49: Fall 2000 $5.00

Cite

THE ARCHITECTURE and DESIGN REVIEW of HOUSTON

weaving an URBAN FABRIC

BUILDING THE BETTER TOWNHOUSE

EXPLORING HOUSTON'S UNDERGROUND

MONTROSE: THE EVOLUTION OF A CITY STREET

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Cover: Composite of Houston townhouses. Collage by Cheryl Beckett. Photos © 2000 Hester + Hardaway.

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Cite

Over the last few years, townhouses have become an ubiquitous reminder of the changes taking place in Houston.

Cite

The Architecture and Design Review of Houston

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The Rice Design Alliance, established in 1973, is a not-for-profit organization dedicated to the advancement of architecture, urban design, and the built environment in the Houston region through educational programs; the publication of *Cite*, a quarterly review of architecture and design; and active programs to initiate physical improvements. Membership in the RDA is open to the general public.

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CALENDAR

RICE DESIGN ALLIANCE SPRING LECTURE SERIES — GREEN SPRING

January 24 through February 21
Brown Auditorium,
The Museum of Fine Arts, Houston
713.348.4876

This lecture series will focus on sustainable architecture and feature built work that addresses important environmental issues. Green Spring will bring to Houston a group of innovative designers from around the world who are questioning the fundamental ways in which buildings and cities are conceived.

Wednesday, January 24, 7:30 p.m.
KEN YEANG, a partner in Hamzah & Yeang, an architectural firm headquartered in Kuala Lumpur, Malaysia, will speak on "The Ecological Agenda: The Ecological Design of Large Buildings and Site." Yeang is the author of *The Skyscraper, Bioclimatically Considered: A Design Primer*.

Wednesday, January 31, 7:30 p.m.
FRUTO VIVAS, who teaches and practices architecture in Caracas, Venezuela, will speak on "Los Arboles Para Vivir." Vivas recently completed the Venezuelan Pavilion for Expo 2000 in Hanover, Germany.

Wednesday, February 7, 7:30 p.m.
THOMAS SPIEGALHALTER, professor of architecture at Carnegie-Mellon University in Pittsburgh, will speak on "Under the Sun, With the Wind." For the past decade, Spiegelhalter has been developing a series of low energy consumption buildings.

Wednesday, February 21, 7:30 p.m.
PLINY FISK, co-director of the Center for Maximum Potential Building Systems, Inc., in Austin, and ROBERT BERKEBILE, an architect with Berkebile, Nelson, Immenschun and McDowall Architects of Kansas City, will speak on "A Public Dialogue."

FIRESIDE CHAT

Wednesday, March 7
Brown Auditorium,
The Museum of Fine Arts, Houston
713.348.4876

To close the Green Spring lecture series, a civic forum titled "The Sky is the Limit" will be held to discuss what has become Houston's most important planning issue — the city's air quality, and the federal sanctions that unremediated pollution could trigger.

SALLY WALSH LECTURE

Wednesday, March 21, 7:30 p.m.
Brown Auditorium,
The Museum of Fine Arts, Houston

NEIL FRANKEL, partner in the Chicago design firm of Frankel and Coleman, will speak.

RDA EXHIBITION: SNAPSHOT

May 4 through June 9
Lawndale Art and Performance Center
4912 Main Street
723.348.4876

In the tradition of Best Laid Plans and Houston Works, RDA, in conjunction with Lawndale Art and Performance Center, will present Snapshot: Current Houston Design on View, an open-call exhibition showcasing architecture, urban planning, preservation, landscape architecture, interiors, furniture, and graphics by Houston architects and designers. A preview will be held on May 3. Call for entries and registration will be issued in January, 2001.

UNIVERSITY OF HOUSTON GERALD D. HINES COLLEGE OF ARCHITECTURE LECTURE SERIES

These lectures have been coordinated with the Rice Design Alliance's Green Spring series. All lectures are held in the College of Architecture Lecture Theater. For more information, please call 713.743.2400.

Tuesday, February 6, 6 p.m.
ALISTAIR MCGREGOR, of Ove Arup & Partners, San Francisco, will speak. McGregor's recent works include the Gap Building in San Francisco.

Tuesday, February 13, 6 p.m.
DAVID HEYMANN, Associate Dean for Undergraduate Programs, University of Texas School of Architecture, and author of *More Domestic Filler in Nature*, will speak. Heymann's recent work includes a visitor center for the Audubon Sabal Palm Sanctuary in Brownsville and a house for president-elect George W. Bush and family near Waco.

Tuesday, March 6, 6 p.m.
NOEL HARDING, a Canadian artist, will speak. Harding's recent work includes "The Elevated Wetlands" (1997-1999), Taylor Creek Park, Toronto. The project involves bioremediation of water from the Don River.

Tuesday, March 20, 6 p.m.
RICK JOY, an architect who practices in Arizona, will speak. Joy's recent works reflect careful building in environmentally sensitive areas.

RICE DESIGN ALLIANCE INITIATIVE FOR HOUSTON

Tuesday, January 16

Beginning on January 16, 2001, RDA will accept applications for the second annual grants program for students and faculty of the Rice University School of Architecture and the University of Houston Gerald D. Hines College of Architecture. The purpose of the program is to support projects that focus on Houston's built environment, its history, present condition, and future development. A variety of projects will be considered, including historic research, speculative studies and projects, problem solving and planning projects, and studies that document conditions of the city and its architecture.

Awards of up to $5,000 are available for projects to be completed in one year. More than one proposal may be funded. Applications are due by March 30, 2001, and the announcement of awards will be made on May 7. Qualified applicants may call RDA at 713.348.4876 for an application.

RICE DESIGN ALLIANCE 2001 ANNUAL ARCHITECTURE TOUR

Saturday, March 31, and Sunday, April 1

This year's tour will feature houses in which the design of the house, landscape, and garden features are integral to one another, producing indoor/outdoor spatial combinations rare in Houston.

RICE DESIGN ALLIANCE HOMETOWN TOUR: PITTSBURGH

Wednesday, April 25, through Sunday, April 29

Discover Pittsburgh's architectural legacy on tours of historic downtown landmarks and neighborhoods as well as corporate skyscrapers; the Strip District, with its ethnic diversity; and Oakland, with its beautiful college campuses and museums. Private historic homes and an array of the finest private clubs will provide the setting for four-star dinners and receptions. Participation is limited to 25 RDA members. For more information, please call the Rice Design Alliance at 713.348.4876.

LETTERS

HIGH QUALITY PRAISE
I was delighted to receive the summer 2000 issue of *Cite*. Congratulations on another outstanding issue.

I thought the photographs of Houston by Alex S. MacLean were fantastic, and I was thoroughly impressed with the superb quality of the whole issue. In fact, the printing, the content, the overall quality of the magazine are far superior to what I used to see during my time in Houston (1972-1992).

Congratulations to all at the Rice Design Alliance on the consistent high quality of *Cite*.

Antony Harbour
Managing Director, Gensler
London, England
Past President, Rice Design Alliance

ALL STRUCTURE, NO CITY
Thanks so much for the new *Cite* [*Cite* 48]. I really appreciate Alex S. MacLean's photos. They tell a great story of infrastructure without a city.

