproofing:** Commercial Spray Systems; **Building specialties:** S.P. Gilbert; **Overhead doors:** Overhead Door Co. of Fort Worth; **Laboratory Fume Hoods:** Kewaunee Scientific Corp.; **Testing lab service:** A.T. Laboratories; **Fencing, gates:** USX, Cyclone Fence; **Accordion folding partitions:** Cowsert Associates; **Specialty doors, curtains, dock equipment:** Johnson Equipment Co.; **Metal lockers:** Rocky Durson and Associates; **Wire mesh partitions:** Acorn Wire and Iron Works; **Louver blinds, drapery tracks:** First Drapes; **Seals:** The Aldinger Co.; **Electrical:** Humphrey & Associates; **Site utilities, louvers, plumbing, HVAC, process mechanical:** Natkin and Company; **Drilled piers:** Contractors Foundation Drilling Co.; **Masonry:** Fenimore-Blythe; **Painting, wall covering, sandblasting, and tape, bed and float:** J.L. Manta; **Fire protection:** Grinnell Fire Protection Systems; **Shredding, trim waste collection system:** Air Systems Engineering; **Drywall, insulation, acoustical, lath and plaster, metal ceilings, glass fiber reinforced concrete:** Integrated Interiors; **Controls, fire alarm:** Johnson Controls; **Steel, precast erection:** Transfield Corp.; **Attack resistant package:** Nonshield Security Systems; **Carpet, resilient flooring:** Superior Carpet Corp.; **Waterproofing, sealants:** Frontier Waterproofing; **Glass, glazing:** Riverside Glass and Mirror, Layne Glass Co.; **Earthwork:** Huggins Construction; **Vault, bank casework:** LeFebure; **Concrete paving:** L.L. Bertram Construction and Engineering; **Granite:** Cold Spring Granite Co.; **Granite installation:** Fitzgerald Tile Corp.; **Granite floor emblem installation:** J. Rios, Inc.; **Architectural precast concrete materials:** Meridian International; **Structural fiberglass members, grating, anchoring:** International Grating; **Metal roofing, siding:** Metal Systems; **Acid brick:** Industrial Flooring; **Wood doors:** Weyerhaeuser and Dallas Door and Supply Co.; **Hollow metal doors, frames:** Door-Pro Systems; **Prefinished panels:** Newcourt, CKA Enterprises; **Benches:** Kroin, Inc.; **Tree grates:** Urban Accessories; **Expansion joint assemblies:** Baleo Co., R.J. Dewees & Son; **Fountain equipment:** Kim Lighting, Hossley Hollingsworth Lighting; **Cast-in-place concrete:** Pioneer Concrete of Texas

Southeast Dallas Police Station, pp. 58-59

Concrete pavers: Pavex (Quadro); **Precast concrete:** Southwest Prestressed; **Brick:** Boral Brick; **Structural joists:** Vulcraft; **Millwork:** Topay; **Exterior finish system:** STO; **Roofing:** Firestone; **Aluminum doors, frames:** Division 8; **Hardware:** Yale; **Ceiling tile:** Armstrong; **Chicago Metallic Grid;** **Resilient flooring:** Armstrong; **Carpeting:** Mohawk; **Straton;** **Lockers:** List Industries; **HVAC:** Trane; **Barber Coleman Controls**

Dallas Convention Center Expansion, pp. 61-62

Coatings and caulking: Aberdeen Industries, Inc.; **Operable partition:** Advanced Equipment Corporation; **Miscellaneous metals:** American Steel and Aluminum, Inc.; **Terrazzo:** American Terrazzo Co.; **Louvers:** Architectural Specialties; **Drywall and ceilings:** CM/CTI Joint Venture, Dallas; **Chain link fences and gates:** Cyclone Fence; **Masonry:** Dell Masonry; **Reinforcing steel:** Desert Steel/J.D., A Joint Venture Partnership; **Roofing:** Max Eubank Roofing Company, Inc.; **Millwork:** Facility Construction Services, Inc.; **Structural steel:** Hirschfield Steel Company, Inc.; **Overhead doors:** Johnson Equipment Company; **Preformed metal panels:** Metal Systems, Inc.; **Ceramic tile:** Modern Tile Company; **Elevators and Escalators:** Montgomery Elevator Company; **Concrete fill:** G.L. Nettles; **Color imprinted concrete:** North Texas Bomanite, Inc.; **Fire protection:** Northstar Fire Protection of Texas, Inc.; **Resilient tile and carpet:** Reiser Associates, Inc.; **Identifying devices:** Roland Edwards Sign Co.; **Pavement markings:** Stripe-A-Zone; **Architectural precast panels:** Structural of Texas, Inc.; **Painting:** Mike Trice Painting, Inc., Inc.; **Sprayed fireproofing:** True Fireproofing Company, Dallas; **Sound and security systems:** Unitech Technology Construction Inc.; **Glass and glazing:** Verto, Inc.; **Glass handrail:** W & W Sales, Limited, Spring Valley; **Metal toilet compartments and accessories:** Charles E. Williams Company, Inc.

