

# Texas Architect

JULY/AUGUST 2010





# Discover Texas Architecture

Discover TexasArchitect magazine.

Become a *Texas Architect* subscriber and you will have complete access to both the print and online versions of the award-winning publication of the Texas Society of Architects/AIA. For more than 50 years, *Texas Architect* has provided the best coverage of the architecture and design industry of Texas and beyond.

Subscribers enjoy full-size images, complete editorial coverage and access to online archives. Preview *Texas Architect's* e-magazine at [www.texasarchitect.org](http://www.texasarchitect.org), and join us for a tour of Texas like you've never seen before.

## Subscribe now:

[www.texasarchitect.org/texasarch\\_subscribe.php](http://www.texasarchitect.org/texasarch_subscribe.php)

**Best Value!**

2 Years | 12 Issues, \$46  
SAVE 24% OFF COVER PRICE!

1 Year | 6 Issues, \$25  
SAVE 16% OFF COVER PRICE!

# TexasArchitect



31

**EXTREMES ON THE HIGH PLAIN**  
MASON ROGERS, AIA



32

**KEEPING UP WITH THE JONESES**  
HKS  
LAWRENCE CONNOLLY, AIA



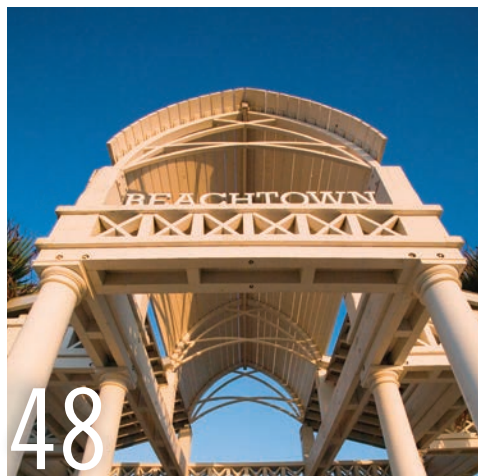
38

**HIDEAWAY IN PLAIN SIGHT**  
David Heymann, Arcitect  
STEPHEN SHARPE



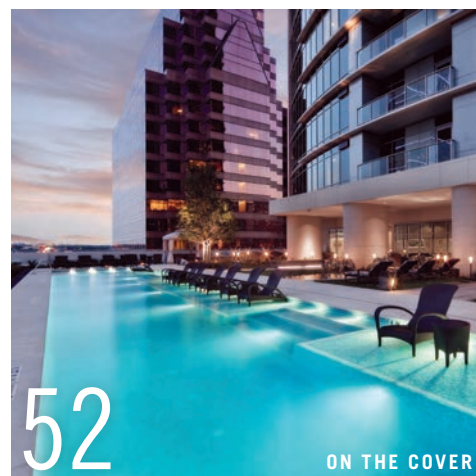
42

**COOL, CALM, AND HIGHLY SECURE**  
Leo A Daly/LAN+PageSoutherlandPage  
JESSE HAGER



48

**LIVING HIGH ON THE COAST**  
Michael G. Imber Architects  
STEPHEN SHARPE



52

**VIEW FROM THE TOP**  
Ziegler Cooper Architects  
MARK OBERHOLZER, AIA

ON THE COVER

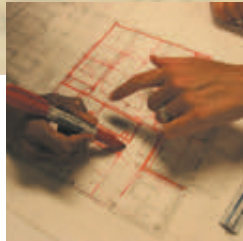
## DEPARTMENTS

- 05 EDITOR'S NOTE
- 06 CONTRIBUTORS
- 11 NEWS/CALENDAR
- 20 PAPERWORK
- 23 EXTREME SOLUTIONS

- 26 BORDER FENCE
- 58 PORTFOLIO RESTAURANTS
- 61 PRACTICE
- 64 MARKETPLACE
- 68 BACKPAGE

# GOOD DESIGN

# MAKES A DIFFERENCE



For almost 150 years, members of the American Institute of Architects have worked with each other and their communities to create more valuable, healthy, secure, and sustainable buildings and cityscapes. AIA members have access to the right people, knowledge, and tools to create better design—and help clients and communities make their visions real.

Visit [www.aia.org](http://www.aia.org) to see enhanced collaboration in action.



Component name | Phone number  
Web address

# A Voice Silenced

David Dillon interpreted architecture for the man in the street

THE IDEA OF EXTREMES, OF DESIGNING THE TALLEST or most outlandish work of architecture, seems appropriate in a state as celebrated as ours for audacious gesture. Unfortunately, we also live in a place where the art of architecture criticism has left the building. Currently, no daily newspaper in the state employs a critic solely dedicated to assessing architectural design and reporting his or her reflections, and the continued demise of architecture criticism bodes ill for our entire society.

The death of architecture critic David Dillon on June 3 silenced a thoughtful and respected voice that for 25 years helped frame public debate about the built environment in Dallas. Dillon was a prolific member of the arts staff of the *Dallas Morning News* until he took a buyout in 2006 and moved with his family to Amherst, Mass., where he died after suffering a heart attack at his home. At the time of his death, Dillon served as a contributing editor of *Architectural Record* and also continued to write on occasion for the Dallas paper as a freelancer. In addition, he wrote periodically for *Texas Architect* and had been recognized three times for journalistic excellence by the Texas Society of Architects.

Over a quarter-century working for the *Morning News*, Dillon witnessed a steady decline of architecture criticism in the mainstream press across the nation. That bothered him, and he voiced his concern in the last article he wrote for *TA*, published in the September/October 2009 edition under the headline “Architecture Criticism and the Public.”

“This is disastrous because newspaper critics are the front line of architecture coverage, always more timely and often more comprehensive than the design magazines,” he wrote. “Newspapers are where the public gets most of its architectural information, as well as most of its information about planning, community development, neighborhood preservation, and other matters that it cares about. Online sources can’t begin to plug this gap, which means that conversation has virtually stopped on most of these critical issues. Dialogue and debate have given way to deafening silence.”

In 1983, Dillon wrote an article for *TA* titled “Perils of the Architectural Critic” in which he opened with this line: “Every critic should get run out of town once in a while. It keeps the job in perspective.” He was recalling the time when he, along with fellow architecture critics Paul Goldberger (then with the *New York Times*) and John Pastier (formerly of the *Los Angeles Times*) were quoted in an article in the *Corpus Christi Caller-Times* during TSA’s convention held in that city in 1981. The article centered on some of the comments they had made about Corpus Christi’s downtown structures while on a bus tour organized in conjunction with the annual meeting. Also on the bus was a *Caller-Times* staff writer assigned to report on their observations. The article, “Corpus Christi Bombs with Critics,” appeared on the front page in the afternoon edition and created quite a stir with its coverage of the trio’s unguarded and less-than-celebratory remarks. In the noisy fallout over the article, the critics departed the city ahead of schedule, but not before they were subjected to two hours of harangue



David Dillon (1941-2010)

during the evening’s awards banquet by speakers who rose to defend the architectural honor of Corpus Christi and denounce them as know-nothing out-of-town snobs.

(Full disclosure: That reporter was me. I am still mystified by the twist of fate that put me on that bus 29 ago years. At that point in my nascent career as a journalist, I had no particular interest in architecture but just happened to be available for that day’s routine assignment. The coincidence is richly ironic, that one day long in the future that same cub reporter would enjoy David’s company at professional events and work with

him on articles for *Texas Architect*. I think back to that October morning in 1981, wondering if I was unfair in my account of their commentary. From his description of the circumstances, he thought so. I had intended to mention it to him when the time was right, but that door has closed.)

In the 1983 article for *TA*, Dillon saw the episode as revealing: “For all its bizarre twists, the incident dramatized a couple of basic truths about architecture criticism. First, no matter how enthusiastically people embrace criticism in theory, they generally have problems with it in fact.... The second basic truth, unappreciated by architects and most newspapers, is that the public takes architecture and urban issues very seriously.”

Later in the same piece, he explained his perspective on his job: “Unlike a critic for a professional journal or academic review, a newspaper critic writes primarily for the general public. My first responsibility is to the bewildered man in the street, who sees his city being rebuilt overnight and can’t make head or tails of it. I’m the interpreter, the go-between, who translates the technical data and the near-impenetrable jargon of the profession into information the average reader can understand.”

For too a short a time, David Dillon enlightened his readers and pushed the architects in his community to think beyond the prevailing style. We – the public and the profession – were all very lucky to have had him as a smart, witty, and impassioned translator.

STEPHEN SHARPE

Jesse Hagar



Lawrence Connolly, AIA



Mark Oberholzer, AIA



Larry Kleinkemper, AIA



Thomas McConnell



Mason Rogers, AIA

Steven Land Tillotson, AIA



**JESSE HAGAR** is a freelance writer and registered architect in the state of Texas. He lives in Houston and works for CONTENT Architecture. While writing this assignment for *TA*, he and his fiancée tied the knot. Read his article on the GSA Regional Field Office on page 42.

**LARRY KLEINKEMPER, AIA** is a leader in the industry on advanced technologies in architecture. He says, “The goal is to find the practical uses for these exciting new technologies and to never lose sight that it must facilitate great design.” Kleinkemper discusses BIM-related tools on page 61.

**MARK OBERHOLZER, AIA** and his wife Leigh have finally decided to unbox their art and hang it up, after living in Austin for almost four years. They are trying to make their house more pleasant for the newest addition to the family, a Russian dwarf hamster. On page 52, Oberholzer writes about the Austonian residential tower.

**MASON ROGERS, AIA** grew up in West Texas. After receiving his masters from the Catholic University of America in Washington, D.C, he and his wife Kellie moved back to their hometown of Amarillo where they now raise their three children, Charlotte, Oscar, and June. Mason is the principal of Playa

Design Studio. His feature intro on page 31 addresses designing for extreme conditions on the High Plains.

**STEVEN LAND TILLOTSON, AIA** has broad experience in design, historic preservation, and planning projects. His mother gave him the name Land, not knowing he would change the landscape of Texas, produce award-winning projects, and create original research that defines the complex cultural landscape of South Texas. Tillotson discusses the architectural implications of the Secure Border Fence on page 26.

**THOMAS MCCONNELL**, an advocate of green building, owns McConnell Photography, an Austin-based company specializing in architectural and advertising images. Accompanied by *TA* Art Director Julie Pizzo, he photographed the Austonian for this issue of extremes. See his images beginning on page 52.

**LAWRENCE CONNOLLY, AIA** is a frequent contributor to *Texas Architect*, *The Shape of Texas*, AIA Austin’s quarterly newsletter *Clerestorie*, and the sports page of his neighborhood paper. When he is not writing, at his day job, or at a movie, he is trying to get his teenagers off the payroll. Read his article about the new Cowboys Stadium on page 32.

## Summer Groundbreaking Set For Piano's Kimbell Expansion

**F O R T W O R T H** The long-anticipated construction of Renzo Piano Building Workshop's expansion of the Kimbell Art Museum is scheduled to break ground late this summer, with the opening of the new \$125 million building slated for 2013. The 85,150-sf addition, which will approximately double the museum's gallery space, will include an underground parking garage. The design will reinforce the intended – but seldom used – public approach to the front of Louis I. Kahn's 1972 architectural masterpiece.

The May 27 release of Piano's final design revealed details not specified when the preliminary scheme was unveiled in November 2008. (See Jan/Feb 2009 *TA*, p. 10.) As previously reported, the expansion will be built on the west lawn and will face inward to Kahn's revered landmark.

The new entry sequence is expected to correct the usual way visitors access the museum, which is through the back door due to its proximity to the adjacent parking lot. Instead, the new approach will bring visitors from the parking garage to ground level inside the new building where Kahn's iconic museum will be prominent just beyond the addition's glass facade.

Piano's design acknowledges the older building in its respectful scale and general plan while at the same time asserting its own more open, transparent character. Physically separated by a court and a reflecting pool, the placement of the expansion will be, in Piano's words, "the right distance for a conversation, not too close and not too far away."

The new building consists of two connected structures, the first and more prominent a pavil-



ion that faces east toward the Kahn building. Designed with a tripartite facade, the pavilion's concrete walls will be flanked by a recessed entrance bay of glass. The pavilion houses a large lobby in the center and exhibition galleries to either side, all naturally lit from above. In the galleries, Piano has devised a roof system that incorporates aluminum louvers, glass, photovoltaic cells, wood beams, and stretched fabric scrims. The north and south walls of the pavilion are glass, with colonnades outside to support generous roof overhangs. Below grade is a lower level with art storage, preparatory areas, mechanical systems, a service tunnel to the Kahn building, and other back-of-house functions.

The second component will be located behind the first, with a glass passageway connecting the two, but will be hardly visible from the outside. Covered by a grassy roof that gives the appearance of an earthwork or archaeological site, it will contain a third gallery that is not top-lit and therefore suitable for especially light-sensitive works. Also inside will be the auditorium, the library, and an education center. The double-height auditorium is placed on axis with the entrance, with a view through various spaces and layers of glass from front to back—from the front door to the glass wall and lightwell behind the auditorium stage.

STEPHEN SHARPE

## AIA/HUD Award for Dallas Initiative

**D A L L A S** Congo Street Green Initiative in Dallas by Building Community Workshop recently received a 2010 American Institute of Architects/U.S. Department of Housing and Urban Development Secretary's Award in the category of community-informed design. A total of four projects were awarded in four separate categories and were recognized during a June 10 ceremony at the AIA convention in Miami. The awards recognize excellence in affordable housing architecture, neighborhood design, participatory design, and accessibility.

Congo Street Green Initiative involves six owner-occupied homes on a narrow street of 17 single-family and duplex houses, all built before 1910. Through a series of conversations with the residents, a plan was developed to restore and/or reconstruct the homes without the residents having to rely upon relocation or incur steep financial burden.

The idea centers on creating a temporary home, or "holding house," for the family whose home is currently under renovation. By remaining part of the community, the homeowners are available to work with the team to reconstruct their home. With the projects taking place sequentially, each house that is rebuilt incorporates materials salvaged from the existing home. To date, three homes have been completed and a fourth is under construction.

The jury noted the following: "The project shows thoughtful consideration of the occupants' needs, which is especially important because of their economic difficulties. It shows a beautiful re-use of existing housing stock, and the fact that the owners can remain makes it 100 percent better still."

For additional information and to view a slideshow of the Congo Street Green Initiative, visit [www.aia.org/practicing/awards/ALAB083019](http://www.aia.org/practicing/awards/ALAB083019).

TA STAFF



Congo Street House—Before



Congo Street House—After

## New Expansion of Ideson Library Follows Cram's Original Scheme

**H O U S T O N** The Julia Ideson Building, Houston's historic downtown library, has received an addition that finally completes its original 1926 scheme. Designed by Gensler's Houston office, the four-story south extension replicates a wing that was omitted from the Boston firm Cram and Ferguson's plan for the library, the only facility completed of the projected five-building Civic Center focused around Hermann Square, a block donated to the city in 1914 by philanthropist George H. Hermann. The district was not further developed until 1939 with the City Hall by Joseph Finger and the garden and reflecting pool by Hare and Hare of Kansas City.

Completed in April, the 21,500-sf addition to the existing 66,000-sf library is the first phase of a project that now continues with an interior restoration. The Julia Ideson Building is the home of the Houston Metropolitan Research Center (MRC) and its collections of books, maps, historic photographs, and architectural drawings related to the Houston region. The new wing provides much-needed archival storage and research facilities to make the library's collections more accessible.



The recent expansion of the historic Julia Ideson Building in downtown Houston added a new 21,500-sf wing, shown at left, and an enclosed garden in front. An interior restoration of the original 1926 building will continue through next spring.

Ralph Adams Cram, working with local associates William Ward Watkin and Louis A. Glover, designed the municipal public library to replace the inadequate 1904 Carnegie Library located a couple of blocks away on Travis Street. Using rose brick and red tile in a Mediterranean style similar to his work on the Rice Institute campus

three miles to the south, Cram emphasized the central bays with a limestone facade detailed with rich Spanish Plateresque ornament. Julia Bedford Ideson was the city librarian from 1902 until her death in 1945 and led the institution

continued on page 62

## Wrecking Ball KO's Memorial Coliseum

**C O R P U S C H R I S T I** After almost six years in limbo, the Corpus Christi Memorial Coliseum fell to the wrecking ball in May. Demolition began shortly after a court restraining order was lifted. The building served as the community's primary public events center for over five decades. The bayfront facility was the most visible local project designed by the city's most well-known architect, Richard S. Colley (1910-1983).

The Coliseum was replaced in 2004 as the primary special events venue when the City of Corpus Christi constructed the American Bank Center (by local firm Gignac Associates with Miami-based Aquitectonica). The new facility is located on the opposite end of Shoreline Drive.

Both its birth in 1954 and its recent death were mired in controversy. Originally, the design was intended for a different site, with Colley strenuously opposed to a decision by city officials that changed it to the bayfront location while the project was still under design. City leadership prevailed and the building stood

for decades as one of the most visible bayfront structures on Shoreline Drive.

Shortly after it opened, the building was featured in *Progressive Architecture*. Its most celebrated innovation was a steel lamella structural space frame that formed its iconic curved roof.

As the vacant building deteriorated, local opinion concerning its fate became polarized. Attempts to develop alternative uses for the facility failed. The question of the building's future

continued on page 63



Even as preservationists persisted in efforts to save Corpus Christi Memorial Coliseum, demolition of the downtown landmark began in May. Clearing the site is likely to continue through June.

(TOP) GERALD MOORHEAD, F.A.M.; (BOTTOM) BILL T. WILSON, F.A.M.



## AIA Brazos Inaugurates School Program

**BRYAN** Volunteer members of AIA Brazos inaugurated the chapter's first "Architecture in Schools" program earlier this year, taking lessons about potential career opportunities to a total of 39 fourth-grade students. Enthusiasm was high among participants from Brazos Christian School in Bryan and First Baptist Church School in Brenham, as well as among classroom teachers and the students' parents.

The fourth-grade program focused on neighborhoods. During the six-week program, students gained an understanding of what architects do, identified placement of significant buildings within their own communities/neighborhoods, and began to understand how the environment influences the design of neighborhoods. Some lessons included a homework assignment, which involved parents in the process as the students identified their routes to school and significant buildings along that route. (Adapted from AIA Austin's program, AIA Brazos's curriculum is posted at [www.aiabrazos.org/about-us](http://www.aiabrazos.org/about-us).)

Volunteers used slide shows to help reinforce the concepts presented. Each student received an art kit for graphic activities, providing hands-on opportunities for reinforcing the lessons. At the end of the program, models of



Fourth graders at Brazos Christian School in Bryan showed their model for a neighborhood to parents at the culmination of a six-week classroom program taught by volunteers from AIA Brazos. A total of 39 students at two private schools participated.

neighborhoods designed by the students were displayed for the participants, their parents, and their teachers.

Nine members of AIA Brazos participated in adapting the curriculum and classroom instruction for the inaugural program. Those volunteers, representing 15 percent of the chapter's total

membership, included employees of the Arkitek Studio, BRW Architects, BBA Architects, and Upchurch Architects. Classroom sponsorships of this semester's program were provided by BBA Architects and the CRS Center in the Texas A&M Department of Architecture.

STEVEN SCHLOSS, AIA

## Recap: Gulf Coast Green 2010

**HOUSTON** Held in mid-April at the University of Houston, the fifth annual Gulf Coast Green Symposium and Professional Expo brought together a diverse group — architects, engineers, contractors, developers, students, educators, and government officials — to share information and network across disciplines. The event was hosted by AIA Houston's Committee on the Environment, organized entirely by passionate volunteers and sponsored by several local businesses allied with the design and construction industry.

Kicking off GCC2010's first day of events on April 15 was AIA President George Miller, FAIA, who reminded all 260 attendees to "make sure we shape change that matters" and promoted the programs and strategies of AIA's sustainable initiatives. Opening the second day was recently elected Houston Mayor Annise Parker

who promised to pursue initiatives for "leading the green business revolution for Houston as a model for all American cities!"