Richard Ingersoll
Montevardi, Italy

A MATTER OF PRIDE
Thank you for sending a copy of the summer 2000 edition of the RDA journal [*Cite* 48] to me. I am very proud of this city and thoroughly enjoyed seeing it through the lens of the talented Alex S. MacLean.

Lee P. Brown
Mayor
Houston

Have a criticism, comment, or response to something you've seen in Cite? *If so, the editors would like to hear from you. You can mail your comments to Letters to the Editor,* Cite, *1973 West Gray, Suite 1, Houston, Texas 77019; fax them to 713-529-5881; or e-mail them to citemail@ruf.rice.edu.*

RETHINKING THE DOME

Is the Astrodome doomed? It lost its namesake tenant when the Houston Astros moved downtown to Enron Field. It lost part of its parking lot when construction began on a new football stadium. And it even lost top billing when Reliant Energy bought the naming rights not only to the Houston Texans' soon-to-be home field, but to the entire complex that sits at the foot of Main Street. So the Astrodome is no longer just the Astrodome. It is, alas, the Reliant Energy Astrodome.

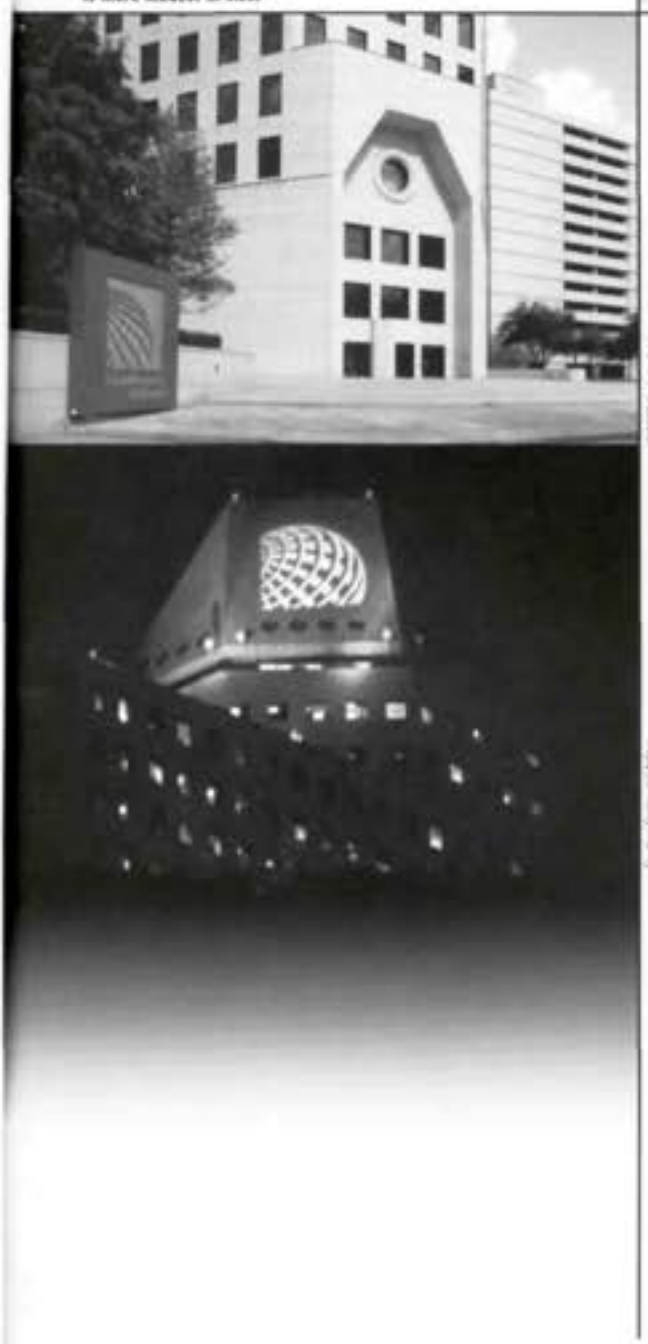
What's next for Houston's most widely known landmark? Could it be relegated to hosting little more than monster truck rallies? Or is it possible that, official denials aside, it's headed for the wrecking ball?

Rather than let the Astrodome slip into the shadow of its NFL neighbor, *Cite* would like to come up with some new uses, and possible redesigns, for the venerable facility, something that will allow it to retain its status as a Houston icon. To that end, it is asking architects, designers, and artists for ideas and drawings on what to do with the Dome. The best of these will be gathered and published in a future issue of *Cite*. For specific details on rules, deadlines, and how notions and sketches should be submitted, send a letter to *Cite* at 1973 West Gray, Suite 1, Houston, Texas 77019, or e-mail *Cite* at citemail@ruf.rice.edu.

SIGNS ON HIGH

CONTINENTAL PROJECTS A MESSAGE DOWNTOWN

Bottom: Fifty-two stories high, the Continental Airlines logo shines over Houston. Below: At ground level the signage contains words, and is more modest in size.



©2000 Hester + Hardaway

Courtesy Continental Airlines

If Continental Airlines hoped to garner some attention by beaming its corporate logo onto the roof of its downtown Houston office tower, then the company got its wish. But wishes can be tricky things, and in the case of Continental, the attention it got is not necessarily the attention it desired.

The attention Continental wanted was simply one that affirmed its corporate identity and its place in a booming central city. The attention it received, at least from some, had more to do with its breaking ranks with Houston's leading corporate citizens. For close to three decades, beginning when the Shell Oil Company moved its headquarters to Houston and chose not to decorate its headquarters at One Shell Plaza with signage, Houston companies have honored a gentleman's agreement to keep the Houston skyline pristine. In 1993, that agreement was codified into a city ordinance that banned any signs higher than 42.5 feet above the ground in the Central Business District.

And the Continental logo is definitely higher than that. Beamed onto the east and west faces of the polygonal cap that tops its 52-story tower at 1600 Smith Street, the Continental images are more than 700 feet above the sidewalk. A laser shooting upward through a glass lens creates the 1,500-square-foot logos, which are visible against a background of blue lighting.

Still, the images, being laser projections, are impermanent. Too, they're visible only at night, and lack any words or lettering. Partly because of that, says Continental vice-president Nene Foxhall, the company didn't see their beamed logos as incompatible with what was already being done downtown. "There were already lights on buildings," she notes, "some of it pretty prominent." That was, however, a minority opinion. "When we talked with the city planning department, they informed us that what we wanted wasn't allowed by the signage code," says Foxhall. "Even though the laser technology wasn't covered technically by the ordinance, in their reading it was covered by the spirit of the ordinance."

As a result, if Continental hoped to brand its corporate headquarters — an issue important to the company's senior management — it would have to get the ordinance amended. Following discussions with the mayor's office, the city attorney, and John Castillo, the city council member whose district includes the Continental building, in early 2000 it began trying to do just that by garnering support from others downtown. Not surprisingly, some were vocal in their opposition to the idea. One of the leading voices against Continental's plan was Louis Sklar, executive vice president of Hines Interests. It was Gerald Hines who, in the early 1970s, had helped persuade Shell Oil to forego a sign on its building and, with other developers such as Kenneth Schnitzer, promoted the idea that downtown's architecture should be allowed to speak for itself, and not be marred by names or logos.