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Texas Index March / April 1993

LEADING INDICATORS:

October and November, 1992

	Latest Month	Previous Month	Change %
Texas Leading Indicator Index (Jan. 1981 =100) †	120.0	119.3	.1
Initial Claims for Unemployment Compensation	68,046.0	70,807.0	-3.9
Average Manufacturing Hours/Week	43.1	43.1	-
Help Wanted Index (1979=100)	120.0	119.8	.1
Retail Sales (Million \$)	11,374.0	11,660.0	-2.5
Oil Price (\$/Barrel)	18.3	19.7	-7.0
Stock Index (1980=100)	202.0	190.0	6.3
Housing Permits (3-month moving avg.)	5,210.0	5,262.0	-.9
New Business Incorporations (3-month moving avg.)	2,961.0	2,833.0	4.5
Consumer Confidence Index (1985=100)	68.9	55.4	24.0
U. S. Leading Economic Indicator Index †	150.3	149.1	.8

† Texas and U.S. leading indicators based on figures for industrial output, sales, employment, prices, interest rates and other factors.

TOTAL NONAGRICULTURAL JOB GROWTH: Oct. 1992 FOR TEXAS AND BORDER STATES

State	Job Growth*	Percent Change	Rank
Texas	84.6	1.2	15
Louisiana	-6.0	-0.4	35
Arkansas	29.9	3.1	1
Oklahoma	-10.6	-0.9	38
New Mexico	6.4	1.0	17
National Average	269.0	.3	-

*In thousands

TEXAS POPULATION CHANGE

Year	July 1st Population	Annual Change Amt.	%
1991	17,349,000	290,600	1.7
1992	17,669,960	320,960	1.9
1993*	17,951,490	281,530	1.6
1994*	18,193,380	241,890	1.3

*Projected

TEXAS NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT

	Nov. '92	Oct. '92	Change
Total Nonagricultural Employment	7,342,500	7,315,400	27,100
Manufacturing	992,800	992,000	800
Durable Goods	552,500	552,400	100
Nondurable Goods	440,300	439,600	700
Nonmanu- facturing	6,349,700	6,323,400	26,300
Mining	173,500	173,400	100
Construction	355,200	355,900	-700
Transportation and Public Utilities	437,600	436,800	800
Wholesale and Retail Trade	1,770,700	1,755,100	15,600
Finance, Insurance, and Real Estate	430,400	430,300	100
Services	1,856,800	1,842,700	4,100
Total Government State & Federal	1,325,500	1,319,200	6,300

ECONOMIC FORECASTS FOR 1993

Texas Forecasts	1992*	1993**
Gross State Product (in billions of 1987\$)	338.9	349.3
Annual % Change	2.6	3.1
Personal Income (in billions)	318.5	339.5
Annual % Change	6.0	6.6
Nonfarm Employment (in thousands)	7,262.7	7,417.3
Annual % Change	1.3	2.1
Resident Population (in thousands)	17,705.4	17,982.3
Annual % Change	1.8	1.6
Unemployment Rate (%)	7.4	6.5
Oil Price (\$ per Barrel)	18.8	19.6
Natural Gas Price 1.64 (in \$ per thousand cubic feet)	1.6	1.6
Oil/Gas Drilling Rig Count	242.0	224.0
U. S. Forecasts		
Gross Domestic Product (in billions of 1987\$)	4,908.7	5,052.0
Annual % Change	1.8	2.9
Construction Price Index (1982-84=100)	140.4	145.1
Annual % Change	3.0	3.4
Prime Interest Rate	6.3	6.5

*1992 figures actual; **1993 figures projected

Compiled by Johanna Rowe
from TEXAS ECONOMIC OUTLOOK, January 11, 1993
published by John Sharp, Comptroller of Public Accounts

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