Interwoven amongst keynote speakers, the symposium's learning sessions were organized under three tracks: "business of green" with topics including job creation, marketing of green building products and services, and return on investment for green strategies; "renovating the future" featuring discussions about successful strategies for health, energy savings, material resources, and economic payback; and "geography of change" which addressed land analysis, planning, design, management, preservation, and rehabilitation for the health of people and ecosystems.

For the first time, this year's symposium offered a series of roundtable forums for attendees to engage in dialogue with the speakers. The forums enabled in-depth analysis of issues critical to the Gulf Coast region.

This year's annual Gulf Coast Green/Steelcase/McCoy Student Competition showcased young talent with innovative solutions to improve life in the region.

As in previous years, the latest event ended with a series of tours of successful green projects around in and around Houston. One tour focused on recycled materials and interiors by exploring sustainably designed office spaces and educating about the sustainable resources throughout Houston. Another tour engaged local green businesses and nonprofit organizations working together to make Houston cleaner and more environmentally conscious. A third tour concentrated on green residences throughout the Houston area and explored their sustainable designs, construction process, and operations.

More information about this year's event can be accessed at [www.gulfcoastgreen.org](http://www.gulfcoastgreen.org).

FILIO CASTORE, AIA

## AIA Austin Awards 15 Projects

**A U S T I N** Fifteen projects were selected for the 2010 AIA Austin Design Awards in April. The jury was comprised of Merrill Elam, AIA, of Mack Scogin Merrill Elam Architects in Atlanta, Ga.; Marlon Blackwell, FAIA, of Marlon Blackwell Architect in Fayetteville, Ark.; and Michael Imber, FAIA, of Michael G. Imber Architects in San Antonio. The three jurors reviewed over 100 submittals at the AIA Austin Center for Architecture.

Three Honor Awards, three Citations of Honor, seven Merit Awards, one Unbuilt Honor Award, and one Unbuilt Merit Award were presented during celebrations on April 16. Identified by category, the following projects were awarded:

### Honor Awards

**Stone Creek Camp** (Big Fork, Mont.) by Andersson Wise Architects — Situated along a sloping hill, the buildings offer warm, almost cave-like spaces as well as expansive porches open to the sunlight and views.

**Doyle Hall Addition + Renovation** (Austin) by Specht Harpman — The renovation and addition create a campus courtyard activated by the presence of a centuries-old live oak tree, a new café, and a year-round mix of student and faculty spaces.

**Avenue G Residence** (Austin) by Alterstudio Architects — A substantial addition and renovation of a former duplex in Austin's Hyde Park national historic district. Avenue G Residence is unapologetically modern, yet comfortable within its context.



Stone Creek Camp

### Citations of Honor

**Larkey Residence** (Austin) by MJ Neal Architects — Respecting the delicate lines and low profile of the existing mid-century modern house designed by A.D. Stenger, this remodel and addition looks virtually untouched.

**12th St Studios** (Austin) by Pollen Architecture & Design — This compound of studio buildings occupies a busy corner in a transitional east Austin neighborhood.

**Frick Residence & Studio** (Austin) by KRDB — Located on a typical infill lot in central Austin, this residence and studio engages the entire site as an elongated “Z” plan inscribed within an exposed, rigid 16-ft structural steel bay system.

### Merit Awards

**Sisters' Retreat** (Austin) by Mell Lawrence Architects — Two parallel hypostyle halls — one covered by a steel trellis, the other enclosed — frame two sisters' shared family pool house and play area on a semi-rural site, sitting amongst a small family compound of homes.

**GSA Regional Field Office** (Houston) by Leo A Daly/LAN + Page/SoutherlandPage, A Joint Venture — Sited to maximize environmental sensitivity, the plan purposefully presents broad faces to the north and south and thin faces to the east and west. A lightweight screen wall of laminated glass shades the structure from direct sunlight, while apertures in the glass skin provide daylighting with reduced glare for interior spaces.

**Bouldin Residence** (Austin) by Alterstudio Architects — Taking advantage of a 25-ft front yard setback requirement allowed for a private walled courtyard and reorientation of the house



Doyle Hall Addition + Renovation

to face the side street. Carefully placed windows, skylights, and a glass floor open the house to the sky and sun.

**Sushi Raku** (Austin) by Michael Hsu Design Office — Impressed with the overall cohesiveness of the space, jurors enjoyed the playfulness of red ropes and oversized lanterns, which provide a contrast in scale throughout the project.

**Mod Cott: Guest House on the Lake** (Lake Buchanan) by Mell Lawrence Architects — A simple metal volume perched high on a bluff offers targeted lake views.

**Duval Studio** (Austin) by MJ Neal Architects — A studio developed of elements that can ultimately be disassembled and removed, leaving the original shell intact.

**E. Windsor Residence** (Austin) by Alterstudio Architects — A small buildable footprint limited by restrictive easements prompted a thin, three-story home with the main living spaces and master suite on the top floor.

### Unbuilt Honor Award

**Yaravi: Necropolis in the Dead Sea** by Miró Rivera Architects — An elegant proposal illustrating how countless individuals may choose their final resting place in this necropolis.

### Unbuilt Merit Award

**UTSA Campus Master Plan** by Barnes Gromatzky Kosarek Architects — This master plan reestablishes the original planning principles for the campus, which were gradually abandoned as the campus expanded. The design organizes future construction by creating a new density that it currently lacks.

RICK PRICE, ASSOC. AIA



Avenue G Residence

## Jury Chosen for TSA Studio Awards

**A U S T I N** This year's TSA Studio Awards will be judged by three Arizona architects, each respected for design work and commitment to sustainable architecture. Comprising the jury is Wendell Burnette, FAIA, of Wendell Burnette Architects in Phoenix; John Kane, FAIA, a founding principal of Architekton in Tempe; and Philip Weddle, AIA, of Weddle Gilmore Black Rock Studio in Scottsdale. The panel is scheduled to meet in the offices of Wendell Burnette Architects on July 16 with *Texas Architect* Editor Stephen Sharpe in attendance to facilitate the event.

TSA Studio Awards recognize innovation and excellence in the design of unbuilt work. The competition was established in 2004 to encourage real or theoretical projects that go beyond the boundaries of architecture by addressing current critical issues. This year's winning entries will be profiled in an upcoming edition of *Texas Architect*.

Burnette established Wendell Burnette Architects ([www.wendellburnettearchitects.com](http://www.wendellburnettearchitects.com)) in 1996. The firm's work is recognized for its focus on the qualities of light and space, context and place, and the environment and landscape. Burnette also is an assistant professor at Arizona State University's School of Architecture and Landscape Architecture. Burnette's practice evolved from his three-year education at

the Frank Lloyd Wright School of Architecture and a subsequent 11-year association with the studio of William Bruder, which culminated in a six-year design collaboration with Bruder on the Phoenix Central Library.

Kane opened Architekton ([www.architekton.com](http://www.architekton.com)) in 1989 with three colleagues. He was recognized by *Architecture* magazine in 2002 as part of the AIA Desert School, a group of influential architects redefining desert modernism. His firm's work has garnered more than 95 local and national citations for design excellence. Kane is a member of Arizona State University's School of Design Innovation's Council for Design Excellence and the Tempe Council Community Sustainability Committee. He is also a visiting critic and lecturer at schools of architecture around the country.

Weddle co-founded Weddle Gilmore Black Rock Studio ([www.weddllegilmore.com](http://www.weddllegilmore.com)) in 1999 with partner Michael Gilmore. His projects in the fields of architecture and urban planning are recognized for their appropriate responses to site development across a range of ecological and urban contexts. Committed to the public good, the firm actively seeks out opportunities for projects that directly benefit underserved and culturally diverse communities. Through such projects, Weddle explores his career-long interest in the complex relationship between the urban form of the Phoenix metropolitan area and the Sonoran desert.

T A S T A F F

## ArCH Hosts 'Policy'

Architecture Center Houston hosts "Policy," an exhibit highlighting 10 years of research by Mary Ellen Carroll for Prototype 180, a model and conceptual procedure that will transform an existing work of Houston architecture and its program into a dynamic system. Prototype 180 and the Rice Building Institute are partners in this integrated process. Architecture Center Houston, 315 Capitol St., Ste. 120; Mon. - Thurs., 9 a.m. to 5 p.m. and Fri., 9 a.m. to 3 p.m. (Prototype 180, permanent exhibit located at 6513 Sharpview St., Houston). More information is available at [www.aiahouston.org](http://www.aiahouston.org). THRU JULY 9

## TFA Wood Design Nominations Due

The Texas Forestry Association is now accepting nominations for its annual awards program "Excellence in Wood Design." The program recognizes outstanding achievement in project designs that use wood and wood products and that have been completed in the last five years. For more information and a nomination form visit [www.texasforestry.org](http://www.texasforestry.org). Nominations are due JULY 15

## ADA Anniversary Day in Dallas

AIA Dallas hosts Americans with Disabilities Act 20th Anniversary Day with a day of activities. The event features speaker Kent Waldrep and tours of George Dahl's Lighthouse for the Blind and Texas Discovery Gardens. For more information, visit [www.aiadallas.org](http://www.aiadallas.org). JULY 26

## Texas Main Street Program Applications Due

The Texas Historical Commission is now accepting applications from small, urban, and recertified communities for participation in the Texas Main Street Program. The program is a revitalization plan for historic downtown and neighborhood commercial districts. For more information, contact State Coordinator Debra Farst at (512) 463-5758 or visit [www.thc.state.tx.us](http://www.thc.state.tx.us) to download an application. Applications are due JULY 30

## UTSOA Hosts 'Rigorous Vision'

The UT Austin School of Architecture's Visual Resources Collection presents "Rigorous Vision: Capturing Contemporary Architecture." The exhibit represents a small subset of thousands of images that professor Lawrence Speck, FAIA, has contributed to the collection. Speck's images capture the formal qualities of contemporary public space in the U.S., Europe, and Asia. UTSOA Visual Resources Collection, Sutton Hall 3.128, Mon. - Fri., 8 a.m.-5 p.m. THRU AUG 13

T A S T A F F

## Governor's Mansion Modified Plan OK'd

**A U S T I N** In late April, Texas Historical Commission officials approved a modified plan for an addition to the Texas Governor's Mansion. The plan is the larger of two that the State Preservation Board had proposed in early April. The addition expands the mansion's footprint to meet modern building codes and future space needs and will be built onto the west side of the structure. The addition, to be designed by Ford Powell & Carson, will not be visible from the front.

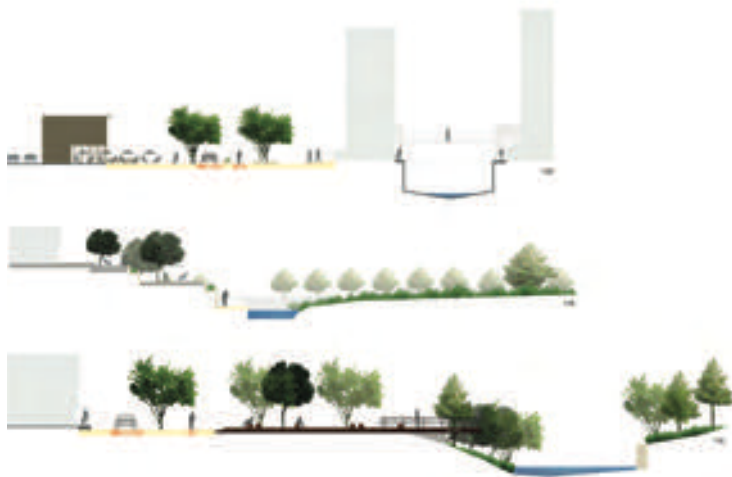
Security concerns have dictated that the floor plan be kept secret, but officials previously stated that the larger 1,555-sf plan calls for moving an existing porte-cochere for a two-story addition and includes a new bedroom, storage areas, a disability-accessible bathroom, and space for a home office.

Officials have stated that the only change to the existing building will be a row of windows on an enclosed upstairs porch that will be set back into the wall, so people can see what was added later—a protocol in preservation.

The proposal is a scaled-down version of a 3,000-sf plan originally considered by the State Preservation Board, released in January but received much criticism for being insensitive to the historic property.

Now that THC has approved the final design concept, Preservation Board officials are preparing final design drawings to submit for a required state permit before construction can begin. The addition is part of a larger renovation project for the mansion, which was heavily damaged by an arsonist almost two years ago. Investigators continue their probe into the attack.

T A S T A F F



## Waller Creek Master Plan

“Tailor the District,” a concept for reinvigorating a downtrodden corner of downtown Austin, uses Waller Creek as the central seam around which patches of social fabric (i.e., places of local commerce, open space, and entertainment venues) are stitched together by a unified circulation network. The dominant feature of the area is the creek that flows through a manmade channel several feet below street level near the eastern edge of downtown. As designed by students from the UT Austin School of Architecture, the scheme was recognized with an Honor Award from the Texas chapter of the ASLA. The project was undertaken as part of Allan Shearer’s landscape architecture studio by Britta Johanson, Chelsea Larson, Steven Moore, and Emily Scarfe. Their proposal emphasizes a vital urban core that supports adjacent blocks both socially and economically while establishing a spatial framework for future growth. The master plan intends to transform a long-standing eyesore into a public amenity that unites disparate social groups.

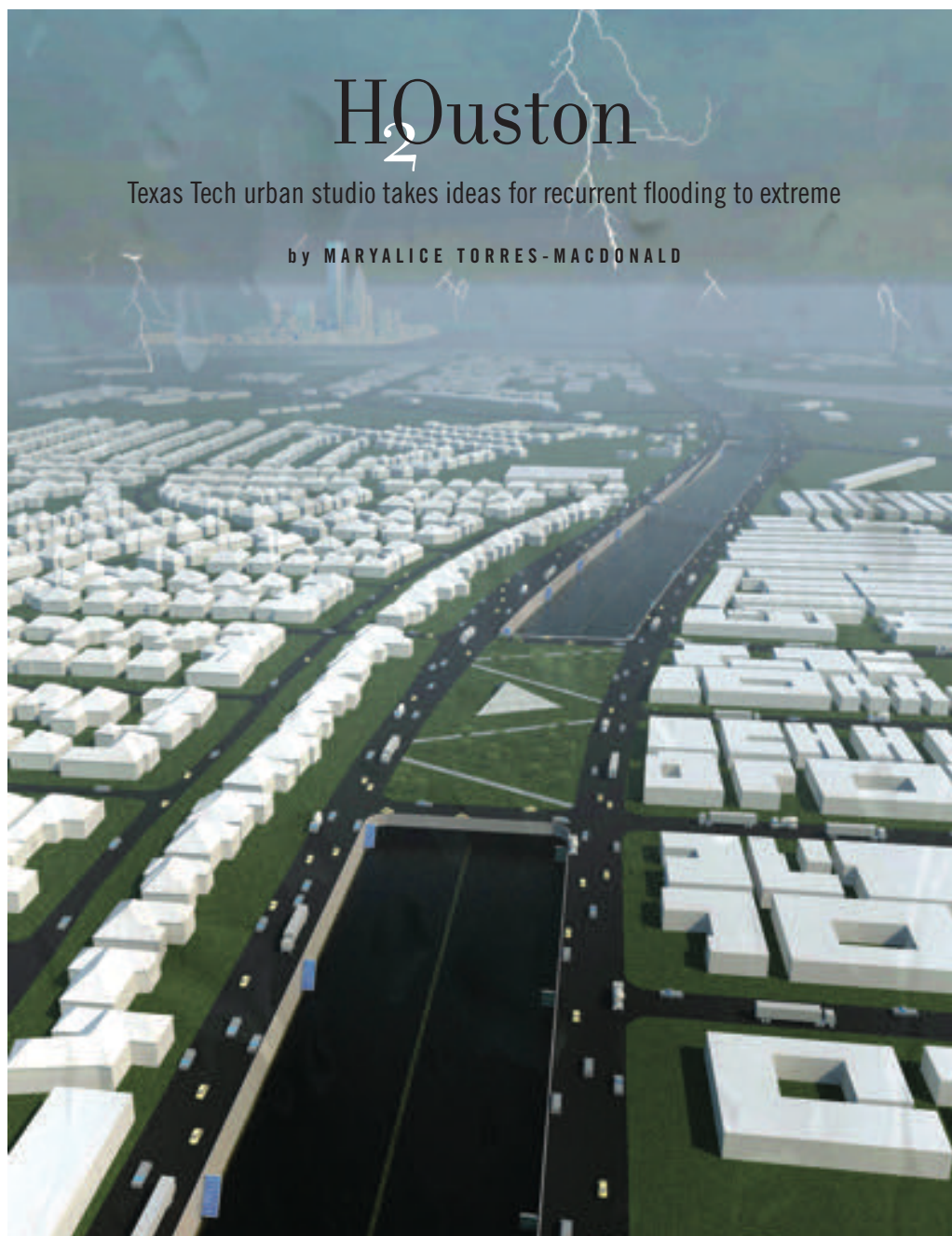
## Casa Verde

Casa Verde, a conceptual project by Houston’s Morris Architects, was one of three projects awarded an Honorable Mention in the 2009 Dallas Urban Re:Vision international design competition that challenged participants to transform a 2.5-acre downtown parking lot into an entirely self-sustaining mixed-use, mixed-income development. Casa Verde includes 500 apartments (40 percent is affordable housing); 57,600 sf of food production; 84,600 sf of open space; a restaurant; health clinic; greenhouse; facilities for wastewater treatment, water storage, composting and recycling; centers for daycare, eldercare, and education; and electric vehicle charging stations. A roof garden features a small orchard. The building skin’s flexible netting allows for vertical plant growth, which harvests rainwater from the roof to sub-level storage. The building system is flatpack structural frame with factory-built modular “plug and play” apartments. Casa Verde also received an AIA Houston 2010 Design Award. To view more images and access a list of the design team, visit [www.revision-dallas.com](http://www.revision-dallas.com).



## Cotillion Pavilion

Designed by Mell Lawrence Architects of Austin, the Cotillion Pavillion replaces an existing shade structure at Cotillion Park in northeast Dallas. Scheduled for completion later this year, the project is part of the City of Dallas Park and Recreation Department’s long-range strategic plan to restore or replace aging picnic pavilions throughout the city. Located near a baseball diamond and a playground, the structure is composed of steel columns supporting a steel framework above a concrete slab. Screen walls are created through a series of steel angles welded to the frame in a horizontal pattern. Below, board-formed concrete benches define the pavilion’s east and west sides, and a steel grill sits to the west. Above, a glass and steel roof is set within the top horizontal plane of the structural frame to provide rain protection and views upward to the sky. A pivoting ellipse painted bright red-orange hangs below the roof and serves as a beacon visible through the screen. The design captures 1,00 square feet while creating a sense of playfulness through the use of shape and pattern.



In 1836, shortly after Texas won its independence from Mexico, two New York real estate developers, John and Augustus Allen, claimed just over 6,600 acres as the site of Houston. The site, located at the confluence of the Buffalo and White Oak bayous, is where Houston's first port, known as Allen's Landing, opened for business in 1841. The Allen brothers wrote about the crystal clear waters and how the abundant natural resource was certain to position the settlement for future growth and prosperity. Little did they realize what a tremendous impact water would have on the Houston we know today.

Recently, graduate students in the Houston Studio + Practicum at Texas Tech University's College of Architecture explored the issue of Houston's recurrent flooding and investigated potential design solutions for the nation's fourth largest metropolis and the only major city

in the U.S. without zoning. The results were intended as conceptual starting points for further studio exploration and application through a new intensive one-year urban design studio. The program provides an opportunity for students to spend their final year of education studying complex urban conditions.