Talking to a reporter from the *Houston Chronicle*, Sklar noted that "one of the things we have is the absence of buildings becoming billboards. I would hate to see something that is a collective landmark spoiled by one more sign." The concern is one echoed by Anita Brown, executive director of Scenic Houston, who notes that "the fact that the downtown skyline is free of commercial advertising is a very unique feature of Houston. There's not another city in the United States that has a skyline like that. It's something we can be proud of, and something we should be careful to protect."

But if the objecting voices were expected, the surprise was that there were voices of support as well, among them Jordy Tollett of the Greater Houston Convention and Visitors Bureau. Houston, Tollett said, was changing, and what might have been good in the 1970s and 1980s, when

downtown was primarily office space, was not so good for today, when the city center is moving toward a pattern of mixed use. Signs, according to Tollett, could be helpful in making the area look alive and vital. And like it or not, there were going to be more of them. Already, the letters broadcasting the name of Enron Field had exceeded the height restriction, a violation allowed because the sign ordinance exempts government buildings. And the lighted guitar that advertises the Hard Rock Cafe in Bayou Place also broke the 42.5 foot barrier, allowed because it was designated a piece of art rather than a piece of signage.

That what was once a consensus opinion against signs was no longer as firm as it used to be was made clear when Central Houston Inc. and the Greater Houston Partnership were asked to weigh in on the question of Continental's projected logo. In the past, there likely would have been no debate on the issue, notes one longtime observer of the groups, simply a rejection of the very idea of a sign. But on this occasion the organizations' memberships were split, resulting in resolutions that on one hand opposed changing the city's sign ordinance, but on the other supported an exception for Continental.

And an exception is exactly what Continental received — a revision of the sign ordinance worded in such a way that it applied only to Continental Airlines and its downtown tower. Or so proponents claimed. Scenic Houston's Anita Brown is less sure. "The city claims this change to the ordinance is extremely rightly crafted, and that no other commercial entity will be able to come in and project their logo onto a building," she says. "But I'm afraid they're just opening the door to more commercial advertising."

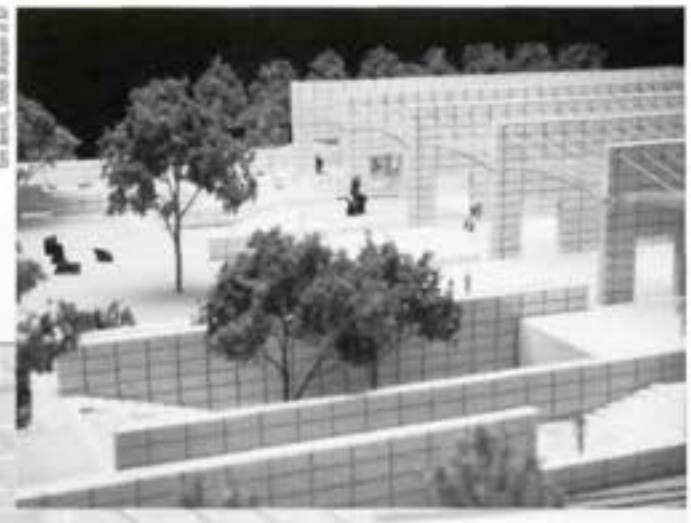
And Continental? With the city's approval in hand, it began preparing and testing its laser projector. "We're sensitive to the criticism we've heard," Nene Foxhall says. "We admire Houston's skyline, and wouldn't want to harm it. But we just respectfully disagree that our projection will do that, or open the door to problems down the road." In October, the logo appeared as part of a short-lived test. Regular projection began on December 14, one more sign, if you will, of a changing downtown. — *Mitchell J. Shields*

A LOSS ON THE PARKWAY

The Gulf Publishing Company, one of the more distinctive buildings flanking Allen Parkway, could soon be gone. The 72-year-old structure, designed in 1928 by Hedrick & Gottlieb and added to in 1936 and 1939 by Alfred C. Finn, has been sold to a developer who plans to replace it with a high-rise residential tower.

The stucco-faced printing plant at 3301 Allen Parkway was constructed in a Spanish Mediterranean style. The first of a group of printing businesses to settle in the area — the Rein Company Building at 3401 Allen Parkway followed later in 1928, and the Star Engraving Company at 3201 Allen Parkway was added in 1930 — Gulf Publishing was designed to blend in with the pleasure drive ambiance of what was then Buffalo Bayou Parkway. Despite its age, the building has no official designation as a historic structure, and so is not under even the small protection of Houston's preservation ordinance. According to the seller, the building was in poor condition and not suitable for restoration. Given the escalating property values nearby, the building's 2.6-acre site was seen as more valuable for housing than for history. — *MJShields*

ART *in the* OPEN



Renzo Piano and Peter Walker design a sculpture center for Dallas

Renzo Piano has a history of creating memorable places to view art. From the Pompidou Centre in Paris to Basel, Switzerland's Beyeler Museum, Piano has sculpted museum buildings as notable as the works they contain. With Houston's Menil Collection and Twombly Gallery, Texas can already boast of two Piano museums, and before long it will be able to lay claim to a third. In Dallas in January, ground will be broken for a Piano-designed 2.4-acre sculpture garden and museum in the city's downtown arts district.

Scheduled to open in the spring of 2002, the sculpture center is a gift of Dallas art collector and real estate developer Raymond Nasher, whose collection, considered one of the world's finest private collections of modern sculpture, it will showcase. The Nasher Sculpture Center will be sited next to the Dallas Museum of Art, and besides providing a garden setting for the outdoor display of sculpture, will have a covered pavilion to house smaller works, a research center, an auditorium, a bookstore, and a cafe.

Nasher selected Piano as the architect and Peter Walker as the landscape architect for the estimated $32 million project. Piano's basic concept for the sculpture pavilion is to imbue it with a sense of discovery, as if it were an archaelogical dig. Six parallel walls will define the entry into the site and guide the visitor's view to unearth the treasures contained within. The design gives a nod to the ancient impulse for pairing masonry construction and sculpture, but juxtaposes the stone walls with a modern, high-tech roof system to complement the modernity of the collection's pieces. The hollow walls will be constructed with a traditional steel-tube column system, with a standard framing system to carry the stone veneer. The pavilion will have a wood floor, and glass walls will enclose the north and south ends to help create a sense of lightness and transparency. The curved roof is planned as an insulated glass system set into a steel frame. Steel cabling extending above the roof will help lighten the structure. Piano describes the roof as "lace-like," and the walls as "massive, strong. I feel the walls are part of the topography."

One of the most innovative features of the design is a perforated aluminum covering that will go over the curved glass roof. Referred to as an "egg crate" type design, it is not a flat grill. Instead, it is a double layer of 3D egg-shapes cast in four-foot by four-foot panels; the panels will be slightly offset to deflect the harsher south light, while allowing north light to come in the galleries. The panelized system will be painted white for additional reflective qualities. Citing his Menil Collection building as a point of reference, Piano notes, "nature is a very strong presence." "There is a sense of deep depth," he adds. "I think it will be one of the most important things in the Dallas [project] — to be able to see through the building." According to Peter Walker, this transparency will provide an unbroken visual connection from the street to the inner garden. What he and Piano are doing, he says, is building on the "remnant" idea of the arts district as a pedestrian street. "We wanted to provide a backdrop that will change with the seasons, but will not be showy," says Walker. "Something that will knit together, and show sculptures to their best advantage."