For the next two years, the research-based studio will concentrate on understanding existing conditions in Houston, dissecting current practices, and developing ideas for solutions as they relate to water.

Houston is known as a city of extremes—from its lack of zoning to its intensely hot and muggy summers, to its frequent battles with flood waters. Currently, these waters are managed in a variety of ways using roadside

continued on page 25



AIA Architects stand ready to provide invaluable counsel on re-claiming brownfields, renewing urban areas, and re-shaping the current landscape toward a more renewable future.

## The next step is up to you.

The AIA is publicly committed to the goal of reaching at least a 50% carbon emission reduction by 2010 and carbon neutral buildings by 2030. AIA Architects Walk the Walk on sustainability.



## Walk the Walk

Architects Leading the Sustainable Evolution™



THE AMERICAN INSTITUTE OF ARCHITECTS

Join us and together we can walk toward a more sustainable future.  
Visit [www.aia.org/walkthewalk](http://www.aia.org/walkthewalk) today.

ditches, curb and gutter roadways, retention and detention ponds, and large storm sewer systems that channel runoff to the many tributaries, creeks, and bayous that ultimately reach the Port of Houston and the Gulf of Mexico. But with an elevation of 43 feet above sea level that rises inland only one foot per mile, and with high-content clay soil conditions limiting absorption, the ability to transport flood water is difficult at best and in many cases impossible. It is these very conditions that challenged the students to reconsider what it means to flood and the ephemeral nature of water in a place such as Houston.

After meeting with the City of Houston's director of public works, Michael Marcotti, for a brief lecture on the local government's approach to infrastructure and flooding, student Jarod Fancher took the basic idea of infrastructure as a drainage mechanism to an

extreme. The streets of Houston were designed to channel water to adjacent bayous with the intention that flooding of the streets was desirable as a diversion to flooding residences and businesses. Fancher proposed recessed hybrid highways, super-sizing the idea of "street channeling" to the interstate. Diversion paths establish safe exit way from the interstate during flood warnings. His concept derived from a series of diagrammatic mapping processes that helped to identify current and

**(preceding page) Jarod Fancher suggested using Houston's existing highways as hybrid flood channels to lead water into adjacent bayous. (below) Peter Smuda's concept for "catch, hold, display, use and release" involves buildings designed to accept runoff for gray-water purposes, then channeling flood water through the downtown's network of pedestrian tunnels.**

projected water movement. The hybrid highway then leads water to the gulf.

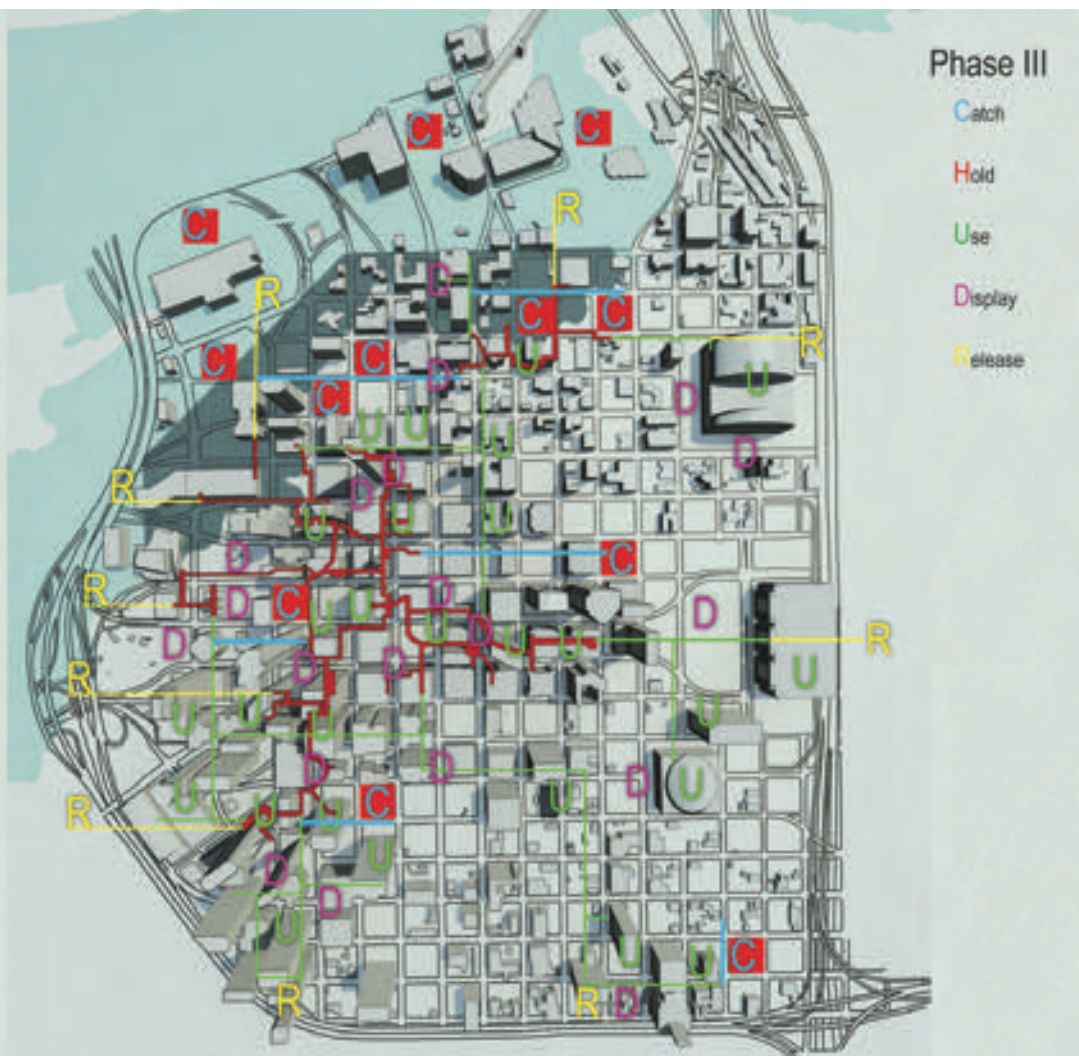
Peter Smuda took a more direct architectural approach with his concept for "catch, hold, display, use and release" in which buildings are designed to accept runoff for use as HVAC coolant and other gray-water purposes. While the filtration system would require more upfront cost, the benefits would likely prove to be cost-effective over the building's life cycle. Smuda boldly proposes to modify Houston's downtown pedestrian tunnel system by channeling flood water through segments located adjacent to the flood-prone areas of the central city. In an effort to address long-term sustainable uses of Houston's floodwater, Tyler Gentry proposed an elaborate series of floodwater holding tanks that would siphon from adjacent flooded areas, filter the runoff, and hold for gray-water uses such as irrigation. The design of the structures would represent their function – similar to water towers and grain silos – with the intent to celebrate their utilitarian nature.

Other students explored different tactics: Jared Rooker envisioned a recreational system using floodwaters, which would broaden the marketability of Houston as a tourism destination for water sports such as canoeing and tubing; Matt Bartholomew identified bayou parks with a proposal to redesign these along with adjacent commercial areas for reuse of floodwaters; and Phillip Meador proposed a complete rethinking of the city's urban fabric and its complex interweaving of neighborhoods based on the principles of Christopher Alexander.

Overall, the students' work represented a rethinking of Houston as a flood-prone city, a new way of considering the ephemeral nature of water. Their extreme concepts for the Houston Studio + Practicum are timely, having evolved simultaneously with the revision of codes by city officials that will allow for the use of catch basins in both commercial and residential applications to assist with periodic flooding. That's a step in the right direction, yet more radical thinking may be necessary to devise long-term solutions for a twenty-first-century metropolis where older neighborhoods are burdened with archaic infrastructure and new development continues to consume vast tracts at the city's sprawling periphery.

MaryAlice Torres-MacDonald is an associate professor at Texas Tech University's College of Architecture.

IMAGES COURTESY TEXAS TECH COLLEGE OF ARCHITECTURE





# Defense Redesigned

An alternative strategy for border security along the Rio Grande

by STEVEN LAND TILLOTSON, AIA

BRITISH HISTORIAN ARNOLD J. TOYNBEE observed that the border of an enlightened and ascendant civilization is a fluid zone of contact. But, he cautioned, when its power of self-determination and its creative influence upon neighbors wane so does the mutual cooperation and communication shared with those neighbors until hostility transforms the border into a rigid military line. Over the last decade, this phenomenon has been manifesting along the 2,000-mile border between the U.S. and Mexico with the construction of the Secure Border Fence.

The Lower Rio Grande Valley has been particularly affected. The “Valley” is more accurately coastal plain and delta whose meandering course of the river has created *resacas*, stranded sections of previous river and flood channels (oxbow lakes), and *bancos*, peninsulas of low-lying land of fertile alluvium that yield abundant natural habitat and cultivated goods.

Over three centuries, the region’s civil population has forged a unique cultural province of shared heritage, kinship, and language within a transnational dynamic. Viewed from a distance *sans* lines of jurisdiction, the Valley is a 10,000-square-mile shallow basin of *ranchos*, orchards, *colonias*, towns, and mid-size cities sprawling along both sides of the river. The his-

toric contrast between lush riparian corridors and dry brushy plain is now blurred by irrigated fields and relentless suburban growth; the amended landscape afforded by diverting water for irrigation and raising flood control levees and resulting in a river somewhat less than *grande*.

As the most frequently crossed international boundary in the world, the U.S.-Mexico border has more than 250 million legal crossings a year. It has countless illegal entries as well, fueled by America’s hopeful beacons. In the post 9/11 political climate, terrorism and immigration converged and moved Congress to enact the Border Protection, Anti-Terrorism, and Illegal Immigration Control Act of 2005, which called for 670 miles of the border to be fenced. Subsequently, lawmakers passed the Secure Fence Act of 2006.

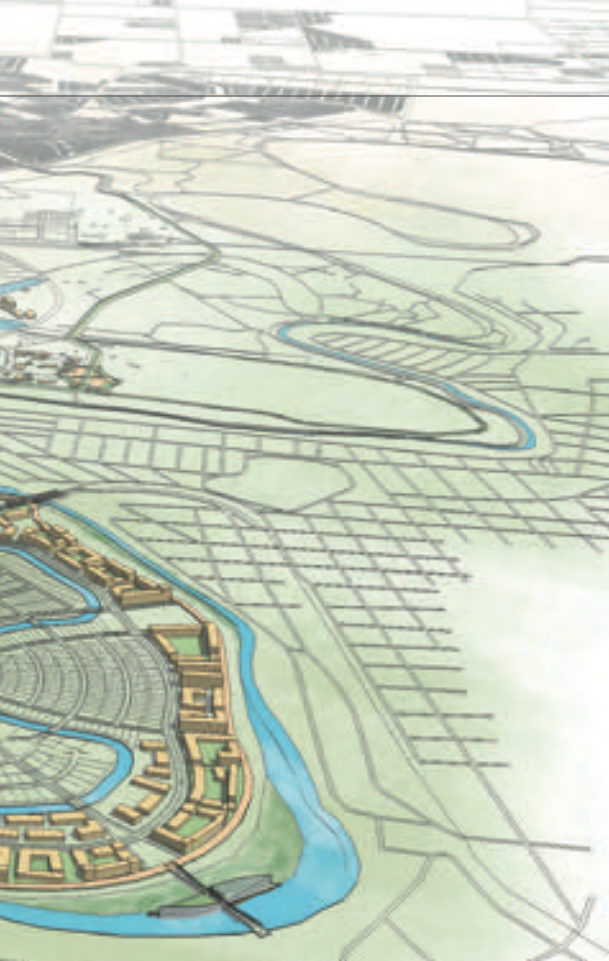
To expedite construction of Secure Border Initiative Tactical Infrastructure (aka the Fence), the U.S. Department of Homeland Security was empowered to waive 22 U.S. laws ranging from the Endangered Species Act to the National Historic Preservation Act. The SBI Office was funded with \$3.4 billion to oversee SBInet, a consortium of private contractors led by Boeing Corporation, to implement fencing, barriers, and surveillance technology.

Prefunctory hearings in Valley communities resulted in an overwhelming reaction of fear and anger. Border security was also of local concern, but the intermittent locations of the Fence would create restricted zones at population centers. Many Valley citizens felt their rights were being violated as an acceptable collateral cost in a misguided mandate for national security. Protests ensued.

Nonetheless the federal government proceeded to survey the placement of about 70 miles of steel post-and-picket fencing and patrol paths from Roma to Brownsville. DHS could waive U.S. laws, but soon found out it could not violate the provisions of the International Boundary and Water Commission. The IBWC, whose jurisdiction is administered through the state departments of the U.S. and Mexico, disallowed the Fence within its floodplains, and so the Fence would stand off and effectively sever access to a multitude of the productive *bancos*.

Such was the situation when I began work as a consultant addressing downtown revitalization for the Imagine Brownsville Comprehensive Plan. Founded in 1848 opposite Matamoros, Brownsville ascended as a sea and river port and international port-of-entry. A previous planning study had identified a portion of the historic riverfront as





gate how border security and urban expansion might be compatible, and produced a conceptual response that was cautiously shared through informal channels.

The basic physical problem derives from a century of incremental and mutually reactive abandonment of the riverfront and ecological degradation. The resultant landscape was a no-man's-land of desolation and isolation both unattractive and negatively attractive, and needed to be reoccupied with wholesome human activity as a fundamental security strategy. Implicit with the recreation of the human habitat would be reclamation of the riparian and aquatic qualities of the river and *banco*.

The strategic line is the City Levee which, if raised to meet IBWC standards, reinforced with a DHS scale-deterrent wall, and broadened to accommodate public pedestrian and limited vehicular circulation, could serve as an esplanade. Levees and ramparts are civil engineering cousins, so by combining their attributes the issues of security, flood control, and a place for people are simultaneously resolved. It is a common enough solution found in most waterfront cities, adding great value and livability, but would be unique to the Rio Grande border region.

The esplanade as a singular path might well be adequate, but would be of greater consequence as the connecting spine of a trail network interlacing a riparian matrix. Protected from flooding by the City Levee, the *banco's* dry and marginally vegetated landscape is marbled with silted *resacas* and river channel remnants which if dredged and appropriately managed could recover ecological qualities. Reshaping the riverbank to support wetlands would require excavation for embayments, and the spoil combined with *resaca* dredging would provide the backfill for the levee esplanade.

Comprehensive reclamation of the riverfront and of the *banco* would substantially raise land values. And if developed with an urban density sensitive to Brownsville's historic urban patterns and an efficient infrastructure, would enable expansion of downtown and a more sustainable absorption of a quarter of Brownsville's otherwise sprawling growth for the next 50 years. Public squares and parks located at approximate half-mile intervals would break the esplanade into an orderly succession of developmental phases.

Since the Fence budget would provide less than half the cost of a reinforced levee, addi-

tional flood control funding and partnership with market development would be essential. However, attempts to present the concept to DHS were rebuffed; there was no interest in an alternative design or collaboration, and officials were proceeding with a revised plan locating the Fence just inside the City Levee. Nevertheless, the concept gained enough local support to include it in the draft plan that was approved by the City of Brownsville.

Although a new administration in 2009 brought hope of relief, the enabling legislation could have only been modified by Congress with an unlikely two-thirds majority vote. Brownsville's U.S. Congressman Solomon Ortiz was undeterred and addressed the issue with President Obama, brought DHS and Brownsville officials together for discussion, and crafted an agreement confirming completion of the Fence but permitting its replacement by a "fortified levee" as illustrated by the Rio Grande Esplanade concept. In the meantime, however, the Fence was built.

The Rio Grande Esplanade concept succeeded as an alternative design solution, but its fulfillment is uncertain. It has returned Brownsville's attention to the river and its riverfront as essential elements of its history and future prosperity. Brownsville and Matamoros have a shared cultural landscape and common economic interests, so the next uncharted step would be in seeking a reciprocal response from Matamoros where redevelopment of underutilized industrial land is being considered along its riverfront. Both cities could reconstitute their own border stability that pays tribute to the political objectives of their distant capitals and yet strengthens their transnational ties and cultural equilibrium. And then there are those upstream communities that deserve a similarly comprehensive border retrofit. It may seem a distant ideal, but such a thought is the basis for a culturally responsive design ethic in which respect for human rights and environmental justice are expressions of national sovereignty.

The writer is a principal with San Antonio-based Kell Muñoz. He was a consultant to Ambiotec Engineering on the Imagine Brownsville Comprehensive Plan. Others whose involvement was critical to the project were Dr. Carlos Marin of Ambiotec Engineering Group; Dr. Juliet Garcia, president of UT Brownsville/Texas Southmost College; Peter Goodman of the City of Brownsville; and Denise Blanchard, chief of staff to U.S. Congressman Solomon Ortiz.



It's not funny when it happens to you.

**PROTECT YOUR PROJECT WITH AIA CONTRACT DOCUMENTS.** No one likes to be left pointing the finger. Having the right contracts in place can reduce risks, prevent conflicts and with our new Integrated Project Delivery (IPD) Multi-Party Agreement, create more successful collaborations. Easy to use, widely accepted and balanced fairly for all parties involved – get off to a smart start with AIA Contract Documents.

**NEW DOCUMENTS INCLUDE IPD MULTI-PARTY AND FEDERALLY FUNDED PROJECT AGREEMENTS.** To learn more, call 800-242-3837, visit [aia.org/contractdocs](http://aia.org/contractdocs) or follow us on Twitter @AIANational.

Get the **NEW VERSION**  
at [aia.org/contractdocs](http://aia.org/contractdocs)

**AIA Contract Documents®**  
THE INDUSTRY STANDARD.



# Extremes on the High Plains

Unlike anywhere else in Texas, conditions in the Panhandle require special design consideration

by MASON ROGERS, AIA

ON THE HIGH PLAINS, DEALING WITH EXTREMES comes with the territory. Tell a northerner you are from the Texas Panhandle and they will ask how you ever survive the heat. A southerner will pity you for having to live on the frozen tundra. While summers can be scorching hot and winter snowfall can pile up unexpectedly, the High Plains – unlike everywhere else in Texas – enjoys four seasons.

In Amarillo and the vicinity, extreme weather cannot be overlooked in the design process. The wind can pester a building's occupants by rattling windows and blowing in dust or it can deteriorate materials and mechanisms left over-exposed. (The Texas Forest Stewardship Program estimates that 535 tons of soil blow away in West Texas every year.) The average annual snowfall in Amarillo is over 15 inches, compared to Austin's average of less than one inch. Snow accumulation around buildings can lead to ice-packed sidewalks and worse, moisture infiltration. The Panhandle's wide range of temperatures (record high 108F, record low -14F) can deteriorate exposed materials and make others impractical. The sun brings life and can just as easily burn it away. Although his legs are starting to fail him, my grandfather still stands by his conviction that the quality of a parking space is based not on proximity to one's destination but the availability of shade. Overall, environmental conditions on the High Plains demand that architects here consider factors such as orientation and materiality to arrive at a successful solution.

The best vernacular buildings in the region address the extreme weather conditions of the High Plains simply and efficiently. Buildings grouped together for agrarian purposes typically provide shelter for the central court space by blocking the dominant southwest winds of summer and the crippling north winds of winter. Trees planted in tightly spaced rows create wind breaks along the perimeter of fields and homesteads. The earliest settlers took cues from Native Americans and found refuge in Palo

Duro Canyon. Charles Goodnight, arguably the most significant cowman of the High Plains, built a home and ran his cattle operation in the canyon for many years before the allure of the railroad drew him away.

Modern building technologies can assist architects in overcoming the design constraints incurred by potential extreme weather. Heated sidewalks melt snow and ice before they become a problem, but such conveniences are not in everyone's budget. HVAC systems can be designed to keep up with almost any amount of solar gain, but at a cost both in terms of budget and operational efficiency.