The transparent nature of the interior galleries, which will be affected by subtle changes in light, the times of day and the atmospheric effects of clouds passing overhead, will give the museum a unique ambiance. Piano refers to it as a "roofless museum," and anticipates that the building will be "very luminous," a softly glowing presence in the Dallas arts district at night.

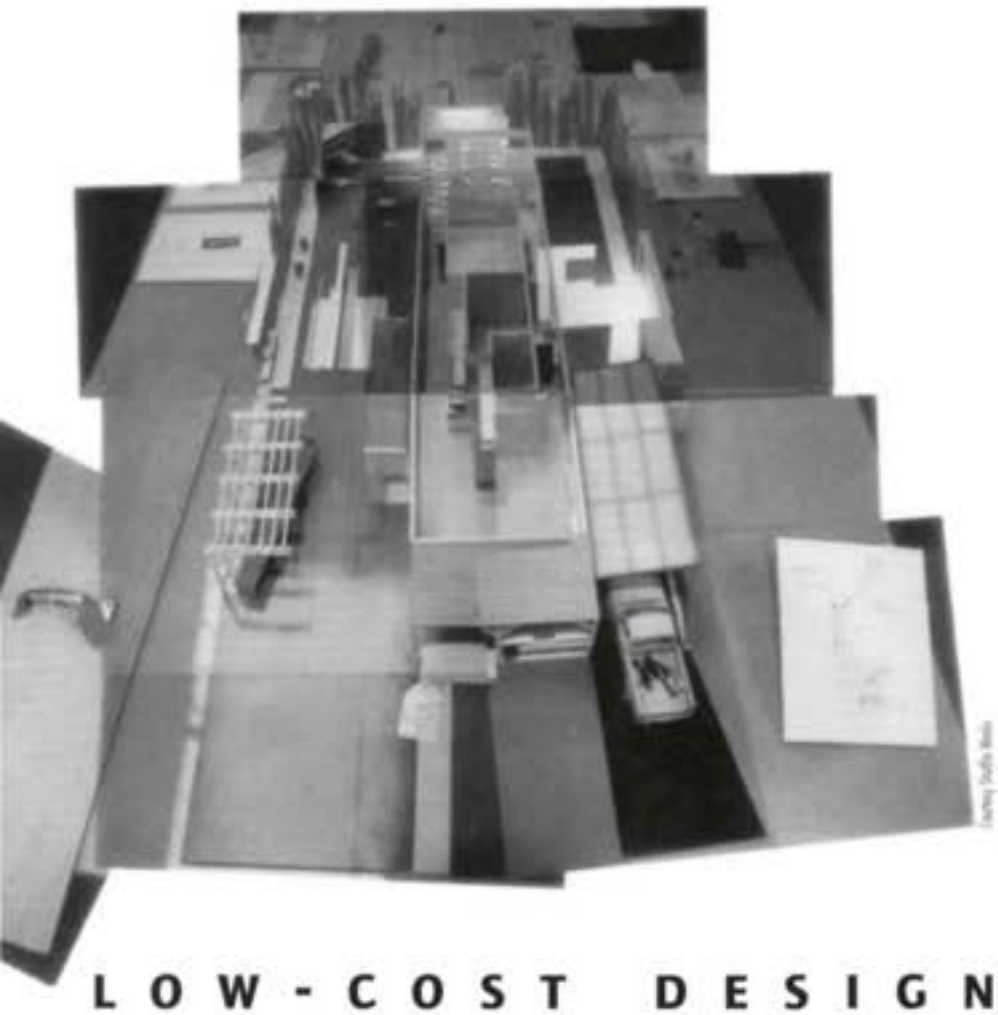
It was over many years that Raymond Nasher and his late wife Patsy assembled their world-renowned collection of modern sculpture. Though courted by museums in other cities, Nasher wanted his collection to remain in his hometown. The city of Dallas and the Dallas Museum of Art offered to build a garden for the sculptures, with the idea of bringing the collection within the museum's orbit. But ultimately Nasher chose to underwrite the costs of land acquisition, site development, and long-term maintenance through his Nasher Foundation, an arrangement that allows him to retain control over the disposition of his collection.

In spite of the significance of his multi-million-dollar gift to Dallas, Nasher had to overcome some hurdles to house his art in the manner he desired. His first choice for the sculpture park was his own house, which is surrounded by eight acres of wooded grounds and creeks, and which he wished to give to the city. But the city, citing traffic and parking concerns, balked at turning the residential property into a cultural district.

When Nasher turned his attention to a site adjacent to the Dallas Museum of Art that was being used as surface parking, he was again rebuffed, this time by tenants of nearby offices who opposed his desire to close a street between the museum and the proposed sculpture park. Nasher's view was that the resulting linkage between museum and the sculpture garden would have been "incredibly vibrant." Piano, though, concurred with the belief that the street should be kept open, telling Nasher, "You must accept the city as it is, not try to create some kind of kingdom for art."

As a result, the primary linkage to the new sculpture garden will be from the Dallas Museum of Art's ceremonial entrance on Flora Street, a significant but previously underutilized entrance. The sculpture center will be accessed from the north side of Flora, a street that forms the central axis of Dallas' downtown arts district. At the eastern terminus of Flora is I.M. Pei's Symphony Center, and several blocks south on Ross Street is the proposed site of a new performing arts center. "Hopefully," Nasher says, "what we are doing will be a catalyst for continuing the development of a really important arts district." — *Barbara Koerble*

A model of the Nasher Sculpture Center shows how it fills its block (top left); Renzo Piano's sculpture pavilion, with its steel-cable supported roof (top right); and how the landscaping interacts with the pavilion (above).



LOW-COST DESIGN

In Fifth Ward and for Habitat, being creative on a budget

Some visitors to DiverseWork's 1998 exhibit *16 Houses: Owning a House in the City* were frankly skeptical that the houses on display would ever be built. Though the stated purpose of the show, a collaboration between DiverseWorks, the Fifth Ward Community Redevelopment Corporation, and the Rice University School of Architecture, was to come up with innovative designs for affordable houses that would fit into the existing fabric of Houston's Fifth Ward, it was clear that some of the participants were more interested in critiquing the idea of low-cost housing than in creating something that could actually be built.

Still, tucked in among the more fantastical notions were some practical ones, and early in the fall of 2000 ground was broken for one of them, architect Deborah Morris' garden house, the first of what will be seven *16 Houses* houses to take root in Fifth Ward. Moving from exhibition room to construction site wasn't easy; the Fifth Ward CRC had originally hoped to start building in 1999, but permitting problems caused some delays. Trying to get the houses to come in on budget caused others. At first, the desire had been for the houses to cost between $36,000 and $82,550 — the price range of single-family homes the CRC was already building — but it soon became clear that giving life to the architects' ideas would require more money.

Since the purpose behind the project was to mix affordability and creativity, that created a dilemma. Ultimately, the allowable selling price was increased to $103,000, a level set by government restrictions on what does and does not constitute affordable housing. At least two of the houses will probably cost more than that, moving outside the official realm of "affordable," if still modestly priced by broader standards.

Even despite the loosened purse strings, certain amenities were lost. Keith Krumwiede had to shave a rectangular extension off his design; Lindy Roy's exuberantly thrust-forward roof had to be scaled back; Studio Works gave up the wheeled furniture that had been part of its InSideOutSide House. But if originality sometimes had to take a back seat to expense, the *16 Houses* houses slated for the Fifth Ward will still stand out in their neighborhoods, evidence that while coming up with interesting ideas on a budget is hard, it's not impossible.

The crunch between cost and creativity is something the architects at Gensler's Houston office had to face as well when they were invited to develop new housing prototypes for the Houston chapter of Habitat for Humanity. The invitation was part of an in-house competition titled "Home 2000"; as a community service project, Gensler had decided not to simply build a house with Habitat, but to develop plans and working drawings that could be added to Habitat's design book.

Courtesy Deborah Morris

Courtesy Lindy Roy

Courtesy Keith Krumwiede

Studio Works' InSideOutSide House (opposite page) is to be built in the Fifth Ward at 709 Schwartz Street. Its neighbors will be Keith Krumwiede's Domestic Topographic Package (above) at 711 Schwartz and Lindy Roy's house (above center) at 707 Schwartz. Deborah Morris' garden house (above top) will be built at 4909 Pickfair.

Carlos Jiménez's house (below) is planned for 2915 Gillespie; William Williams' and Archie Pizzini's Flip-Flop House (below middle) will be next door at 2917 Gillespie. The location of Michael Bell's Glass House @2 Degrees (bottom) hasn't been settled. It may end up containing offices.

Courtesy Carlos Jiménez

Courtesy Williams/Pizzini

Courtesy Michael Bell

Such design donations are among the ways that Habitat expands the variety of housing it can offer its low-income customers. Not that they're particularly common; the national Habitat design book has only 17 different designs, while according to Milby Hart, executive director of Houston Habitat, the local chapter's book has only seven plans. The Gensler competition promised to increase that number by half again or more.

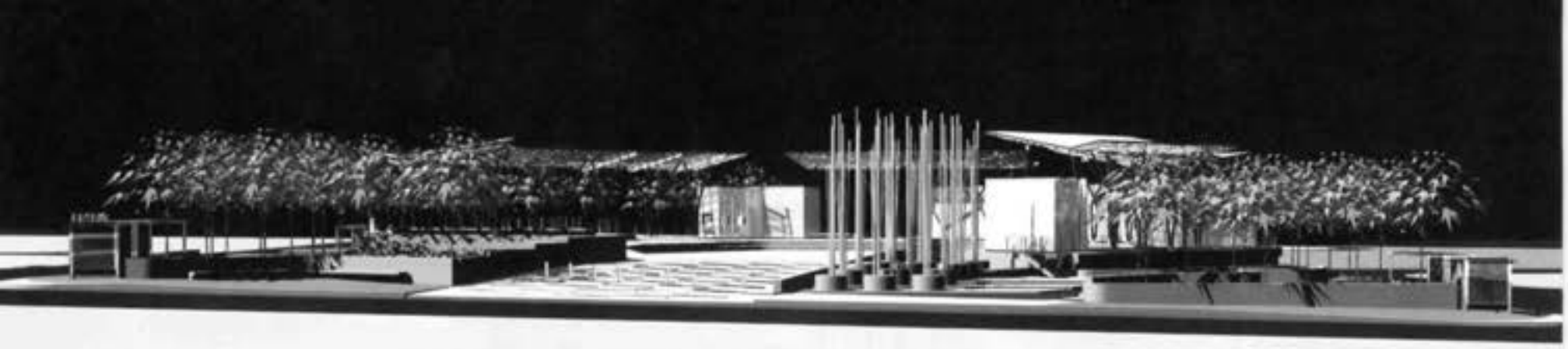
To come up with those designs, though, meant working with a budget less than half that available to the architects working on the Fifth Ward project; it also meant having to take into consideration that the house would be built by volunteer labor. Within those constraints, the Gensler staff developed 11 proposals, then selected the three that seemed to best fit Habitat's needs. Designed by Son Ma, Laurence Krupa, and Paul Homeyer, plans for the three houses have been donated to Habitat, which will select one that Gensler employees will then help build sometime in the spring of 2001. Meanwhile, some Gensler architects whose designs didn't make the competition's final cut have offered their plans and working drawings for Habitat's future use. As a result, notes Habitat's Hart, the one Gensler house the firm itself helps build is unlikely to be the last Gensler Habitat house raised in Houston. — *MJShields*

Courtesy Gensler

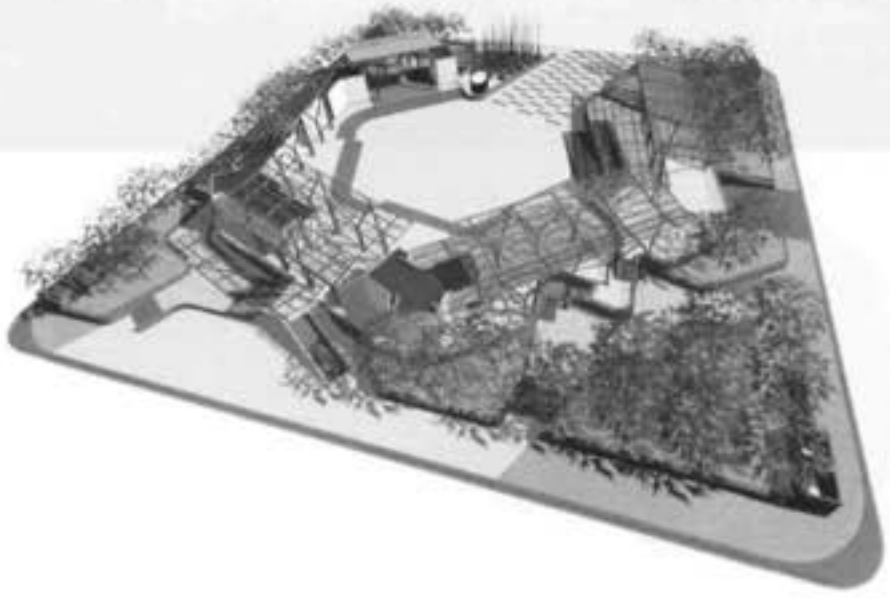
Courtesy Gensler

Courtesy Gensler

The three finalists in Gensler's Habitat for Humanity competition were, from top to bottom, houses by Paul Homeyer, Laurence Krupa, and Son Ma.



JONES PLAZA MAKEOVER BEGINS



Top and above: Renderings of a remade Jones Plaza, showing relocated greenery and new stage.

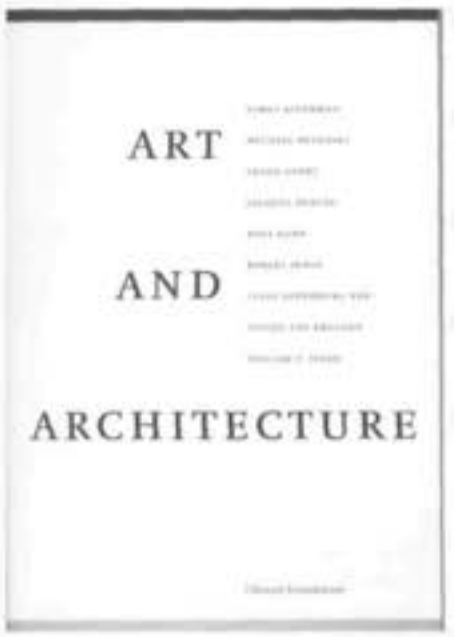
IT MAY HAVE BEEN A FEW DAYS LATE, but at least it won't be more than a few dollars short.