Design elements responding to extreme weather conditions can be visible and add aesthetic value. Others are hidden within the roof or wall systems. Snow guards prevent large sections of accumulated snow from sliding off metal roof assemblies. During the rest of the year, the snow guards establish a complementary rhythm to a standing-seam metal roof. Diagonal structural bracing, on the other hand, is typically fastened between structural members and covered with finish systems. Although generally concealed, bracing exposed to the interior or exterior can provide an elegant reflection of the building's strength and sophistication.

People of the Panhandle like to think they come from hearty stock. Even today it takes a certain strength of character to live and thrive on the High Plains. The stark beauty of the prairie and the surprising grandeur of the canyon are hard to deny, and the determination to live here is rewarded with the broadest range of experience. Spring's beauty is accentuated by the harsh winter, and the cool breezes of autumn are restorative after summer's dry heat. These topographic and meteorological extremes combine to offer a unique beauty, yet demand honesty and efficiency from the built environment.

Mason Rogers, AIA, is the principal of Playa Design Studio in Amarillo.





# Keeping Up with the Joneses

**PROJECT** Cowboys Stadium, Arlington

**CLIENT** Dallas Cowboys Football Club

**ARCHITECT** HKS

**DESIGN TEAM** Bryan Trubey, AIA; Mark Williams, AIA; Joe Buskuhl, FAIA; Kevin Taylor, AIA

**CONTRACTOR** Manhattan Construction Company

**CONSULTANTS** Walter P Moore (structural-prime); Campbell & Associates (structural-consulting); M-E Engineers (MEP); Accessology (ADA); Wrightson, Johnson, Haddon & Williams (electronic/acoustics/noise/vibration); Selbert Perkins Design Collaborative (graphics); URS as LOPEZGARCIA GROUP (assistant MEP/plan review/inspections); Uni-Systems (roof/wall/video board); Birdair (fabric membrane roof); RWDI (wind tunnel); Graham Associates (civil); Landtec Engineers (geotechnical); Craig Olden (retention); Bencor (slurry wall)

**PHOTOGRAPHER** Blake Marvin/HKS

by LAWRENCE CONNOLLY, AIA

As if straight from a big-budget science-fiction movie, the new Cowboys Stadium in Arlington looks like a colossal alien spacecraft tethered to the ground by a pair of monumental steel arches. Some locals even refer to it as Death Star, but it does not appear threatening. Nevertheless, it is really BIG! Its immense size becomes particularly evident when the sun is low and the saucer-shaped stadium casts a wide and long shadow that extends beyond its oceanic parking lot and spreads dramatically across adjacent properties.



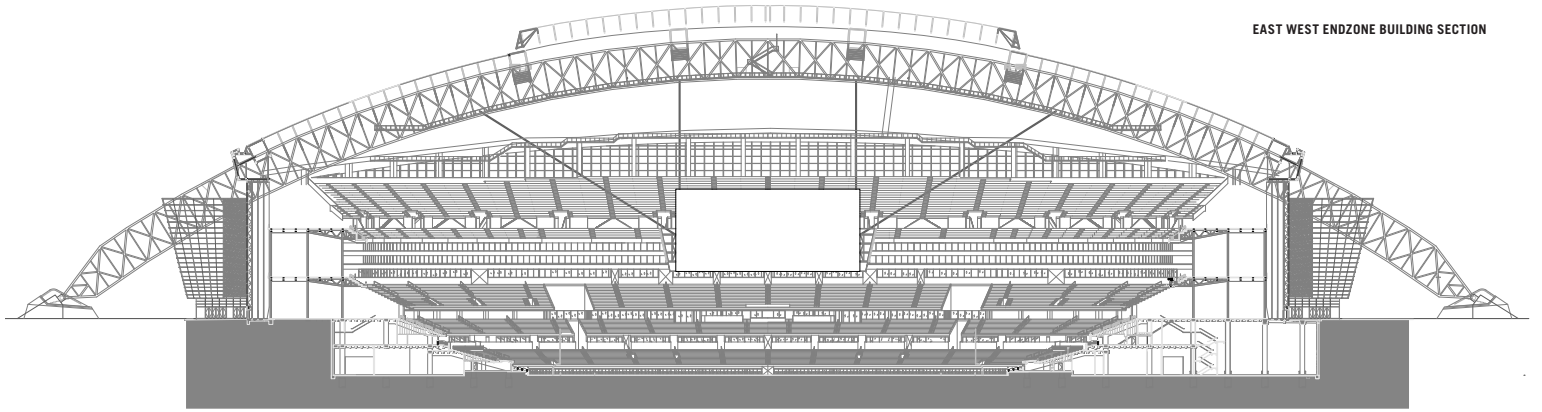
Given its three million square feet and its even more breathtaking volume of 104 million cubic feet, it was inevitable that the new stadium would claim some design and construction records. Most significantly, this architectural and engineering marvel represents the world's largest space unobstructed by support columns. The retractable roof is also the world's largest. (See sidebar on p. 37.) And, at both end zones are the world's tallest retractable glass doors, each measuring 180 feet wide and 120 feet high, configured as five-panel transparent sliding partitions that can be opened in 12 minutes. All of these gigantic kinetic leaves afford welcome envelope options in modern stadium design by allowing this enormous room to be naturally ventilated. The opportunity to eliminate the need for air-conditioning, weather permitting, makes this flexibility the stadium's greenest feature. Transparent glass is also abundant along the stadium's canted side walls and reduces the need for electrical lighting in corridors during daytime operations.

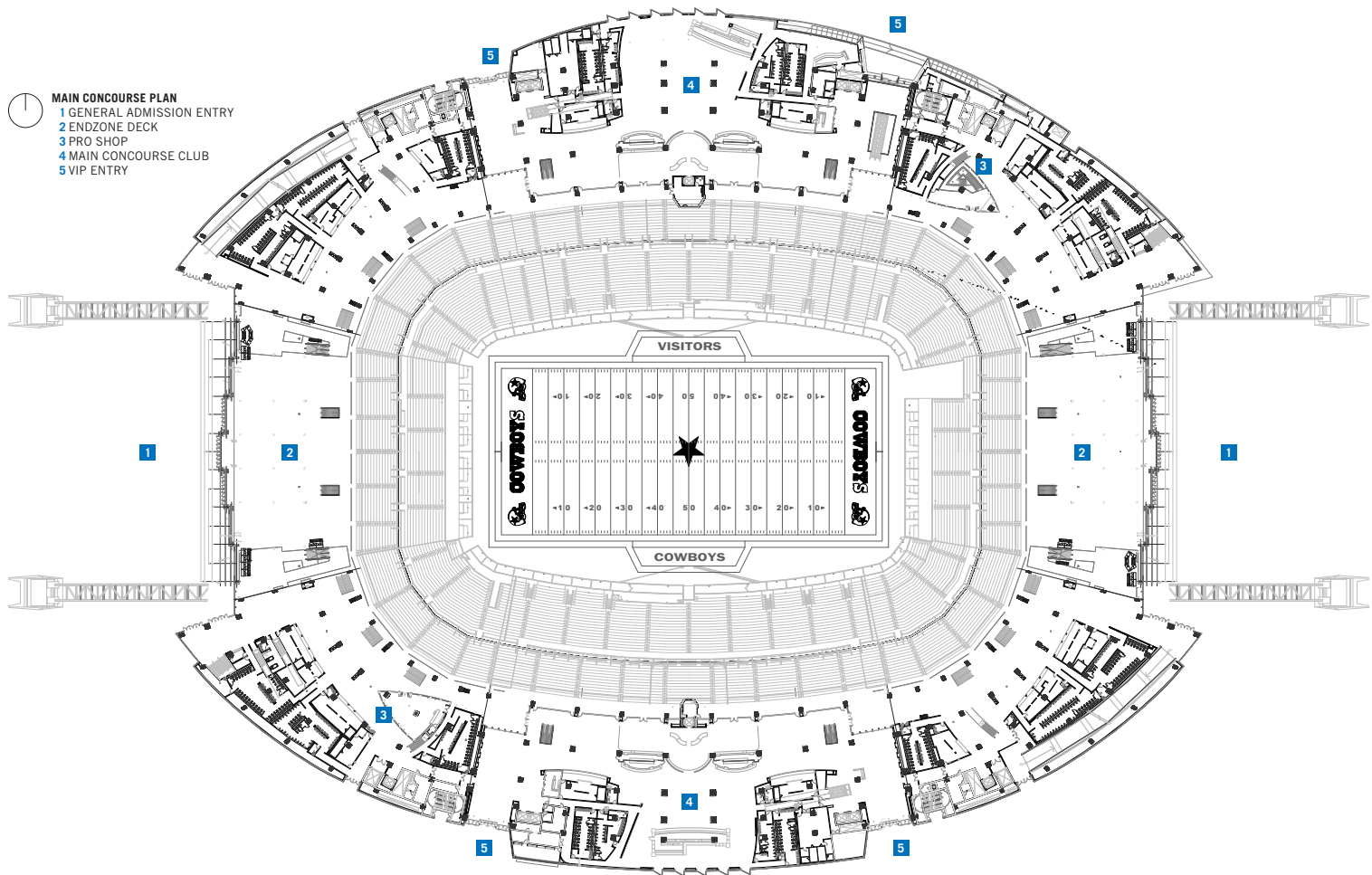
Designed by Dallas-based HKS Sports & Entertainment Group in close collaboration with NFL franchise owner Jerry Jones, Cowboys Stadium replaced the recently demolished Texas Stadium in Irving. (See article on p. 68.) When the roof canopy is open, the new stadium resembles its predecessor—the shared “hole in the roof” being the most obvious legacy to have migrated to Arlington. While the old stadium possessed its own iconic profile, the silhouette of the replacement is more streamlined and visually cleaner in comparison. More so, everything about the new place is better and much bigger. The contrast is even starker between the new stadium and the typical raw-boned, open-air venues of yesteryear. Where those early structures' exterior perpendicular walls and columns rose immediately behind the last row of their seating bowl, the progressively patterned fritted

**As the largest NFL arena, Cowboys Stadium encloses 104 million cubic feet. The building, completed last year and designed by HKS Sports & Entertainment Group in collaboration with team owner Jerry Jones, relies on twin steel box-truss arches to support its 14,100-ton dome. The result is the world's largest column-free interior, yet one sheltered by the largest retractable roof on the planet.**

**RESOURCES** ROOF STEEL: Derr Steel Erection Co.; STEEL ROOF DECKING: Metal Dek Group; STRUCTURAL STEEL: Arcelor Mittal; STEEL COATINGS: Sherwin Williams; RETRACTABLE ROOF: Saint-Gobain Fabric; REINFORCING CONCRETE: CMC; CONCRETE MATERIALS: TXI; CONCRETE WALKWAYS: North Texas Bomanite; CEMENTIOUS DECKS: Capform; FOUNTAINS: Greenscape Pump Services; PRECAST ARCHITECTURAL CONCRETE: Heldenfels Enterprises; EXTERIOR METAL WALLS: Centria, Reynobond, Reynolux; METAL PANELS: Alcoa; EXTERIOR WINDOWS: Pilkington North America; EXTERIOR GLAZING: Viracon (Haley-Greer); EXTERIOR STONE: Blackson Brick; WALL INSULATION: Johns Manville; EXTERIOR ENTRANCE GLASS: PPG; LUMBER: Brazos Forest Products; PLASTIC FABRICATIONS: Wilsonart, Formica, Abet Laminati; SECURITY HARDWARE: Southern Folger Detention (ISI Detention Contracting); INTERIOR WINDOWS: Oldcastle Glass, PPG; CEILING PANELS: BASWA Acoustic, Armstrong, Tectum, USG, CertainTeed Ecophon, Ceilings Plus; ISLE/ BALCONY GLASS: Mammen, Oldcastle Glass; DIVIDERS/COLUMN DETAILS: Cascade Coil Drapery; WATERPROOFING: WR Grace; GYPSUM BOARD AND INTERIOR PANELS: Georgia-Pacific Gypsum; OPERABLE PARTITIONS: Modernfold; ELEVATORS/ ESCALATORS: Schindler; DOORS AND HARDWARE: Ceco Door, Kawneer, Eggers, Khoury; CARPET: Shaw Contract Group, Atlas, Constantine Commercial, Chilewich, Karastan, Interface Flooring; PLUMBING FIXTURES: Kohler, Toto; RESILIENT FLOORING: Forbo, Flexco, Johnsonite; FLOOR/WALL TILE AND STONE: Horizon Tile, DalTile, American Tile Supply, Sadlerstone, Crossville, Mixed Up Mosaics, Sigma Marble Granite & Tile; QUARRIED STONE: Stone Marketing International, Ann Sacks; FURNITURE AND CASEWORK: TBC Consoles, Martin Bratrud, Ekitta, Lundy Services, Architectural Specialties Trading Co.; EQUIPMENT RACKS: Middle Atlantic Products; WALL COVERINGS: Innovations in Wallcoverings, Knoll Textiles, Maya Romanoff, Carnegie, Concertex, Kravet; SPECIALTY WALL FINISHES: modularArts; ART DIFFUSION PANELS: Interlam (Spec Reps); ELEVATOR AND SPECIALTY WALL GLASS: Pulp Studio (Spec Reps); WOOD FLOORING: Junckers Hardwood; VIDEO SCOREBOARD: Mitsubishi; AUDIO VISUAL EQUIPMENT: Chief Mfg., BOSH/EV, BSS Audio, Community Loudspeakers, Tannoy Loudspeakers

EAST WEST ENDZONE BUILDING SECTION





glass walls of the Cowboys' new home are canted at 14 degrees to reduce the stadium's cooling load and overall footprint. This adroit slimming gesture makes the enclosure appear smaller than it actually is and thus minimizes the daunting impact of such a massive building.

Cowboys Stadium, the largest NFL venue ever built, can accommodate 100,000 spectators. The attention to gracious hospitality toward all guests is a hallmark of the franchise's operation. (Patrons are called guests rather than fans.) Extraordinary effort has been made to ensure "an experience like none other." Finding a restroom without an annoying line is easy because there are 1,600 toilets. While in route, it is unlikely that a guest will miss any of the game, event, or performance because their path is never beyond the view of a monitor screen. In all, there are 3,000 monitors and each has the capability of being operated individually—an invaluable operational and security feature. Neither will there be long lines at the concessions because the house contains 1,216 points of sale. Vantage points for guests range from standing-room-only areas in the end zone plazas (This venue's most affordable tickets) to premium clubs, lounges, and luxury suites.

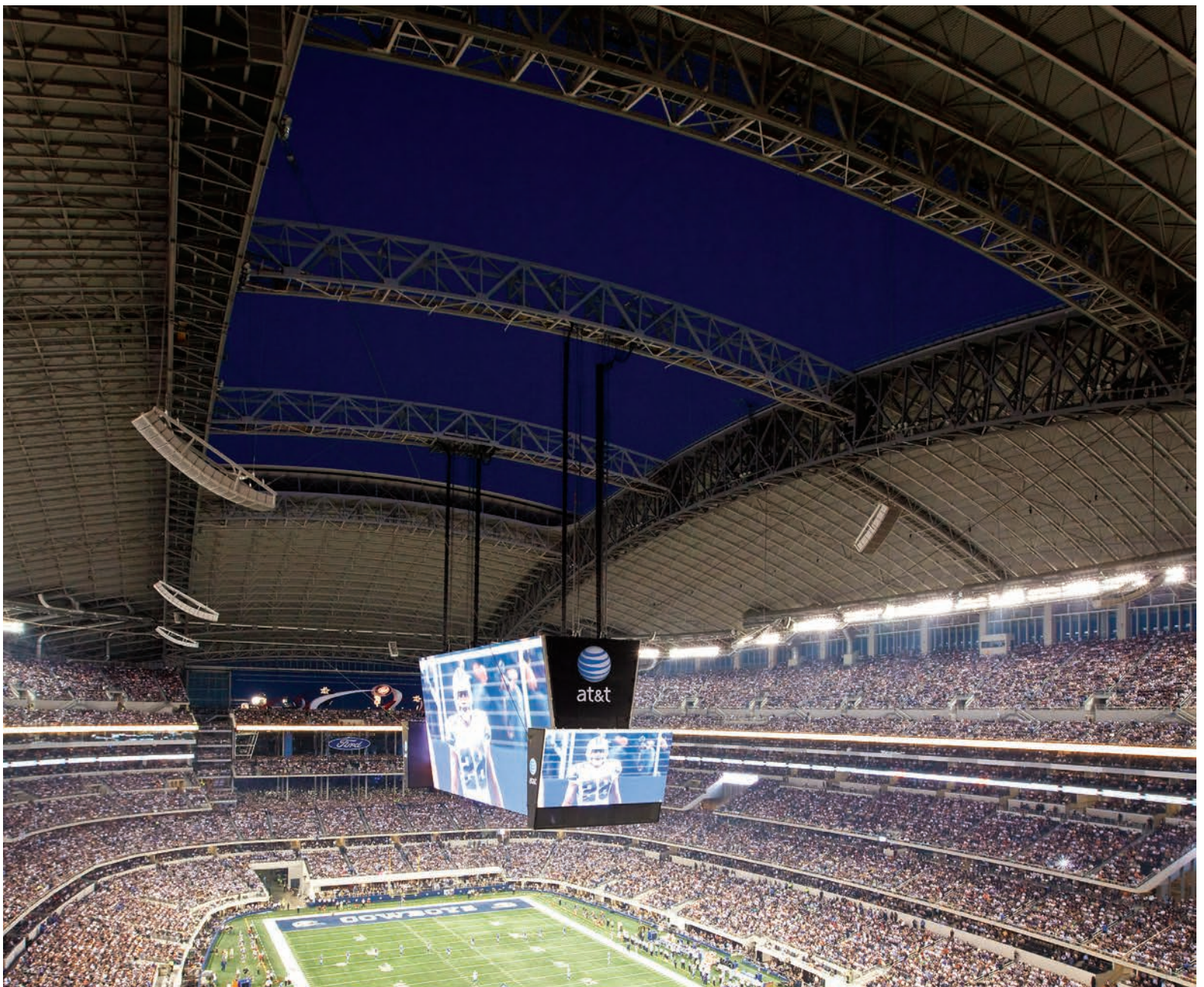
Each seat in the stadium has a view of either of two 160 x 72-foot high-definition screens (also a world record) or the smaller 50 x 28-foot screens located in the end zones. (Interestingly, the \$40 million price tag for each of the big screens exceeds the total cost for constructing Texas Stadium in 1971.) Seeing a person 12 times their actual height gives new meaning to the expression "larger than life." The screens are so mesmerizing that HKS's principal designer, Bryan Trubey, AIA, who has 50-yard-line seats close to the field, found himself staring at the big monitor almost exclusively during his first Cowboys game in the new stadium. It was halftime before he realized that he hardly had watched the action on the field itself.

Taking a cue from the late Raymond Nasher's NorthPark Center and applying it to a much larger public facility, the stadium has 19 commissioned and acquired modern artworks that adorn the expansive wall areas and cavernous volumes inside the stadium—the two largest two-dimensional commissioned pieces are 40 feet tall and over 4,000 square feet each. Interior surfaces of Italian granite, stainless steel, aluminum, natural concrete, and other neutral-colored materials—tones that match the Cowboys' primary team color of metallic gray—provide a muted background that does not compete with the artwork.

As the marketing materials for the new stadium proclaim, "the numbers alone can boggle the mind." The size of the stadium, the engaging artwork, the leading-edge technology and the other superlative components are only the means to an end to provide a memorable guest experience. The ambitious goal was to build a facility that would be used for more than just football games by creating a flexible multi-purpose venue for company meetings, conferences, social occasions, and other large-scale events throughout the year. Accordingly, in the previous 12 months the stadium has hosted trade shows, conventions, motocross races, boxing matches, college and professional basketball games, and a wide range of musical concerts. HKS's Trubey acknowledges that Cowboys Stadium is a testament to the extraordinary due diligence by Jerry Jones and his family in studying landmark arenas around the globe to realize their dream of "making every aspect...of the spectator...more awe-inspiring than ever before." They have succeeded, and in doing so they also have redefined the large multi-purpose building type and pumped new life into a 50-year-old sports franchise.

Lawrence Connolly, AIA, practices in Austin and serves as a *TA* contributing editor.

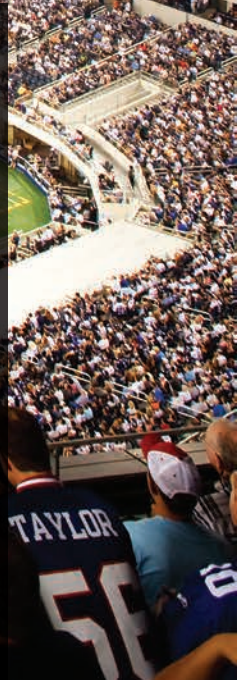
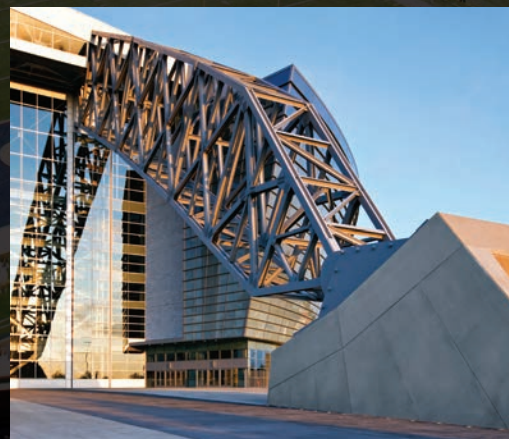





## A Really Big Room

Cowboys Stadium is the largest column-free space in the world—a feat that allows clear sightlines to the playing field from every seat in the house. That achievement is made possible by a pair of gray steel arches, composed of 17 x 35-foot box trusses made of high-strength steel forged in Luxemburg, that extends the entire 1,225-foot length of the structure. The longest single-span arches ever built, they reach beyond the stadium walls and are buttressed by four angled, solid-concrete plinths that partially support the 660,800-sf dome weighing 14,100 tons.

At the center of the dome is a 256 x 410-foot retractable roof of translucent fabric. The rectangular roof opening, a 2.4-acre oculus set 292 feet above the playing field, is reminiscent of the Cowboys' old place in Irving. (Texas Stadium was supposed to have a retractable roof, but the structure would not support it.) A rack-and-pinion drive system opens and closes the two bi-parting mechanized roof panels in less than 12 minutes.







# Hideaway in Plain Sight

**PROJECT** Hill House, Austin

**CLIENT** withheld

**ARCHITECT** David Heymann, Architect

**DESIGN TEAM** David Heymann; Byron Blattel; Shivani Langer; Jose Minguell; Shawn Brown; Jesse Hager

**CONTRACTOR** White Construction Company

**CONSULTANTS** Architectural Engineers Collaborative (structural); Bosse & Pharis Associates (landscape); Archillum Lighting Design (lighting); HBC Engineering (geotechnical); Longaro & Clark (civil); AA Gonzalez Engineering (mechanical); All-Safe (security); Audio Video Design (AV)

**PHOTOGRAPHERS** David Heymann; Paul Bardagjy

by STEPHEN SHARPE

Set on the crest of a prominent hill west of downtown Austin and oriented to command an unobstructed view of the skyline, the Hilltop House itself is visible from many points around the city. The owner, a wealthy entrepreneur, wanted a refuge from the city and his desire for privacy drove him to choose this lofty site. Though the house's 19,500 gross square feet (12,750sf conditioned) are methodically spread across the sloping terrain, its low-lying form rises just above the treetops at the pinnacle of the hill.

The client bought 12 lots of a planned subdivision to realize his dream. He then hired David Heymann, an architect whose ecologically sensitive approach to design has attracted notable commissions such as the residential retreat outside Crawford he created for Laura and George W. Bush. For that earlier project – a relatively modest dwelling that Heymann says consumes one third the energy of a comparably sized house – he investigated how to balance environmental considerations with the realities of mainstream American lifestyles and available construction methods. With the Hilltop House, he found an extreme case study to further his research while working again in close collaboration on a client’s home. Heymann’s challenge involved the efficient dispersal of the programmatic elements to reduce the building’s overall massing and also make the most of the superb vistas.

The approach to the Hilltop House begins within a suburban development of large Mediterranean-style homes set at the base of the hill. From the owner’s security gate, the paved driveway meanders along the edge of his acreage – originally planned for the expansion of the suburban development – and gradually ascends through dense juniper scrub left mostly untouched by the construction. Sightings of wild turkey, deer, foxes, and other wildlife are common. The drive terminates at 896 feet above sea level, with Austin’s rapidly evolving downtown splayed out in the distance 400 feet below. A fringe of escarpment live oaks surrounds the crown of the hill, enhancing the sense of serene privacy.

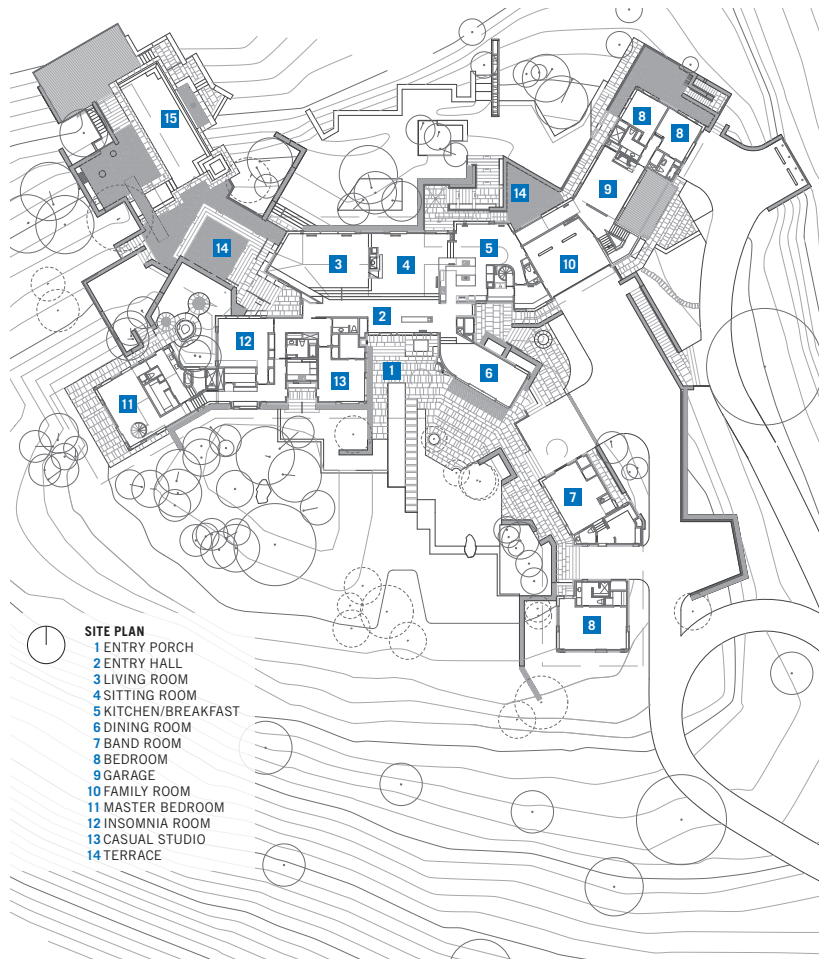
The material palette complements the rugged environs and responds to concerns about sustainable building practices. Two local types of limestone – fossil stone from just north of Austin and Leuders from Lampasas, used in both roughback and cut form – clad the steel-frame house. Soffits are sheathed in Spanish cedar from managed forests in Central America.

The house is divided into a series of pavilion-like spaces oriented along a true north-south axis and organized under two segmented arcing roofs. The eastern roof frames a view of downtown Austin and the western roof follows the contour of the adjacent hilltop. While the plan resolves the complex program of the house, creates exterior spaces in a range of scales, and capitalizes on the panoramas, solar exposure on the long east and west faces posed a considerable challenge. Heymann’s solution involved carefully siting the house between existing trees for afternoon shading and surrounding the house with six-foot roof overhangs. The elongated configuration also allowed for a concentration of geothermal heat pumps along the mechanical corridor that runs the length of the house.

Viewed from atop the crow’s-nest observation deck, the metal roof is vast but simple considering the elaborate array of spaces underneath. Mainly one-room deep, the interior spaces benefit from bountiful natural light and are easily cross ventilated. Built on multi-levels, the house has several sets of stairs to adjust to the topography, which also breaks down its overall scale. The four wings of the house separate the program into a suite of private rooms that lead to the master bedroom at the northwest point; a terrace and pool at the northeast; a guest suite at the southeast; and entertainment spaces – including a band room for the owner and his friends to play music – at the southwest that is separated from the main house by a breezeway.

The sprawling layout incorporates a variety of outdoor spaces where the pleasures of the heights are particularly acute. From here the building appears to fall away, its upturned eaves fold from sight and exterior surfaces blend into the landscape, and one’s eye is directed out across the rolling hills and the cityscape beyond.

Stephen Sharpe is the editor of *Texas Architect*.





The Hilltop House's rambling plan disperses its 12,750-sf of conditioned space into four narrow wings configured underneath two curved roofs that also shelter several outdoor areas. While the house sits relatively low in profile, the architect used both internal and exterior stairs to further break up the house's overall massing and accommodate the site's sloping topography. Windows are detailed with fixed glass pushed to the outboard side of the frame while operable sections are inboard, which creates seating and allows for easy cross-ventilation within interior spaces that are mainly one-roof deep. Outside, the grade beam extends beyond the exterior walls to form a bench that circles the entire house. The roof is shaped to collect rainwater via two large swiveled scuppers the architect calls 'feedbags' that collect runoff in cisterns hidden beneath the north terrace.



RESOURCES: RAINWATER SYSTEM: Tanktown; CONCRETE PAVEMENT AND CONCRETE MATERIALS: Keystone Concrete Placement; SPA, POOL AND WATERFALL: Crystal Clean Construction; GEOTHERMAL AND MECHANICAL INSTALL: RM Mechanical; STONE: Continental Cut Stone (Lucia); METAL MATERIALS, DECKING RAILINGS: Dennis Steel; ARCHITECTURAL METAL WORK: Patriot Erectors; PRE-FABRICATED WOOD JOINTS, TRUSSES; ROOFING MATERIALS: AD Willis; ARCHITECTURAL WOODWORK, LAMINATES, WOOD AND SPECIALTY DOORS, CABINETS, MANUFACTURED CASEWORK: Khoury; PREASSEMBLED METAL DOORS: Overhead Door Company of Austin; GLAZED WINDOWS AND DOORS: Durathem Window Corp.; UNIT SKYLIGHTS: Starlight Skylights a product of Orca Mfg.; GYPSUM BOARD: Central TX Drywall; TILE: McLennan County Tile Co.; WOOD FLOORING: Artisan Hardwood Floors; FLUID APPLIED FLOORING: Dream Garage Specialist dba Your Garage Pros; EXTERIOR SUN CONTROL: Texas Sun and Shade; FOOD SERVICE EQUIPMENT: Factory Builder Stores; LIGHTNING PROTECTION: Bonded Lightning Protection



## Environmental Impact

David Heymann concedes that the house is indeed very large, yet he is quick to point out the designs sustainable attributes. "It's not smart growth, but its smarter to have one very big house than a dozen big houses," he says. "Such houses are inevitable, and ignoring them for scalar impropriety does not resolve their environmental consequence."

The architect partly finessed the house's significant visual and environmental presence partly through site planning. The client purchased 11 adjacent house lots encircling a hill that rises above ecologically sensitive Barton Creek. By aggregating all the land and managing the percentage of cover, the property qualified for a conservation easement. Careful site planning also kept the house away from erodible slopes, washes, existing springs, and from encroaching on the habitat of the endangered golden-cheeked warbler. Also, Heymann reports that the site was examined by archeologists to verify the absence of Native American artifacts at the building location.





# Cool, Composed, and Highly Secure

**PROJECT** GSA Regional Field Office, Houston

**CLIENT** U.S. General Services Administration

**ARCHITECT** Leo A Daly/LAN + PageSoutherlandPage, A Joint Venture

**DESIGN TEAM** Lawrence W. Speck, FAIA; George R. Jumonville, AIA; John Cryer III, AIA; Tami Merrick, AIA; Joan Albert; Robert Johnson, AIA; Richard Butler; Jeffrey S. Willis, PE

**CONTRACTOR** Yates Construction

**CONSULTANTS** Jacobs Facilities (construction management); Applied Research Associates (blast consulting); Aviles Engineering (geotechnical); BAi (acoustics); CBM Engineers (structural); Kroll Schiff Associates (security); Landtech Consultants (survey); Nathelyne A. Kennedy & Associates (civil); Persohn/Hahn Associates (vertical transportation); Rolf Jensen & Associates (life safety/code); Project Cost Resources (estimator); Wong & Associates (landscape)

**PHOTOGRAPHER** Tim Hursley

by **JESSE HAGER**

From its beginning in 1994, the General Services Administration's Design Excellence Program upset the status quo in how the federal government commissioned architectural services. The innovative program advocated high-quality design and architectural expression, two concepts not often associated with federal projects built in the latter half of the twentieth century. The stated mission called for emphasizing "contemporary form and meaning to America's rich legacy of public architecture and art." From the outset of the program, GSA garnered positive recognition in architectural circles for numerous buildings designed by celebrated architects such as Richard Meier and Morphosis. One of the latest is in Houston, the GSA Regional Field Office designed in a joint venture between PageSoutherlandPage and Leo A Daly.



The project was long in the making. Back in 2001, PageSoutherlandPage principal Larry Speck, FAIA, was preparing an interview for a new federal building in Houston when terrorists struck the World Trade Center and the Pentagon on Sept. 11. The interview was scheduled on Sept. 12. Of course, it was rescheduled, but the repercussions of the attacks would eventually affect all federal projects. Once the Houston job was awarded, the architects were uncertain about how their design might change in response to the heightened sense of security.

Generally speaking, there are two aesthetic elements that tend to doom federal projects from their inception. First, there is the inevitable requirement that the building maintain a specified distance from the public realm. Sounds simple, perhaps, but one might recall Kieran Timberlake's U.S. Embassy in London, which critics lambasted for lacking sculptural distinction to be placed as an isolated object in a field. The second element directly affects the building's appearance by requiring a high degree of protection for occupants, which often leads to a windowless concrete enclosure.

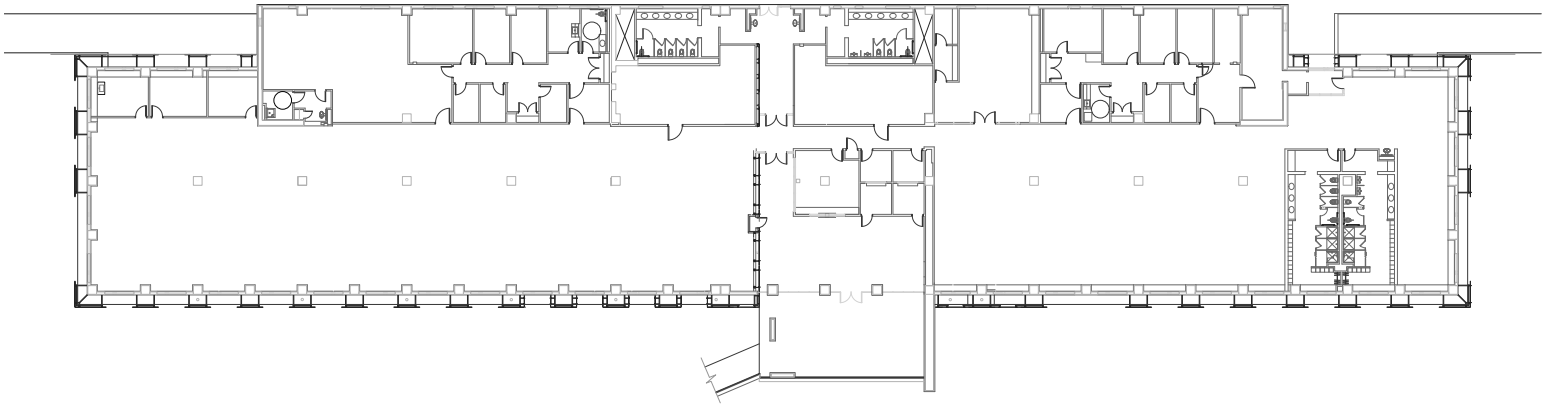
The GSA Regional Field Office is located just off U.S. 290 on the north-west edge of Houston, with the eight-story slab of glass and metal oriented along an east-west axis. Construction was seen by thousands of motorists daily, many who probably expected the project to be the new offices for a high-tech company because of the building's sophisticated green glass envelope that wraps three sides.

The building's massing instantly reads as an office building and one that presumably doesn't stray too far from modern tenets of structural bay spacing and open office configurations. This is speculation because the building is highly secure and the general public is not allowed inside. (Scores of the

**The architects carefully addressed concerns for sustainability, as well as security and appropriate image, into the design of the 275,000-sf office building. The design solution maximizes environmental sensitivity, promotes daylighting and views (oversized windows are nearly nine feet tall), and provides for the potential of solar energy capture. The plan is purposefully narrow, presenting broad faces to the south and north, and thin faces to the east and west. The design also reduces energy costs through the use of high-performance glass, high insulation values, dedicated energy recovery units, and special selection and design integration of energy efficient HVAC systems, including a full building under-floor HVAC system. Efficient use of water is achieved through drought-hardy landscaping, rainwater harvesting, low-usage plumbing fixtures, and cooling tower water recycling. The project has been recognized with a 2010 TSA Design Award, as well as awards from AIA Houston and AIA Austin.**

**RESOURCES** FENCES, GATES, HARDWARE: Ameristar Fence Products (Anchor Group); LANDSCAPING: Mata-Turf (Pampered Lawns); CONCRETE MATERIALS: Southern Star Concrete; PARKING GARAGE PRECAST STRUCTURAL CONCRETE: East Texas Precast; UNIT MASONRY WALL ASSEMBLIES: Featherlite Building Products (Camarata Masonry Systems); DIMENSION STONE CLADDING: Camarata Masonry Systems; STRUCTURAL STEEL JOISTS, STEEL DECK: Berger Iron Works; METAL STAIRS: Sharon Stairs (Berger Iron Works); ARCHITECTURAL WOODWORK: CRC Mastercraft; SOLID POLYMER FABRICATIONS: DuPont Corian (CRC Mastercraft); ROOF AND WALL PANELS: Universal Sheet Metal; WATERPROOFING: Henry; BUILDING INSULATION: Owens Corning; MEMBRANE ROOFING: GAF Everguard; METAL DOORS: Ceco Doors; WOOD DOORS: VT Industries; ENTRANCES AND STOREFRONTS: United States Aluminum (Haley-Greer); GLASS AND GLAZED CURTAINWALL: Viracon (Haley-Greer); GYPSUM BOARD: ClarkWestern; TILE: DalTile; ACOUSTICAL CEILINGS: Armstrong; PAINTS: Pittsburgh Paints; OPERABLE PARTITIONS: Moderco; ACCESS FLOORING: Tate Access Flooring (McCoy Floor Covering); BLINDS: Bali (Capitol Blind and Drapery); ELEVATORS: ThyssenKrupp







architecturally curious, this writer included, have been approached and questioned by security personnel for merely walking near it. After taking photographs of the building from a public right-of-way, a street ironically named Justice Park Drive, I was approached by a security guard who asked me what I was doing.) But by observing the building from a distance, a few aspects of the design are evident. Among them is the fact that the building's short faces are its east and west ends, which demonstrates a consideration for orientation while also suggesting a shallow floor plate that allows daylight to penetrate all interior work areas.