In August, after more than a year's delay, work finally began on the renovation of Jones Plaza. Construction crews moved into the square that sits at the heart of Houston's theater district and began ripping it apart, removing trees, tearing up expanses of concrete, and in general clearing the way for a radical rethinking of the space, a rethinking that city officials hope will help bring life to what has long been one of the more moribund parts of downtown.

Generally empty except during planned events, Jones Plaza came to be viewed as a serious problem as the area around it began to boom. The Houston architectural firm of Willis, Bricker & Cannady was hired to come up with a new design for the square, a design that included a permanent stage and concession stand, replacing the concrete staircases at the four corners with greenery, and lowering the plaza's height a few feet. Once the scheme was approved, though, it sat in limbo as questions were raised about the $5 million cost of the project. A start date of May 1999 was pushed back to fall 1999, then spring 2000 as different budgets were prepared, slashing various elements of the proposed renovation.

But when the final reduced plan was presented to the city, says project design architect Mark Wamble, the decision was made to return to the original concept and original budget. Only one element of the initial design has been left out — decorating the plaza's air vents and stair housings with poster boxes. And that, says Wamble, can easily be added later if extra funds are raised. Currently, the anticipated completion date of the new Jones Plaza is spring or summer 2001. —*MJShields*

ART of the WORD



CHINATI FOUNDATION BEGINS PUBLISHING PROJECT

FOR YEARS, the only way people could take advantage of the Chinati Foundation's highly regarded, if semi-regular, symposiums on art and other related topics was to travel out to Marfa, the tiny West Texas town where artist Donald Judd created both a series of impressive site sculptures and a memorable setting for aesthetic talk. But now the foundation has expanded the reach of its lectures by publishing a pair of volumes documenting two of its gatherings — *Art in the Landscape*, pulling from a symposium of the same name in 1995, and *Art and Architecture*, which collects presentations from a similarly titled 1998 event.

The soft-bound books, designed by Dutch graphic artist Ruger Fuchs, are the first in what Chinati Foundation spokesman Steffen Boddeker says will be an ongoing series, with new editions appearing about every two years, which is to say at about the same schedule as the symposiums themselves.

Though the print versions of the Marfa meetings lack the often illuminating conversation that can spring up between lectures, and lack as well the starkly isolated setting that helps make the Chinati events stand out in the minds of their primarily urban participants, they nonetheless manage to capture much of the symposiums' appeal. They also boast an impressive list of contributors: *Art in the Landscape* includes lectures by author Lucy R. Lippard and artists James Turrell and Hamish Fulton, while *Art and Architecture* features architects Frank Gehry and Jacques Herzog, and artists Claes Oldenburg, Coosje van Bruggen, and Robert Irwin, among others. The books, printed in an edition of 2,000 each, are available at bookstores and through the Chinati Foundation itself at www.chinati.org. — *MJShields*

UT SELECTS NEW BLANTON ARCHITECTS

THE REGENTS OF THE UNIVERSITY OF TEXAS have selected a new architectural firm to design the Jack S. Blanton Museum of Art on UT's main campus in Austin. Kallmann McKinnell & Wood Architects Inc. of Boston has been given the commission that was abandoned a year ago by the Swiss firm of Herzog & de Meuron in a dispute that led to demonstrations on the UT campus and the resignation of the dean of the University's School of Architecture.

The manner in which Herzog & de Meuron was treated by the UT regents (detailed in "A Flaw in the System," *Cite* 47) led some in Austin to worry that good architects would be wary of vying for the Blanton commission. However, according to Lawrence Speck, the former architecture dean who gave up his post in protest, while some architects did shy away as a result of the controversy, there were also some notable firms who competed for the job, among them Michael Graves & Associates.

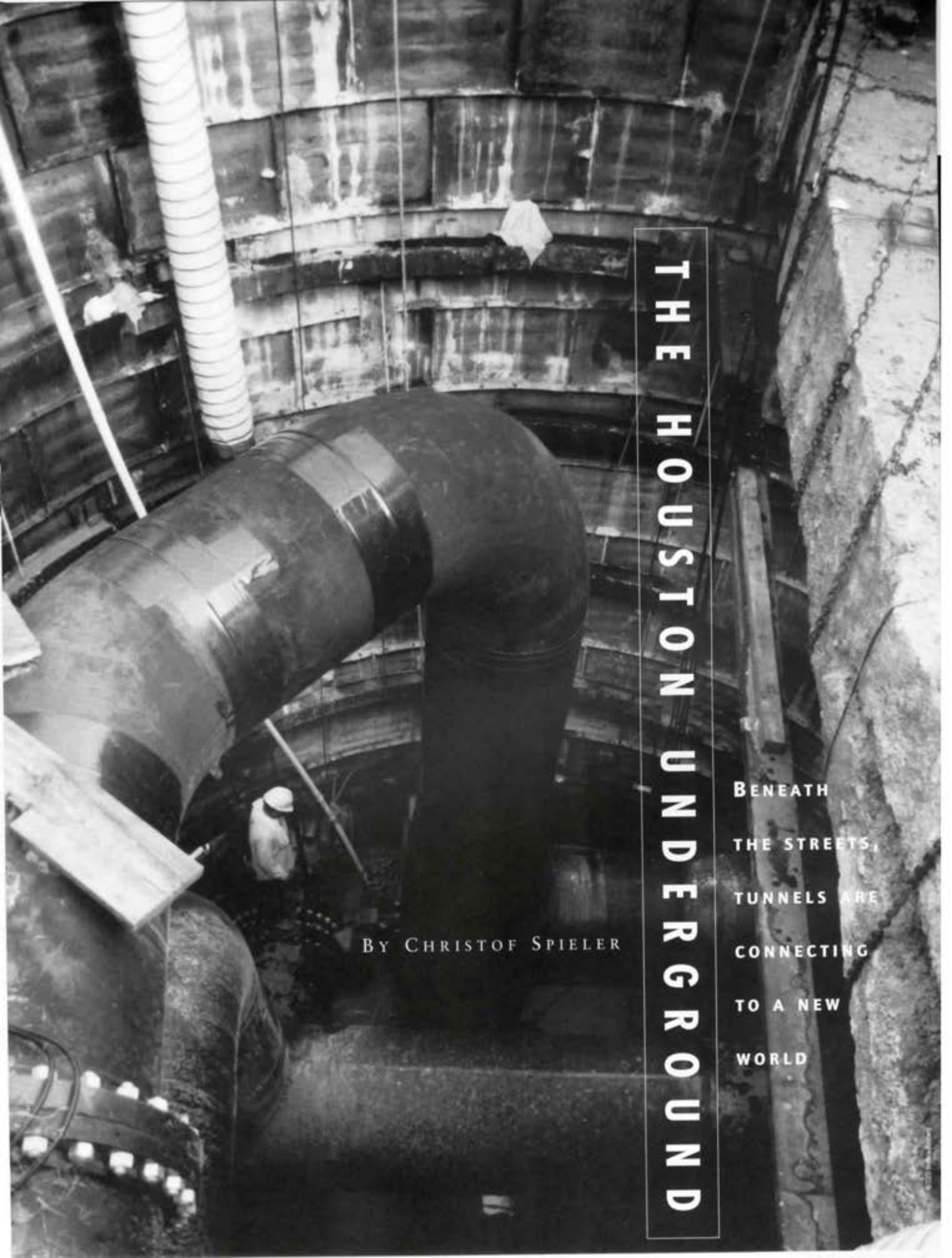
Still, notes Speck, there was a difference in what the UT regents were looking for this time around. The committee that selected Herzog & de Meuron was seeking museum specialists interested in designing a signature building. The committee that chose KMW was more interested in finding a firm with a sensitivity to context, one that would design something to fit snugly into UT Austin's existing architectural fabric.