Then there's the glass skin, with rhythmically placed square window openings that provide relief and scale to the east, south, and west facades. The glass turns the corners at the north side just slightly as well, stopping only at a rectangular projection from the main volume, which perhaps hints at what must be a service core. The green glass "second skin" performs an important function, namely reducing direct exposure of the sun on the building's face. Part of a double-skin system, the glass skin is paired with highly reflective aluminum panels that can be seen beneath. The exterior contributes substantially to maintaining cool interior temperatures, reportedly as much as 15 degrees. (See sidebar on opposite page.)

Several large voids on the glass facades disrupt the regularity of the smaller window openings. Their function may be merely compositional since the secrecy of the interior program suggests that occupants would likely prefer no indication of what is going on inside.

This being Houston, a city notoriously devoid of zoning ordinances, the building's context runs the gamut from automotive-related services along the highway to commercial strip centers with nondescript names like ABC Business Center. Residential subdivisions almost abut the property on

the east and north sides. Surprisingly, when driving through one adjacent neighborhood I had trouble locating the GSA building because of the dense overhead canopy of mature trees just tall enough to conceal it. Where the narrower eastern face of the building did poke through the canopy, the color of the glass blended with it remarkably well. Inhabitants of a newer development to the north (begun well after the GSA building was underway) did not fare as well. The flat facade (the conjectured service core mentioned earlier) looms above these houses like an ominous monolith. From here the building's full breadth is palpable, yet the north-side fenestration appears less rigorous in its technical application. Compared to the regular window openings on the other three sides, which successfully obscure the interior program while not detracting from the exterior's visual appeal, the openings on the north side seem to be placed willy-nilly in a manner that distracts from the overall compositional form. Fortunately, when the light is right, the metal skin reflects the sky and this wall appears to dematerialize.

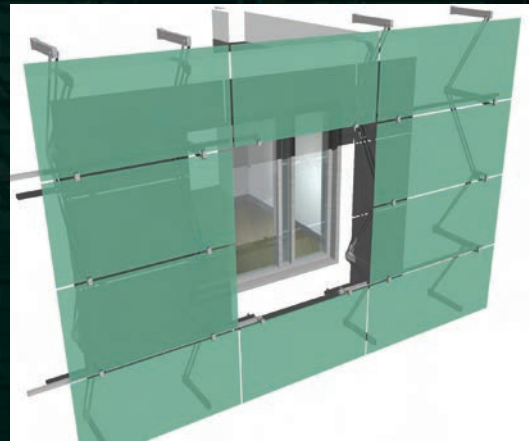
As one approaches the building—if one dares—the meandering Justice Park Drive leads to an intimidating black perimeter fence and a security pavilion composed of limestone and metal. Landscaping is young but lush and promises to eventually soften the precision of the building's exterior. The earth gently rises and ramps up to the second-level lobby, flanked by a limestone fin that frames the entry. No parking lot glares in the sun; instead, a garage is nestled to the rear of the complex and fairly out of view. For a building clearly concerned with security, there is no sense that this is a bunker. Quite the opposite in fact, this is a building that appears welcoming and one that in all likelihood is a pleasant place to work.

Jesse Hager is a designer at Content in Houston.

## Energy-Efficient Envelope

The new GSA building's "second skin" of nearly opaque glass is held in place by a lightweight metal frame affixed to the concrete walls. Placed away from the thermal wall of the building, the glass skin provides substantial shading from direct heat gain. The result is a cooled microclimate created in the space between the two exterior layers, which reduces the load requirements for air conditioning systems. Apertures in the glass skin, sized somewhat smaller than the windows, reduce glare within the work spaces while also affording interior daylighting and views to the outdoors.

In addition, the concrete walls are sheathed in aluminum shingles that reflect sunlight. The combination of reflectivity and the high thermal mass of the concrete works to stabilize temperatures inside the building. The aluminum surface is fully revealed on the north side where varied window patterns animate the facade and respond to specific lighting requirements for interior functions.





# Living High On the Coast

PROJECT *Coastal Living* Ideas House, Galveston

CLIENT Beachtown Galveston

ARCHITECT Michael G. Imber, Architect

DESIGN TEAM Michael Imber, FAIA; Brandan Moss

CONTRACTOR American Villas

CONSULTANTS Beachtown Galveston Corp. (project management); Susan B Bozeman Designs (interiors); Aran & Franklin Engineering (structural)

PHOTOGRAPHER *Coastal Living*

by STEPHEN SHARPE

Though ravaged by periodic hurricanes and economic doldrums for over a century, much of Galveston's magnificent architecture survives. The island city's glory days, the three decades that preceded the devastating storm of 1900, are recalled in its richly detailed commercial edifices and stately Victorian-era homes. More than a collection of fine individual buildings, Galveston in the late nineteenth century comprised a tightly knit network of residential districts within walking distance of workplaces, cultural institutions, and public amenities.

Michael G. Imber, FAIA, and project manager Brandan Moss have conjured up those bygone days in a house designed at Beachtown, a New Urbanism development that is taking shape near the eastern tip of Galveston Island. Imber is among a handful of architects sanctioned by Beachtown's developer to either design houses for future residents or approve the plans devised by other commissioned designers. Three of Imber's creations have been built, including one designed as an "idea house" for *Coastal Living* magazine. Completed in 2008, the dwelling – stylistically defined as Carpenter Gothic – exudes Beachtown's carefully managed ethos of casual seaside luxury.

With its 4,000 square feet stacked on three levels, the house stands just inside the dunes on a corner lot that offers wide-open views to the Gulf of Mexico and to a large swath of greenspace next door. The site – indeed, all of Beachtown – is located several hundred feet outbound from Galveston's seawall, a concrete bulwark erected to protect the city from storm surges. On the inbound side of the 10-mile-long seawall, populated areas have been systematically elevated over time to avoid catastrophic inundation such as that which killed an estimated 6,000 people in September 1900.

Following in the wake of Hurricane Ike's direct hit in 2008, the City of Galveston toughened its residential code by mandating that the first level of occupancy of all new beachfront properties be built 19 feet above sea level. That revision adhered to FEMA's post-Ike recommendations for base flood elevation (BFE). The municipality's new height requirement posed a central challenge for designers obliged to create high-end beach houses for well-heeled clients. Yet, going even further to protect future homeowners from potential flood damage, Beachtown developer Tofigh Shirazi set the height requirement to three feet above BFE after Hurricane Rita in 2005.

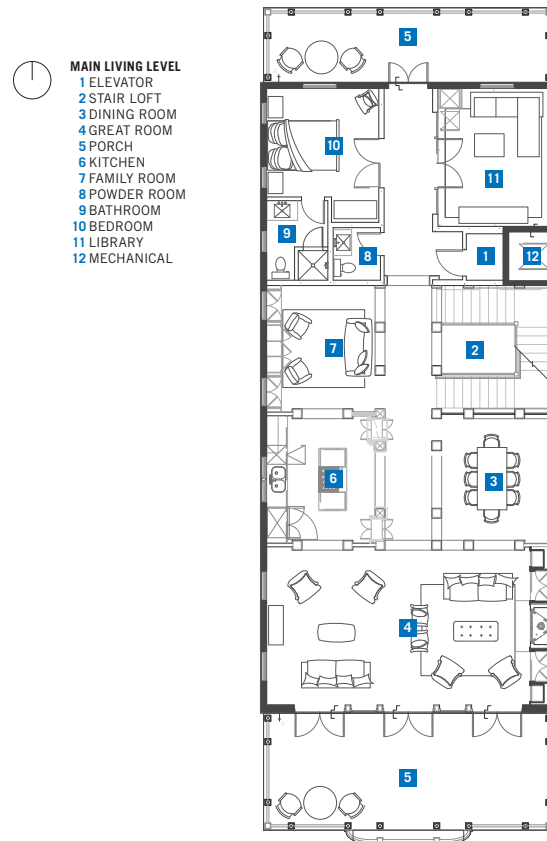
So how does an architect resolve such an extreme requirement while accommodating homeowners who expect effortless movement from auto to abode? Elevators, of course, are essential. Additionally, Imber and Moss have integrated a vertical entry sequence that breaks down the ascent into a series of manageable intervals. First, one steps up to a raised porch to access the front door that opens to a utilitarian vestibule. Second, one either chooses the lift option or mounts a flight of stairs that wraps the elevator shaft. The program appears to be the model used throughout the development.

Similar to the additional height requirement imposed at Beachtown, says Shirazi, the rigorous construction methods exceed the recommendations of the Institute for Business and Home Safety. Materials include concrete piers and columns, steel framing, impact-resistant glazing, and exterior components that can withstand hurricane-force winds. (For the record, the Idea House withstood Ike's assault with only minor damage.)

As with the Idea House's cottage-like exterior, the interiors feature refined details reminiscent of earlier times along the Gulf coast. Twelve-foot ceilings accentuate the long and narrow floor plans of the two upper levels, each bisected lengthwise by a hallway. The traditionalist layout maximizes natural ventilation complemented by a linear cupola on the roof with operable vents that also bring in additional sunlight.

In addition to the house's indoor living spaces are several exterior ones, mainly the four commodious verandas as well as the ground-floor pool. From this breezy spot, a pair of wide doors offer access to the garage underneath the first occupied level. Strictly functional, the room is bounded on two sides with slatted walls designed to allow high winds and water to flow through when the inevitable next hurricane visits Galveston.

Stephen Sharpe is the editor of *Texas Architect*.

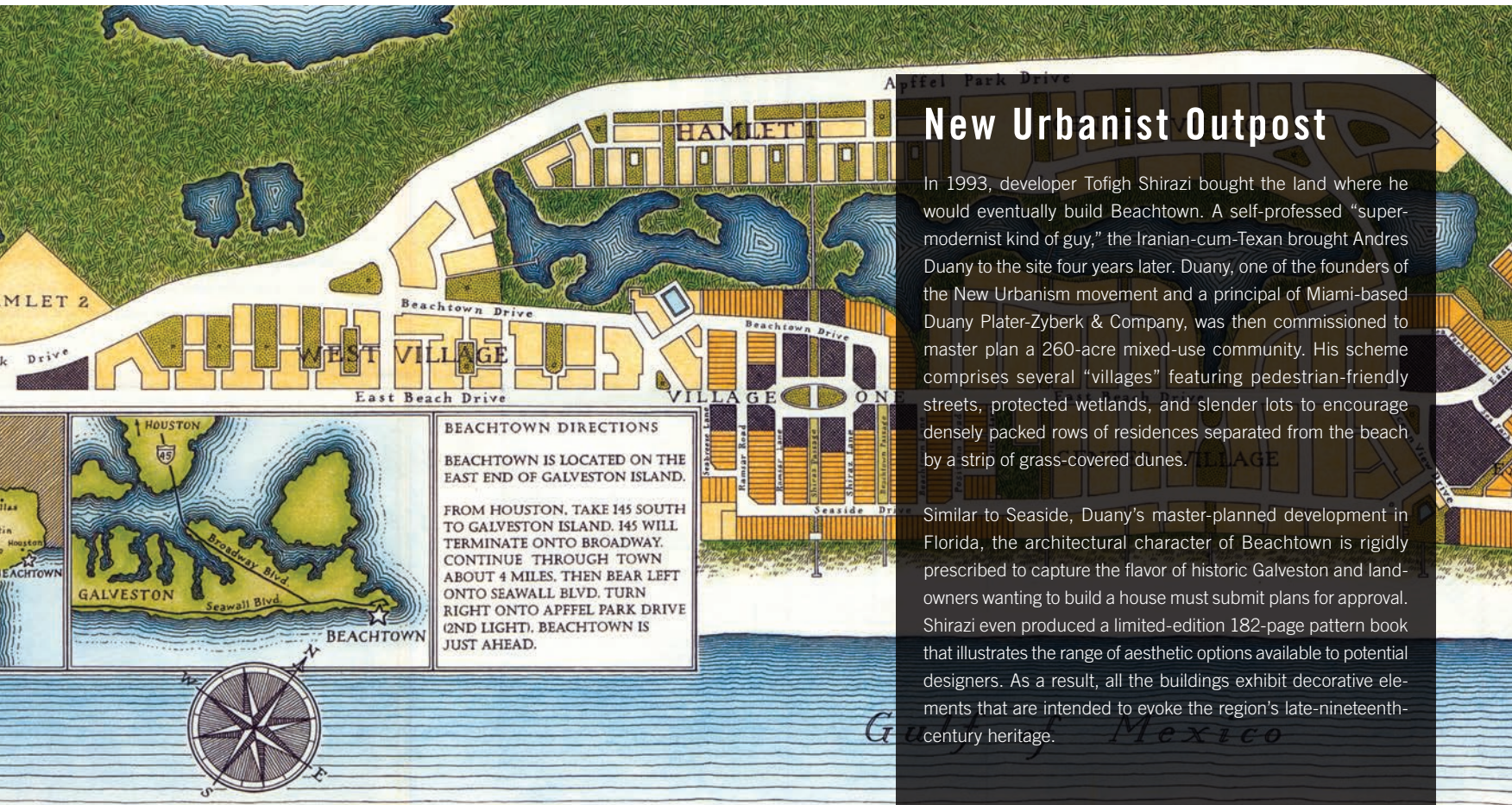




The Coastal Living Idea House was completed in mid-2008 just before Hurricane Ike's eye passed over Beachtown that September, devastating parts of Galveston Island and nearby communities. Beachtown emerged from the storm surge relatively unscathed, which the developer contributes to the high quality of construction and materials used. The Idea House, designed by the San Antonio firm Michael G. Imber, Architects, exemplifies the historical character that influences all the buildings at the New Urbanism enclave. Architects devising plans for Beachtown must resolve a significant design problem: how to create a welcoming entry that allows occupants and their guests to ascend from ground level to the first occupied floor, a height of 20 feet above grade (24 feet above sea level).



RESOURCES BUILDING MATERIALS: Galveston Wholesale; PAVERS: Belgard; CONCRETE COLUMNS: Coastal Columns; HOLLOW CORE CONCRETE FLOORING: Gate Concrete Products; LUMBER: Ideal Lumber; EXTERIOR MOLDINGS: Hayes Carpentry; EXTERIOR TRIM: MTZ Construction; INTERIOR TRIM CABINETRY: CCm Custom Cabinets & Wood Interiors; CUSTOM MOLDING: The Detering Co.; DECKING, TRIM & MOLDING: AZEK Building Products; EXTERIOR INSULATION: Energy Guard Foam Insulators; SIDING: James Hardie; METAL ROOFING: MBCI (Brinkmann Roofing Co.); WOOD DOORS AND WINDOWS: JELD-WEN (Grogan Building Supply); GARAGE DOORS: Overhead Door Co. of Houston; GLASS: MI Glass; TILE: Chico Tile; WOOD FLOORING: Total Floors; PAINTS: Valspar; FAUCETS: Kohler; DOOR KNOBS: Schlage; COUNTERTOPS: Silestone of Houston; OUTDOOR CABANA: AAA Awnings; KITCHEN CABINETS: KraftMaid (Design by Dimension); LIGHTING: Bevolo Gas & Electric Lights; LANDSCAPE LIGHTING: Outdoor Lighting Perspectives of Houston; BLINDS, SHUTTERS: Hunter Douglas (Creative Blinds); WOOD PATIO FURNITURE: Agio; CUSHION FABRIC: Sunbrella; LIGHTNING PROTECTION: Bonded Lightning Protection; AV: Audio Video Rescue; AV WALL BRACKETS: Chief Mfg.; SECURITY CAMERAS: HomeWATCH Security Cameras/American Industrial Cameras; ELEVATOR: Waupaca Elevator Co.; CUSTOM WOODEN RETURN AIR GRILLES: Worth Home Products



## New Urbanist Outpost

In 1993, developer Tofigh Shirazi bought the land where he would eventually build Beachtown. A self-professed “super-modernist kind of guy,” the Iranian-cum-Texan brought Andres Duany to the site four years later. Duany, one of the founders of the New Urbanism movement and a principal of Miami-based Duany Plater-Zyberk & Company, was then commissioned to master plan a 260-acre mixed-use community. His scheme comprises several “villages” featuring pedestrian-friendly streets, protected wetlands, and slender lots to encourage densely packed rows of residences separated from the beach by a strip of grass-covered dunes.

Similar to Seaside, Duany’s master-planned development in Florida, the architectural character of Beachtown is rigidly prescribed to capture the flavor of historic Galveston and land-owners wanting to build a house must submit plans for approval. Shirazi even produced a limited-edition 182-page pattern book that illustrates the range of aesthetic options available to potential designers. As a result, all the buildings exhibit decorative elements that are intended to evoke the region’s late-nineteenth-century heritage.







# View from the Top

PROJECT The Austonian, Austin

CLIENT Second Congress, Ltd.

ARCHITECT Ziegler Cooper Architects

DESIGN TEAM R. Scott Ziegler, AIA; Kurt Hull, AIA; Charles Middlebrooks, AIA; Fani Qano; Chris Petrash, AIA; Rafael Feinstein

CONTRACTOR Balfour Beatty Construction

CONSULTANTS Clayton Levy Little Architects (historic architect); AKA Consulting Services (owner rep); Gary Lee Partners (interiors); Axiom Engineers (civil); CHPA Consulting Engineers (MEP); CBM Engineers (structural); TBG Partners (landscape); Fugro Consultants (geotechnical); BOS Lighting Design (lighting); CDC Curtain Wall Design & Consulting (curtain wall)

PHOTOGRAPHER McConnell Photography

by MARK OBERHOLZER, AIA

Distant views of central Austin have a way of appearing suddenly as a result of Austin's perch on the edge of the Hill Country. Until recently, downtown's most visible landmark has been the icily geometric Frost Bank Tower, built in 2004 and reaching 515 feet high, offering a counterpoint to the occasional warm glow of the University of Texas Tower to the north of downtown and the Victorian dome of the Texas State Capitol.



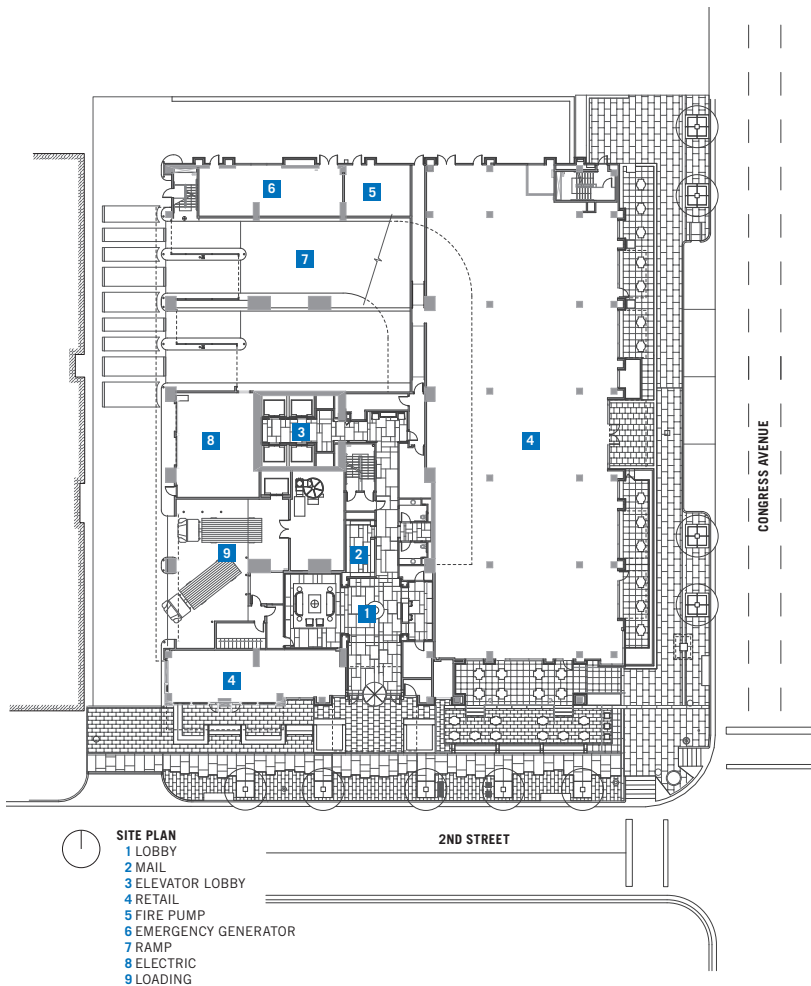
Six years after the Frost Tower punctuated Austin's skyline, a newly opened building is making its own mark. At a height of 683 feet, Ziegler Cooper Architects' Austonian residential high-rise now stands dramatically above all other downtown buildings. (It's even taller than the combined height of the State Capitol and the UT Tower.) While downtown Austin has added a handful of tall buildings in the last decade, the slender Austonian easily eclipses them all.

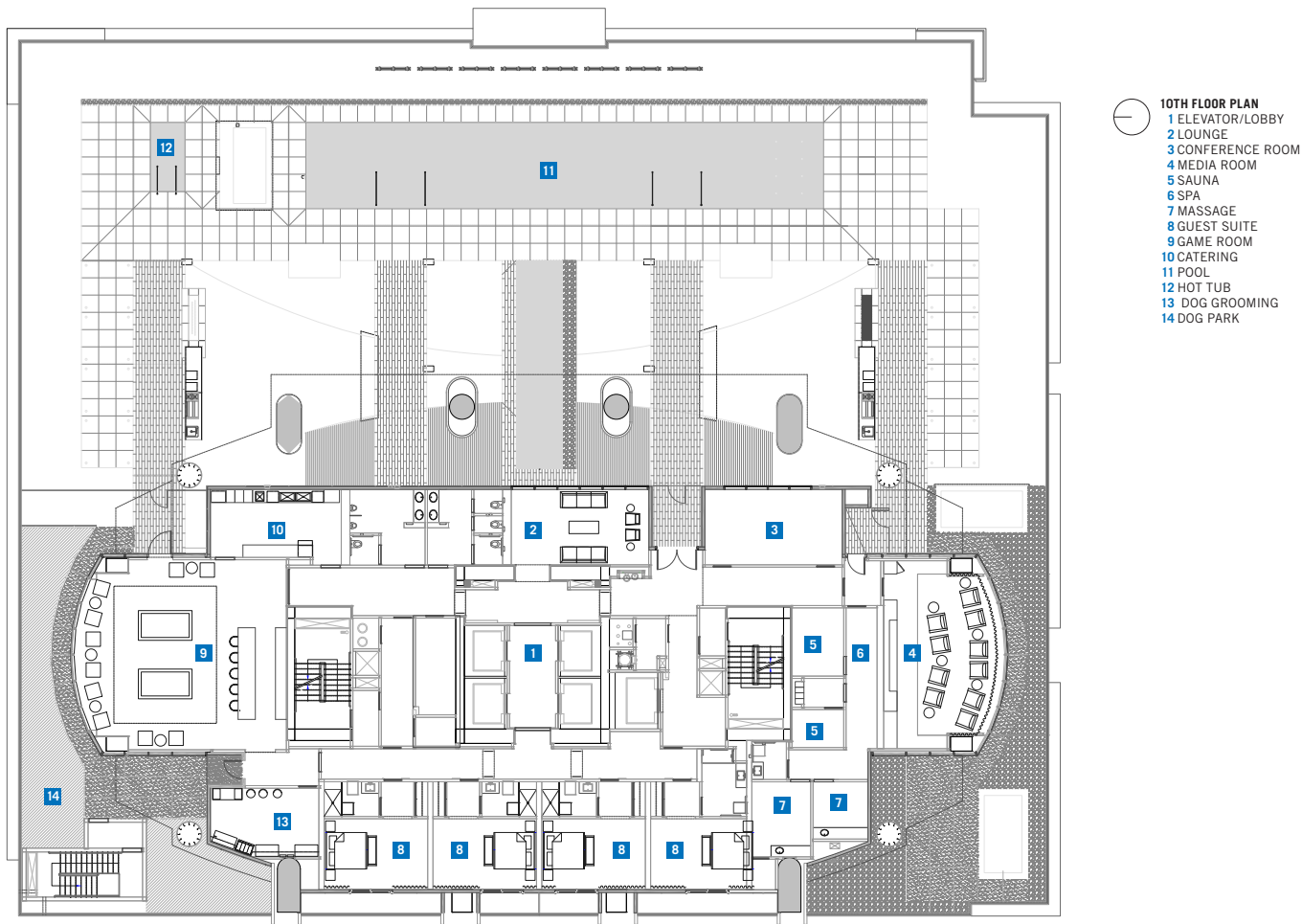
The building joins a growing number of apartment and condominium towers located in downtown Austin, adding hundreds of residential units to an area traditionally dominated by office space during the day and music clubs at night. This transition back to a more "peopled" downtown mirrors trends in most American cities and reflects an increasing demographic that is looking for a more urban lifestyle, reversing the twentieth century flight to the suburbs by middle and upper class citizens. As Jim Adams, principal of the McCann Adams Studio, which is currently developing Austin's Downtown Plan, notes, "The Austonian is exemplary of the vision that is evolving for downtown Austin: a high-rise, high-density, mixed-use building that brings architectural elegance and a healthy population of new residents to the urban core."

The building consists of a 90-foot-high rectangular base clad in precast concrete and limestone topped with a slender, glass-clad, elliptical-shaped tower. The building's base contains residential and retail parking, while the two streetside faces contain the building's lobby and a variety of retail lease spaces. Since the site abuts an alley, the garage entrance does not interrupt the sidewalk on either Second Street or Congress. The Austonian marks one end of the Second Street District, an evolving mixed-use, pedestrian-friendly street anchored by Antoine Predock's copper and

**Located along Congress Avenue in downtown Austin, the tower portion of the Austonian is set back from the street frontage to protect view corridors to the State Capitol. That also allows more light and open space throughout the urban core, avoiding the canyon-like effect of older, denser cities such as New York City. Designed by Ziegler Cooper Architects for a Spanish developer, the Austonian features a smaller floorplate than other new residential buildings in Austin. In fact, the building contains no more than six units on any of its floors. The elliptical tower rises above the 10-story podium, which is topped with a pool and other amenities for residents.**

RESOURCES: FENCES, GATES AND HARDWARE: Hansen Architectural Systems; GARDEN ROOF: American Hydrotech; PLANTING ACCESSORIES: Permalock; LANDSCAPE CONTAINERS: Kornegay Design; CONCRETE MATERIALS: Capform; PRECAST ARCHITECTURAL CONCRETE: Coreslab Structures; MASONRY UNITS: Acme; STONE, LIMESTONE, GRANITE, SLATE: Thorntree Slate & Marble; RAILINGS: Hansen Architectural Systems; ARCHITECTURAL WOODWORK: Woodhaus; WATERPROOFING: Tremco, American Hydrotech; BUILDING INSULATION: International Cellulose Corp., Owens Corning; METAL ROOFING: D.R. Kidd; METAL DOORS: Security Metal Products (Performance Door and Hardware); METAL WINDOWS: Kawneer (Trainor Glass); KITCHEN AND BATH CABINETS: Scavolini (Euro Design Kitchen and Bath); WINE STORAGE ROOMS: Wine Trend; SKY LOUNGE COIL DRAPERY: Cascade Coil Drapery; MISC. STEEL, STRUCTURAL STEEL, ORNAMENTAL METALS: Milestone Metals; PANORAMIC VIEWSHED PHOTOGRAPHY: Blimp Photo & Video Services; ALUMINUM GLASS SLIDING DOORS: EFCO Corp, a Pella Co. (Texas Fenestration); ENVIRONMENTAL GRAPHIC DESIGN: FMG Design; LIGHTNING PROTECTION: Bonded Lightning Protection





stone Austin City Hall, and bolstered by the City of Austin’s underground parking garage. Jim Adams remarks that “Ground-level retail and restaurant uses will energize a segment of Congress Avenue and Second Street that have been largely devoid of activity. The only shortcoming is the streetscape design, which because of a long drop-off zone has left a chunk of Congress Avenue – the Austin’s ‘Main Street’ (and arguably the same for the entire state of Texas) – with a broken line of boulevard trees.”

The design for the Austonian incorporated the facade of an existing historic brick building located on the one-third acre site. Formerly the Dumas Blacksmith Shop, the historic facade was reconstructed and incorporated into the base of the Austonian, just adjacent to the residential lobby entrance on Second Street.

The tower follows the pattern established for Congress Avenue, which requires all buildings to step back above 90 feet to preserve the historical scale along the avenue and maintain the axial focus on the State Capitol dome. The ellipse shape of the tower’s plan is partly a response to this setback, but also addresses the building’s status as a visual landmark. “The building is seen from viewpoints over all 360 degrees, and the ellipse softens the impact of views, and catches the sun’s highlights all day long,” points out Scott Ziegler, AIA. On a practical note, the ellipsoid shape encloses more volume with less cladding than a rectangular volume, reducing the amount of curtain wall while offering a variety of views for occupants.

The slim profile of the attenuated tower is the most striking feature of the building, and required some careful planning and engineering. Houston engineering firm CBM designed the structural system. Led by Dr. Joseph Colaco, CBM has a long track record of innovative structural engineering, specializing in high-rise buildings.

As in many very tall buildings, lateral movement or “sway” needs to be addressed to avoid uncomfortable sensations in the building occupants. At the very top of the tower, a large baffled sloshing tank acts as a dampening system to lateral wind force, effectively slowing down the lateral movement of the building in response to high winds. Below the sloshing tank, the highest occupied levels are the fitness center and club level, which are located on the 55 and 56th floors of the building. The public spaces of the building match the elegance of the exterior with a muted palette of walnut paneling and limestone floors. Within the residential units, the floor to ceiling glazing takes center stage, focusing on the stunning views of the city and the edges of the Hill Country to the west.

Aside from the views, one of the primary goals of the project was to facilitate sustainable living. Ziegler credits the direction given to him by the developer, Spain’s Grupo Villar Mir. “The owners had made a bold commitment to cutting-edge sustainable design...that the building should pursue the creation of a lifestyle that supports people’s desire to lead a green life,” he says.

In addition to specific sustainable strategies, such as collecting the building’s condensate water for irrigation and using the municipality’s chilled water loop, the density and location of the building create huge per capita reductions in land use, road building and even municipal services and other infrastructure. “High-density development is a much more sustainable strategy for growth” says Ziegler. Given the rate at which Austin and other Texas cities continue to grow, the Austonian’s title as Texas’ tallest residential building may not last for long.

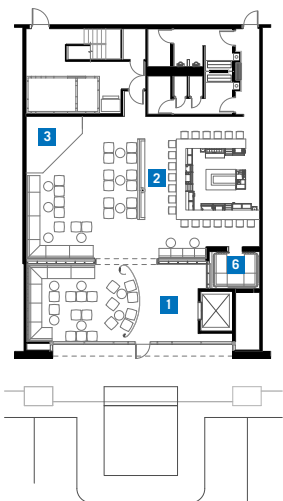
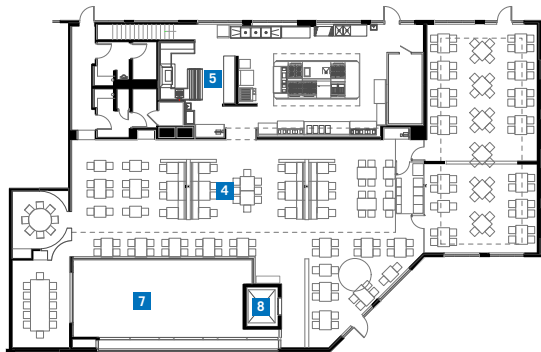
Mark Oberholzer, AIA, is a senior designer with Rhode Partners in Austin.

## Slender Profile

According to Scott Ziegler, FAIA, the slenderness ratio of the building maximizes the possibilities of the concrete structure. To go any higher, he says, would have required more exotic structural strategies common in the world's tallest buildings, such as the Sears Tower or the Burj Dubai.

In structural terms, the building is designed much like two 30-story buildings with one stacked atop the other. The bottom half of the tower is stiffened by the podium base, while the building's upper half is stiffened by an outrigger floor at level 34—this level's slabs are thickened and full-height web members create an ultra-stiff floor that acts like a belt, allowing the upper half of the building to develop lateral strength. Though clad completely in curtainwall, there are visible nods to the structure: the concrete floor slabs have been extended past the glass on the east and west sides of the building, suggesting a rib-like structure emerging from the cladding.





- TWO LEVELS
- 1 LOBBY
  - 2 BAR
  - 3 STAGE
  - 4 DINING
  - 5 KITCHEN
  - 6 PRIVATE ROOM
  - 7 OPEN BELOW
  - 8 ELEVATOR

**PROJECT** Silo Elevated Cuisine, San Antonio  
**CLIENT** Patrick and Cari Richardson  
**ARCHITECT** Sprinkle & Co. Architects (formerly Sprinkle Robey Architects)  
**DESIGN TEAM** Davis Sprinkle, AIA; Travis Lucy; Michelle Hartl; Anilu Trevino  
**CONTRACTOR** Malitz Construction  
**CONSULTANTS** Beyer Mechanical (mechanical); Beyer Plumbing (plumbing); Persyn Engineering (structural); Mission Restaurant Supply (kitchen)  
**PHOTOGRAPHERS** Chris Cooper; Paul Hester

**RESOURCES** GRANITE: Delta Granite & Marble; BACKLIT BAR COUNTERTOPS: Lightblocks; PLASTIC FABRICATIONS: 3Form; WATERPROOFING: Emser Tile & Stone; METAL DOORS: Curries Essex (Wesley Thompson Hardware); WOOD DOORS: Mohawk (Wesley Thompson Hardware); ACCESS DOORS: Cornell (Alamo Door Systems); GLASS: Biela Glass; TILE: Hakatai, American Olean; SPECIAL CEILING SURFACES: Maharam Fabric; PAINT: ICI; CARPET TILES: Shaw Contract Group (Commercial Surfaces); LAVATORY FAUCETS: Hansgrohe Axor; RESTROOM ACCESSORIES: Bradley (DEA Specialties); FOOD SERVICE EQUIPMENT: Mission Restaurant Supply; WINE ROOM COOLER: Breezaire; BLINDS: MechoShade; ELEVATOR: Schindler; SOUND SYSTEM: Muzak; DIMMING SYSTEM: Lightolier; LIGHTING: Artemide, Lightolier, Primus Lighting

Designed by Sprinkle & Co. Architects and completed in 2008, Silo's second San Antonio location occupies 8,900 square feet and two floors within a suburban retail development. The owners requested that the architects preserve but also refresh the restaurant's identity. This was achieved through the use of new and unexpected materials and compositions over familiar design elements. The tall entry foyer serves as the martini bar on the ground level and provides access to the main dining area on the second level. A shallow and narrow fountain graces the entryway and sets a Zen-like tone, while a large, curved rusted steel sculpture separates the circulation from the lower-level lounge areas. Patrons access the second floor by way of a copper-clad glass elevator. The upstairs dining space focuses on a large, open kitchen on one side and a floor-to-ceiling glazing on the other. A series of small, private dining rooms feed off the main dining space. As an homage to turn-of-the-century Parisian cafés, a continuous band of narrow mirrors runs above the seating booths giving patrons better sight lines in all directions. Decorative lighting accents rich surface textures including wood, textiles, copper, rusted steel, glass, and stone. A contrast is created between the light and airy upstairs formal dining spaces and the dark and intimate lounge areas below.

NOELLE HEINZE



## Paggi House

PROJECT Paggi House, Austin

CLIENT Paggi House

ARCHITECT J Square Architecture

DESIGN TEAM Jay DuPont, AIA; James Shieh; Elaine Andersen

CONTRACTOR CL Carson

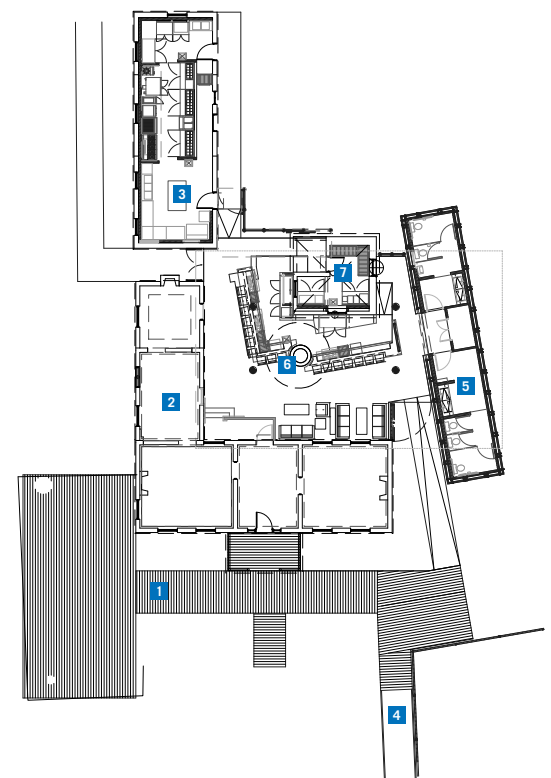
CONSULTANTS Steinman Leuvano Structures (structural); Jerry Garza (MEP); Architerra Studio at Evergreen (interior design)

PHOTOGRAPHERS J Square Architecture; Rebecca Fondren Photography

RESOURCES PRECAST ARCHITECTURAL CONCRETE: ModernCrete; RAILINGS: Southwest Steel Services; ROOF AND WALL PANELS: GE Lexan (Sundance Supply); SIDING: James Hardie; BATHROOM TILE: Architerra Studio at Evergreen; FOOD SERVICE EQUIPMENT: Mission Restaurant Supply; DESIGN SOFTWARE: AutoCad, SketchUp

Sited on a bluff overlooking Austin's downtown skyline and Lady Bird Lake, the Paggi House recently underwent renovations that restore the original 1840s structure while adding a contemporary twist. Re-imagined by J Square Architecture, the 5,523-sf restaurant, which once served as an inn and a family home, gained a new roof, outdoor bar/dining space, restroom, and office. The kitchen and interior dining room were also expanded. The major architectural element of the renovation is the new covered outdoor bar area with a cast-in-place concrete bar. A large butterfly roof structure made of concrete, steel, and polycarbonate panels covers this area, as well as an original storage room and a portion of the new restroom building. Sleek decks and outdoor dining areas soften the transition between the nineteenth century house and the modern glass-and-steel condos that surround the establishment. An elegant and subdued interior includes dark-stained oak floors and black, unlighted ceilings that provide a contrast with pale plaster walls. Two intimate dining rooms flanking each side of the entry hall sport ornate original fireplaces, black leather chairs, white table linens, black glass chandeliers, and large contemporary paintings by Austin artists Roi James and Shawn R. Camp. To aid in the restoration and renovation process, Pfluger Associates Architects contributed files and drawings for the 1970s restoration of the original structure.