While that approach could make it hard to come up with something as memorable as Herzog & de Meuron's rejected proposal, Speck remains cautiously optimistic. "They're very good architects," he says of KMW. "They have done extraordinary work. And they're quite capable of pulling off something extraordinary here." Assuming, of course, the regents let them. — *MJShields*

BRIDGING 59

Above: Bridges over U.S. 59, looking west from Mandell Street.
Left: Street level view of Mandell bridge.

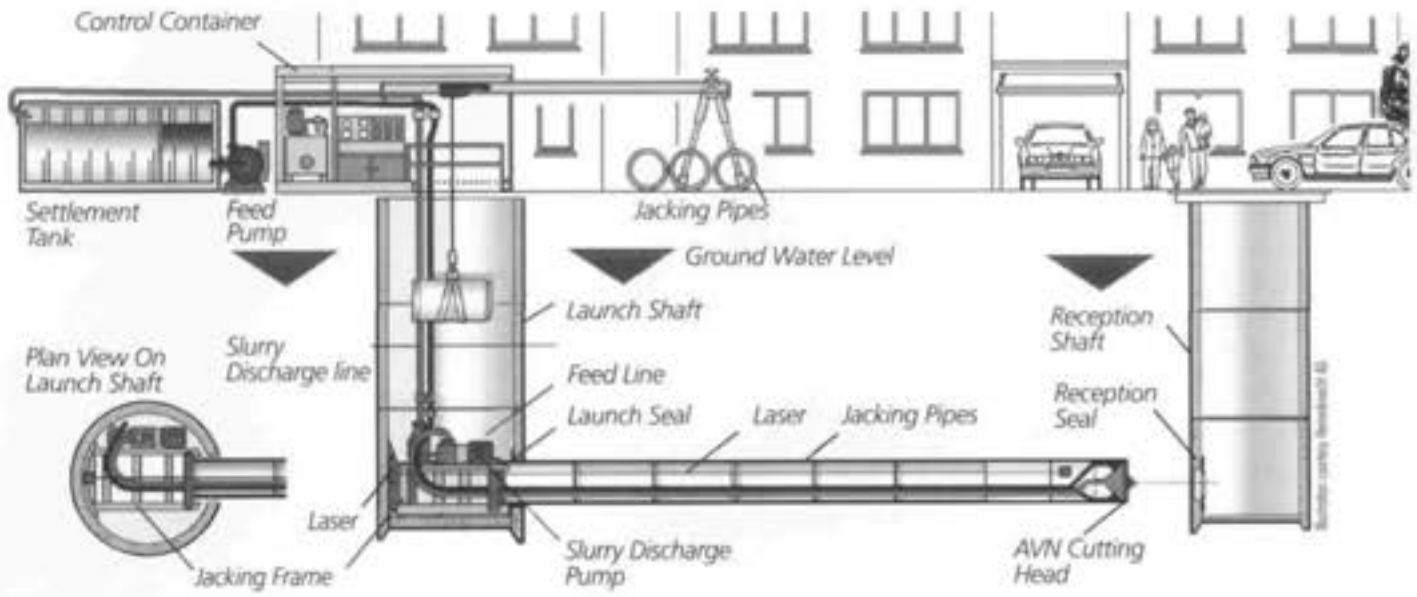
By early December, three of the four new bridges spanning U.S. 59 between Shepherd and Montrose had been opened, with the fourth scheduled for completion by February 2001. The quartet of tied-arch bridges, constructed at a cost of $1.7 million each, replaced four smaller bridges that had to be removed to clear way for the widening of U.S. 59. The previous bridges were 166 feet long and 50 feet wide; the new spans are 228 feet long and 60 feet wide. Engineers with the Texas Department of Transportation came up with the initial design concept for the bridges, and then Rey de la Reza Architects and the SWA Group were hired to enhance the structures and provide landscaping. Rey de la Reza reshaped the proportions and aesthetics of the bridges, adding, among other elements, finials, decorative spheres, fencing, a walkway with multicolored pavers, and gray caps at the top of the arches to add height and conceal structural connections. Final landscaping will be done following the freeway's widening. — *MJShields*



THE HOUSTON UNDERGROUND

By Christof Spieler

Beneath the streets, tunnels are connecting to a new world



Above right: Diagram illustrating microtunneling technique. The microtunneling machine, unattended and controlled from the surface, carves a path for a new sewer pipe, pushed from behind by jacking equipment.

Left: A look into the world below: Workmen install the pipes that feed chilled water to Northwind's downtown air-conditioning network.

MODERN URBAN LIFE would be impossible without a series of utility networks introduced in the past 200 years. Water mains, sanitary sewers, storm sewers, gas pipes, electrical mains, telephone conduits, television cable, and now data networks are all part of a web that keeps the world working. Some of these systems can, and often do, run above ground. But for the most part, technical considerations, reliability problems, safety issues, and aesthetic preferences have forced the infrastructure underground. Beneath any urban street is a tangle of pipes, ducts, and cables, a tangle somewhat ordered in newly urbanized areas but extremely disorganized in older ones, its density proportional to the density of the city around it. Even in a place as spread out as Houston, the infrastructure goes deep into the earth, and it digs deeper every year as new pipes and conduits try to get around what's already there.

Traditionally, underground utilities were placed or repaired by digging a trench. But trenching risks disturbing other underground systems, and the deeper the trench goes, the more expensive bracing its sides against collapse and getting in equipment becomes. Trenching also involves wide-scale disruption, traffic closures, and patched pavement. Houston's ongoing Traffic Streets program downtown shows just how problematic this can be. That work, like the rebuilding of Fannin in the Medical Center, is primarily a paving project, but it also includes replacing utilities. According to Metro spokesperson Connie Roebuck, the Traffic Streets project staff coordinated with private utilities and the City of Houston to get all utility work done now — before the streets are repaved — rather than do it later, when the pavement would have to be torn up again. How successful that coordination will be remains to be seen. Similarly, the Fannin rebuilding is taking care of utility relocations that would be required for that street's planned light rail line. In any case, a local government's ability to deal with utility disruptions is limited. A 1999 Texas law, for example, gives telecommunications providers the right to dig up any public street they want in order to lay cable.

The solution to the problem of tearing up the roads lies in "trenchless technology," a catchall phrase that covers a wide variety of technologies from a variety of origins. To the layman, it is all just tunneling — digging a horizontal hole through the ground without disturbing the soil above. Once, tunneling was reserved for crossing under mountains or rivers, or for a handful of subway systems. In the past half-century, though, technological advances have made tunneling increasingly versatile and cost-effective.