NOELLE HEINZE



- SITE PLAN**
- 1 WOOD DECK
  - 2 DINING AREA
  - 3 KITCHEN BUILDING
  - 4 EXISTING ADA CHAIR LIFT AND WALK
  - 5 NEW RESTROOM BUILDING
  - 6 EXISTING CISTERN
  - 7 BAR STORAGE



# August E's



**PROJECT** August E's, Fredericksburg

**CLIENT** Dawn and Leu Savahn

**ARCHITECT** Mustard Design

**DESIGN TEAM** Andrew Bray, Jackie Currie

**CONTRACTOR** Owner

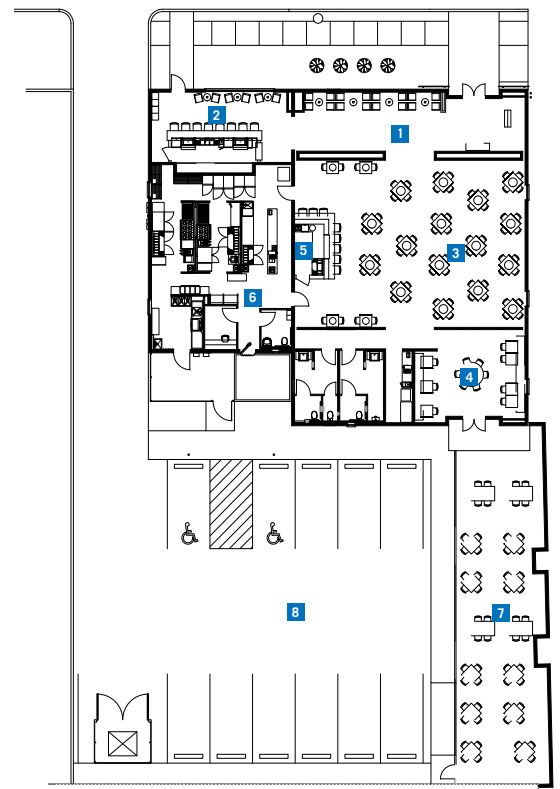
**CONSULTANTS** Richard Eppright (project management); Itz Electric (electrical/hvac); McInnish Engineering (energy code compliance)

**PHOTOGRAPHER** Green Dog Pictures

**RESOURCES** CONCRETE PAVEMENT: TXI (Customized Concrete); CONCRETE BAR TOP AND TILE: Versatile; CUSTOM ENTRANCE SCREEN: Rode's Iron & Pipe; LUMBER AND GYPSUM BOARD: Dittmar Lumber Company; BAR WOODWORK: Quality Hardwoods; METAL AND WOOD DOORS: National Account Doors; KITCHEN DOORS: Ellison (National Account Doors); SUSPENDED CEILINGS: Armstrong; PAINT: Sherwin Williams, Benjamin Moore; SIGNAGE AND AWNINGS: Chandler Signage; FOOD SERVICE EQUIPMENT: Ace Mart; LIGHTING: Contech, BK Lighting (American Lighting); BATHROOM SINKS: Kohler (Ferguson Bath & Kitchen Gallery)

August E's was an established restaurant in need of a new location. In 2008, the business moved to an existing building one block off historic Main Street in Fredericksburg. Designed by Andrew E. Bray of Mustard Design, the project injected new life into a 4,900-sf structure that previously housed a 1950s automotive repair shop and later a furniture warehouse. A limited budget dictated creative and cost-effective solutions. Departing from tradition, a steel tube screen articulates the entry and invites guests to dine on the Texas-Asian cuisine found beyond. The design uses existing building elements including restored entry doors and refurbished concrete floors. Simple steel-gray fabric awnings and accent lighting highlight the exterior. The interior features existing block walls to separate the dining and bar/lounge areas from the kitchen. Simple partitions in the dining room provide a comfortable yet flexible space to accommodate large events and more intimate dinners. The exposed structure, accent lighting, cast-in-place concrete bar with Brazilian cherry wood panels, and white leather chairs give the restaurant a warm, modern feel.

NOELLE HEINZE



- SITE PLAN**
- 1 LOUNGE
  - 2 BAR
  - 3 DINING
  - 4 PRIVATE DINING
  - 5 SUSHI KITCHEN
  - 6 KITCHEN
  - 7 FUTURE PATIO
  - 8 PARKING



# BIM's Progeny

Advances in 3-D modeling improve efficiency and streamline project delivery

by LARRY KLEINKEMPER, AIA

ONLY 20 YEARS AGO, architects and their clients were limited to drawings and models rendered by hand. Then the industry began to adopt CAD (computer-aided drafting) and digital modeling, technologies that brought about animation and rendering. Now there is BIM (building information modeling) that offers architects an entirely new set of tools for their practice. With BIM's three-dimensional computer modeling every project can benefit from holographic imagery, LiDAR scanning, rapid prototyping, CNCs, and real-time engines, as well as improved rendering and animation.

An important difference between BIM and two-dimensional drafting is the modeling. A three-dimensional computer model enhances an architect's ability to coordinate with engineers and other design professionals. All of the elevations, plans, and schedules are synchronized, so that if a door is added on the floor plan view, the same door automatically shows up in the elevation view and door schedule. The computer models also work well with a number of other technologies. By having a computer model of every project, technologies that previously were too expensive or inefficient are now cost-effective and streamlined.

Here are some examples of BIM-related tools:

**LiDAR** (light detection and ranging) is a type of laser scanning. LiDAR is the fastest, most efficient way of capturing an existing building's dimensions and details. It is a technology that has become incredibly useful since BIM because the 3-D information from a laser scan is more useful and

effective in a computer model. Only the largest architectural firms can afford the equipment and operator expense, but smaller firms can hire a service provider to scan a building and create a BIM file.

**Table-top scanners** help architects whose method of design begins by sculpting a physical model. The device scans a physical model and translates the digital information into a computer model.

**Real-time engines** complement BIM's enhanced presentation capabilities by allowing clients to "tour" every area of the project. Viewers appear to move freely through the 3-D computer model and feels as though they are actually walking through all spaces on all levels of the project.

**Rapid prototyping** offers another form of presentation models. These are resin models printed from a computer file, a quick way of giving a client a model they can hold or display that provides a basic understanding of the design for a building.

**CNC** (computer numerical control) machines create large-scale 3-D models. Both CNC and rapid prototyping also can print out full-scale details of buildings. CNCs are aiding architects in creating unique forms that otherwise would be difficult to produce as 2-D drawings.

**Holograms** offer another variety of presentation model, one that is printed on special film. Shinning a regular light onto the flat sheet produces a 3-D object that protrudes about 12 inches above the surface. Clients can visually experience the same details as a physical model. Holographic models are beneficial to architecture firms because they are more economical and faster than a detailed hand-rendered model. They also can show small details that are difficult to hand model and impossible to replicate with rapid prototyping.

Not only does BIM allow the use of new technologies, but it can be used with new techniques, such as shared central file and IDP (integrated project delivery). IPD allows architects, contractors, and engineers to work together on a project, instead of independently. All the project team members' plans are coordinated so mistakes and conflicts are less likely to occur. In addition, BIM allows everyone to work from the same model or drawing. All of their information goes into a central file, so if one wants to change a particular wall, the computer will check with the system to see if another architect is using it. As the architect adjusts part of the drawing, the system will stop other users if their changes interfere.

BIM continues to change the way architecture firms are run. Clients and architects are able to communicate more clearly and efficiently. While many clients aren't able to read 2-D drawings, they are able to look at a computer model and understand the shape of a building. This results in faster consensus and less changes due to misunderstandings.

BIM has made completing a project more efficient and less costly by removing much of the duplicate efforts involved in designing a project. It has allowed firms to step out and invest in technologies that have improved the level of presentation and the quality of work they produce.

You can contact the writer at [larry@tridot.com](mailto:larry@tridot.com).



PHOTO COURTESY ZEBRA IMAGING

in building first the Carnegie and then the present building, ultimately expanding the library system to six libraries across the city. The Central Library was named after her in 1951 and served as the main library until 1976, when the current Central Library, designed by S.I. Morris Associates, was built.

The historic interiors of the library do not disappoint. A noble staircase, with a spacious landing graced by a large Public Works Administration mural from 1935 by Ruth Pershing Usher, leads to a two-story atrium that is surrounded by a balcony and topped by wood-coffered clerestory. The MRC's main reading room and the building's original steel stacks bracket the atrium, which now will also lead to the new archives addition. Including many original furnishings, these fine spaces will be restored in the next phase, planned for completion next spring.

The nonprofit Julia Ideson Preservation Partners was organized in 2006 to raise funds for the addition and restoration of the projected \$32 million project. Led by Barry Moore, FAIA, the Gensler team designed the project to receive

LEED Silver certification. Landscape design of the new enclosed garden, called the Outdoor Reading Room, was by TBC Partners.

Broadly based on Cram's drawings for the library (held in the MRC collection), the addition strives to blend seamlessly with the original. The brick is a near match and stone string courses align. However, the prime concept to construct a portion of the library that never existed, even if duplicating the architect's original intentions, goes against current preservation practice in the U.S. by making the new indistinguishable from the old.

The Secretary of the Interior's Standards for the Treatment of Historic Properties – the so-called "Ten Commandments" of architectural preservation – states that "Designs that were never executed historically will not be constructed," and further: "New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural

features to protect the historic integrity of the property and its environment."

However, according to project architect Moore, plans for the new addition were endorsed by the Texas Historical Commission. The state entity is charged by the U.S. Interior Department with approving or not approving changes to historic properties such as the Ideson, which is listed on the National Register of Historic Places and officially recognized as a state landmark. The approval by the state preservation officer, Moore said, stemmed from the special circumstances of having the original drawings. "Because we had the original design drawings from Cram, for the garden as well as the new addition, we therefore understood the design intent," Moore said.

Nonetheless, the approach used for the Ideson addition creates a false history. Where adherence to the federal Standards may have led to an abstracted and contemporary concept, the design of the new addition instead misleads with mimicry that belies the research archive's modern functions and needs.

GERALD MOORHEAD, FAIA



**September 30, 2010 - El Paso, Texas**

**2010 CONFIRMED SPEAKERS:**

**LUCIA ATHENS, Keynote Speaker**  
 Author *BUILDING AN EMERALD CITY: A Guide to Creating Green Building Policies and Programs*  
 Lucia Athens is the former manager of the City of Seattle Green Building Program. She is now a senior associate and sustainable futures strategist for CollinsWoerman, a Seattle-based planning, architecture, and interior design firm specializing in innovative and sustainable solutions.

**SAM RASHKIN, National Director ENERGY STAR for Homes, U.S. EPA**  
 Sam Rashkin has managed ENERGY STAR for Homes since its start in 1996. Under his leadership, ENERGY STAR for Homes has grown exponentially to more than 6,500 builder partners and over 940,000 labeled homes. He is also introducing a new EPA Indoor Air Quality label for the housing industry linked to ENERGY STAR Qualified Homes and an advanced technology new home program called Climate Choice for elite builders.

**www.eco-el paso.org**

*Symposium and Expo on Design in the Hot Arid-Climate*

PARTICIPATING ASSOCIATIONS & PUBLICATIONS:



# Index to Advertisers

continued from page 12

became a political hot button prior to city elections in May 2009. In February, the City Council voted to demolish it after trying for more than five years to determine an adaptive reuse.

Local advocates organized the Friends of the Coliseum and filed a lawsuit after the City Council authorized a contract for demolition that resulted in a temporary restraining order that blocked demolition for almost two months. Meanwhile, local activists submitted an application to the Texas Historical Commission seeking landmark status for the building. However, while the application for historic designation was being considered by the state commission the restraining order was lifted and demolition began on May 7. In the meantime, THC recommended approval by the National Register of Historical Places but demolition continued before landmark status could be attained.

In the end, perhaps the building was not so well loved that it could gain enough community support to assure adequate funding to allow its continued existence.

BILL T. WILSON, FAIA



**BOSSE & PHARIS**  
ASSOCIATES

**URBAN DESIGN**

**CONSERVATION PLANNING**

**COMMUNITY PLANNING**

**LANDSCAPE ARCHITECTURE**

606 BLANCO STREET  
AUSTIN, TX 78703  
P: 512.472.7332  
F: 512.472.4160

www.bossepharis.com

ADVERTISER	PAGE	ADVERTISER	PAGE
<b>Acme Brick Company</b> .....	7, 17, 28	<b>Hanson Brick</b> .....	1
(800) 792-1234 • bseidel@brick.com www.brick.com		(972) 653-3823 • connie.ahlefeld@hanson.com www.hansonbrick.com	
<b>AG&amp;E Associates, PLLC</b> .....	66	<b>Hunt &amp; Joiner, Inc.</b> .....	67
(214) 520-7202 • sagrawal@ageassociates.com www.ageassociates.com		(214) 760-7000 • sdial@h-jinc.com www.h-jinc.com	
<b>Armor Glass International, Inc.</b> .....	18, 64	<b>JEAcoustics</b> .....	65
(713) 213-5080 • info@armorglassinternational.com www.armorglass.com		(512) 371-0800 • evans@jeacoustics.com www.jeacoustics.com	
<b>ASI Signage Irving</b> .....	65	<b>Jewell Concrete Products (Oldcastle Architectural)</b> .....	IFC, 21
(972) 915-3800 • deborah.zornes@asisignage.com www.asisignage.com		(800) 792-3216 • aaronk.mcmillan@oldcastlepg.com www.jewellconcrete.com	
<b>Austin Community College</b> .....	66	<b>Jose I. Guerra, Inc.</b> .....	64
(512) CAD-4900 • learncad@austincc.edu www.austincc.edu/learncad		(512) 445-2090 • rguerra@guerra.com www.guerra.com	
<b>AVADEK</b> .....	21	<b>L.A. Fuess Partners, Inc.</b> .....	65
(713) 944-0988 • sales@avadek.com www.avadek.com		(214) 871-7010 • mpeterman@lafp.com www.lafp.com	
<b>Blackson Brick</b> .....	BC, 14	<b>Manhattan Construction Company</b> .....	24
(214) 855-5051 • info@blacksonbrick.com www.blacksonbrick.com		(214) 357-7400 • (713) 529-0000 www.manhattanconstruction.com	
<b>Bonded Lightning Protection</b> .....	21	<b>Marvin Windows Planning Center</b> .....	8, 9
(800) 950-7933 • sales@bondedlp.com www.bondedlp.com		(800) 888-3667 • nagle@bmcwest.com www.bmcwest.com	
<b>Boothe Concrete</b> .....	65	<b>Modern Spark Fires</b> .....	29
(512) 454-1641 • chris@bootheconcrete.com www.bootheconcrete.com		(866) 938-3846 • info@sparkfires.com www.sparkfires.com	
<b>Bosse &amp; Pharis Associates</b> .....	63	<b>National Fenestration Rating Council</b> .....	24
(512) 472-7332 • dbosse@bossepharis.com www.bossepharis.com		(301) 589-1776 • therron@nfr.org www.nfr.org	
<b>Boston Valley Terra Cotta</b> .....	67	<b>Professional Services Technical Consultants</b> .....	64
(888) 214-3655 • info@bostonvalley.com www.bostonvalley.com		(281) 437-3458 • wross@pstcinc.net www.pstcinc.net	
<b>Boyer &amp; Associates</b> .....	65	<b>Red Dot Building Systems</b> .....	10, 18
(512) 255-2300 • www.boyerengineering.com		(800) 657-2234 • info@reddotbuildings.com www.reddotbuildings.com	
<b>Buell Design</b> .....	9	<b>Schuler Shook</b> .....	65
(214) 824-3513 • jon@buelldesign.com www.buelldesign.com		(312) 944-8230 • dallas@schulershook.com www.schulershook.com	
<b>Butterfield Color</b> .....	64	<b>Spacify</b> .....	65
(630) 906-1980 • keith@butterfieldcolor.com www.butterfieldcolor.com		(866) 772-2040 • sales@spacify.com www.spacify.com	
<b>CCM Construction Services, LLC</b> .....	29	<b>Sunbelt Stone</b> .....	22
(214) 906-8751 • john@ccmconstructionservices.com www.ccmconstructionservices.com		(972) 403-1133 • scarpenter@subrogatelaw.com www.sunbeltsandstone.com	
<b>Compound Security Specialists</b> .....	65	<b>Thorntree Slate &amp; Marble</b> .....	18
(512) 444-4283 • rpalmerton@compoundsecure.com www.autogateatexas.com		(713) 690-8200 • renee@thorntreeslate.com www.thorntreeslate.com	
<b>Continental Cut Stone</b> .....	IBC	<b>Total CAD Systems, Inc.</b> .....	22
(254) 793-2329 • info@continentalcutstone.com www.continentalcutstone.com		(281) 445-6161 • ppadamada@tcadsys.com www.tcadsys.com	
<b>DEACERO</b> .....	24	<b>Tymetal Corp.</b> .....	67
(800) 332-2376 • www.designmasterfence.com		(800) 328-GATE(4283) • txsales@tymetal.com www.tymetal.com	
<b>Design Arts Seminars, Inc.</b> .....	64	<b>Weatherization Partners</b> .....	2
(850) 391-0335 • micene@designarts.net www.designarts.net		(800) 288-9835 • info@weatherizationpartners.com www.weatherizationpartners.com	
<b>Flexco Floors</b> .....	67	<b>Wrightson, Johnson, Haddon &amp; Williams</b> .....	66
(800) 633-3151 • www.flexcofloors.com		(972) 934-3700 • jkimpton@wjhw.com www.wjhw.com	
<b>Georgia-Pacific Gypsum</b> .....	30	<b>York Metal Fabricators</b> .....	64
(800) 225-6119 • techservices@gapac.com www.gpgypsum.com		(800) 255-4703 • grantyork@yorkmetal.com www.yorkmetal.com	
<b>Grand Openings</b> .....	4		
(972) 539-2671 • mbowles@millworksolutions.com www.grandopenings.com			

# Intentional Grounding

Texas Stadium demolition clears land for redevelopment

by STEPHEN SHARPE

TEXAS STADIUM COLLAPSED ON APRIL 11 in a well-executed implosion detonated at 7:08 a.m. that ended a storied 37-year career as the home of the Dallas Cowboys. In less than 30 seconds and before more than 20,000 witnesses, a spectacular series of blasts from 2,715 lbs. of explosives reduced the 65,675-seat arena to rubble.

An iconic presence on the prairie in Irving, with an innovative design for the roof that stood independent of the internal structure it covered, Texas Stadium was replaced by the \$1.15-billion Cowboys Stadium that opened in May 2009 in Arlington. (See p. 32.) The roof made the stadium famous because there was an opening in the middle, which once prompted Cowboys linebacker D.D. Lewis to say, “Texas Stadium has a hole in its roof so God can watch his favorite team play.”

Texas Stadium was designed by architect A. Warren Morey for Clint Murchison Jr., AIA, who then owned the Cowboys franchise and envisioned an arena that would shelter the spectators yet leave the playing field open to the weather. The stadium – completed on time and within its \$35 million construction budget, Morey recalls proudly – opened on October 24, 1971.

Now that the demolition by Dallas-based Weir Brothers is complete, the site is expected to be developed for commercial use. One proposed project would combine the stadium site with surrounding properties for a large transit-oriented development strategically positioned along the expansion of the Dallas Area Rapid Transit’s light rail system. During ceremonies accompanying the implosion, Irving Mayor Herbert Gears said, “Texas Stadium has been an excellent contribution to our community in many ways and for many years. But today, we are officially ready for future development of this prime piece of real estate. Life will go on in Irving.”

The razing of Texas Stadium also fits into the production schedule for a complex Texas Department of Transportation project dubbed the Diamond Interchange, with work already having begun on TxDOT’s reweaving of four major highways and integration with DART’s new Orange Line. Plans call for most of the concrete from the demolished stadium to be recycled in the road construction.

Stephen Sharpe is celebrating his tenth anniversary as the editor of *Texas Architect*.



The dramatic razing of Texas Stadium, built in 1971 and renowned for its roof opening, has cleared a large swath of land in Irving for future development. A major reconfiguration of four highways, nicknamed the Diamond Interchange, is currently underway adjacent to the site.

PHOTO BY WILSON ROE COURTESY THE CITY OF IRVING