The most prominent symbol of this tunneling boom is the Tunnel Boring Machine (TBM), the device used to dig the Channel Tunnel connecting England and France, the Dallas light-rail tunnel under the North Central Expressway, and countless other large-diameter tunnels. In principle, a TBM is much like an earthworm; it is long, cylindrical, and advances forward by ingesting soil or rock at its front end (the "face"), then conveying the dirt backwards for removal. Concrete or steel panels are placed behind the front end to keep the tunnel from collapsing, creating a lining. The TBM advances by pushing against this lining, and steers by bending its articulated body.

TBMs can be huge — big enough to dig a double-track railroad tunnel or a four-lane road tunnel in one pass. The bottom limit on their size is determined by the need to have people inside the machine to place and seal the lining. So for tunnels of less than six- or eight-feet in diameter, TBMs are impractical.

There is an obvious appeal, though, in applying the TBM approach to smaller tunnels. This can be done by combining TBMs with another technique known as pipe-jacking. Pipe-jacking is like pushing a tent pole into a sleeve — the lining is pushed in from the end of a tunnel, with more segments added from the pushing end as the tunnel advances. Place a small machine with a rotary cutter to dig into the soil in front of the first pipe, add an auger or pipe to carry the soil out of the back of the hole, and you have a complete tunneling system, a "microtunneling" machine. Essentially, the steering and digging functions of the TBM, which require no human presence, remain at the tunnel face, while the lining and forward propulsion is removed to an open-air pit at the tunnel's rear.

Microtunneling pits are generally spaced 300 to 500 feet apart, with the tunnels being bored from one pit (the launch shaft) to the next (the receiving shaft). The distance between the pits is set by the pipe, or lining; its friction against the ground limits just how far it can be pushed. Alignment of the tunnel is controlled by means of optical or laser sights, and can be held to a precision of an inch or less between holes. "It's as accurate as you can do a trench," says Cliff Tubbs of Houston tunneling con-

Big bore: Microtunneling machines such as the above, seen in pieces at a contractor's yard, are used to carve paths through Houston's clay for sewage and water lines.

tractor BRH-Garver. But that accuracy requires diligence, he adds: on one Houston job a French firm ended up being off 32 feet sideways and four feet vertically. In gravity sewers in particular, vertical alignment is critical, because water, after all, only flows downhill.

Microtunneling was used first in Tokyo, then in Berlin in the early 1980s. The technology was brought to Houston in 1986, when BRH-Garver won a $9.7 million contract for a new sanitary sewer in River Oaks. The sewer work was clearly needed — some River Oaks homes still used septic systems at the time, and the sewers that were in place were overloaded — but the idea of it wasn't particularly popular. Local residents had held up the project for seven years because they didn't want construction trenches disrupting their streets.

The solution to the impasse appeared to be microtunneling. BRH-Garver imported proven Japanese and German equipment, but early going was still rough. The first five attempts at tunnels failed. The problem wasn't simply one of inexperience; the machines had been designed for the sandy soil of Berlin and Tokyo, and Houston's clay gummed them up. "We just got a ball of clay rotating," Tubbs says. "We basically had to reinvent [the machines]." The answer was to add jets of compressed water to the machine's face, water that liquefied the clay, turning it into a slurry that then passed through to the rear.

Microtunneling in Houston proved to be significantly different from microtunneling elsewhere, which gave local companies an advantage. Many out-of-town firms that came in fled. "Most contractors come to Houston bragging about [being able to work in] wet sand and leave because of the clay," says Tubbs.

The experience in River Oaks proved valuable in the early 1990s, when government mandates required a $1.2 billion upgrade of Houston's sanitary sewer system. The main goal of the Greater Houston Wastewater Program was to eliminate the more than 200 locations where untreated sewage could flow into waterways. Houston, like most cities, has a "separated" sewer system, one in which storm sewers channel rain-runoff directly to the bayous and sanitary sewers direct wastewater from buildings and industries to sewage treatment plants. But in a few parts of Houston a decade ago, old sewers still carried wastewater directly into the bayous, while in other places sewers would back up through manholes into streets or lots when the water flow was heavy.

The problem with the sewers stood in the way of new construction. In the 1980s, when Houston was booming, the city stopped issuing sewer permits, which are required to build a new building or add to an existing one, in large parts of west and southwest Houston. A sixth of the city simply did not have enough sewage capacity for any more customers. Permits were selling on the black market at up to 40 times the permit fee; ultimately, it was estimated that some $1 billion in construction had been prevented. In 1992, the EPA and the Texas Water Commission required Houston to eliminate all of its overflows within five years. The solution was new sewers, 1.2 million feet of them (a further 3.8 million feet of sewers were rehabilitated). Most were standard tunneled sewers, but some were either very deep underground or in areas where surface disruption was very undesirable.

There are 44 wastewater treatment plants scattered through the city, but they are not evenly distributed. Since it's not feasible to build a treatment plant in many neighborhoods, some sewage must flow up to ten miles from its source to be treated. For the most part, it is pulled by gravity through increasingly large pipes: 8 to 12 inches in diameter in a neighborhood street and up to 84 inches in diameter in major mains. To keep the water flowing, the sewers must slope continuously downward. A 12-inch pipe, for example, must drop almost 14 feet a mile.

Most sewers lead to one of Houston's more than 350 lift stations, deep shafts where sewage is pumped up into pipes though which it flows under pressure to the treatment plant. These pressure pipes don't have to drop; they can actually rise and fall to avoid obstacles. And they can run only six or eight feet underground. In some cases, though, lift stations aren't feasible, either because the land needed isn't available or because there's neighborhood opposition. In these cases, sewage must run under gravity flow for miles. This leads to laying sewers 50 feet or more underground, far below the depth where it's economical to use trenches in construction or repair.

The drive to upgrade Houston's sewage capacity made for many applications for microtunneling. By the time the program wrapped up in 1997, more than 180,000 feet of microtunneled storm sewers had been installed. For a time, the majority of the microtunneling being done in the United States was being done in Harris County. *No-Dig International* magazine called Houston "America's microtunneling capital."

The lessons learned in Houston have proven useful elsewhere, allowing microtunnelers to handle more difficult soil conditions around the world. The experience also paid off for Houston's tunneling companies. BRH-Garver, for one, dispatches machines and people all across North America from its yard near the Gulf Freeway.

Even with locally adapted technology, Houston's soil still holds surprises. For the most part, the city's soil is stiff clay, the remnant of silt deposited in an ancient sea. Fifteen to 20 feet down are layers of sand. Isolated pockets of this sand — the beds of long-buried rivers — can turn up unexpectedly, and prove a problem. It can flow in and fill a tunnel, and sometimes it hardens into a sort of soft sandstone, which can stop tunneling machines dead in their tracks.

As it turns out, tunneling machines have a critical weakness: they can't back up. Their pipe fills up the hole behind them, and while that pipe can be pushed, it can't be pulled. If a machine breaks down, or if it hits a solid substance it can't cut through, there's no way to retrieve it through the tunnel itself. Instead, a rescue pit has to be dug. Sometimes the solid substance that necessitates a rescue is natural, and sometimes it's man-made — a utility pipe that wasn't shown on maps, the foundation of a long-demolished building, or something that wasn't built like it was shown on the blueprints. One machine boring a tunnel underneath the West Loop, for example, hit a deeper than expected sign foundation in the middle of the freeway. Since a rescue shaft can cost from $5000,000 to $1 million, contractors try to avoid the need for them. Engineers usually provide the contractor with the results of soil bor-

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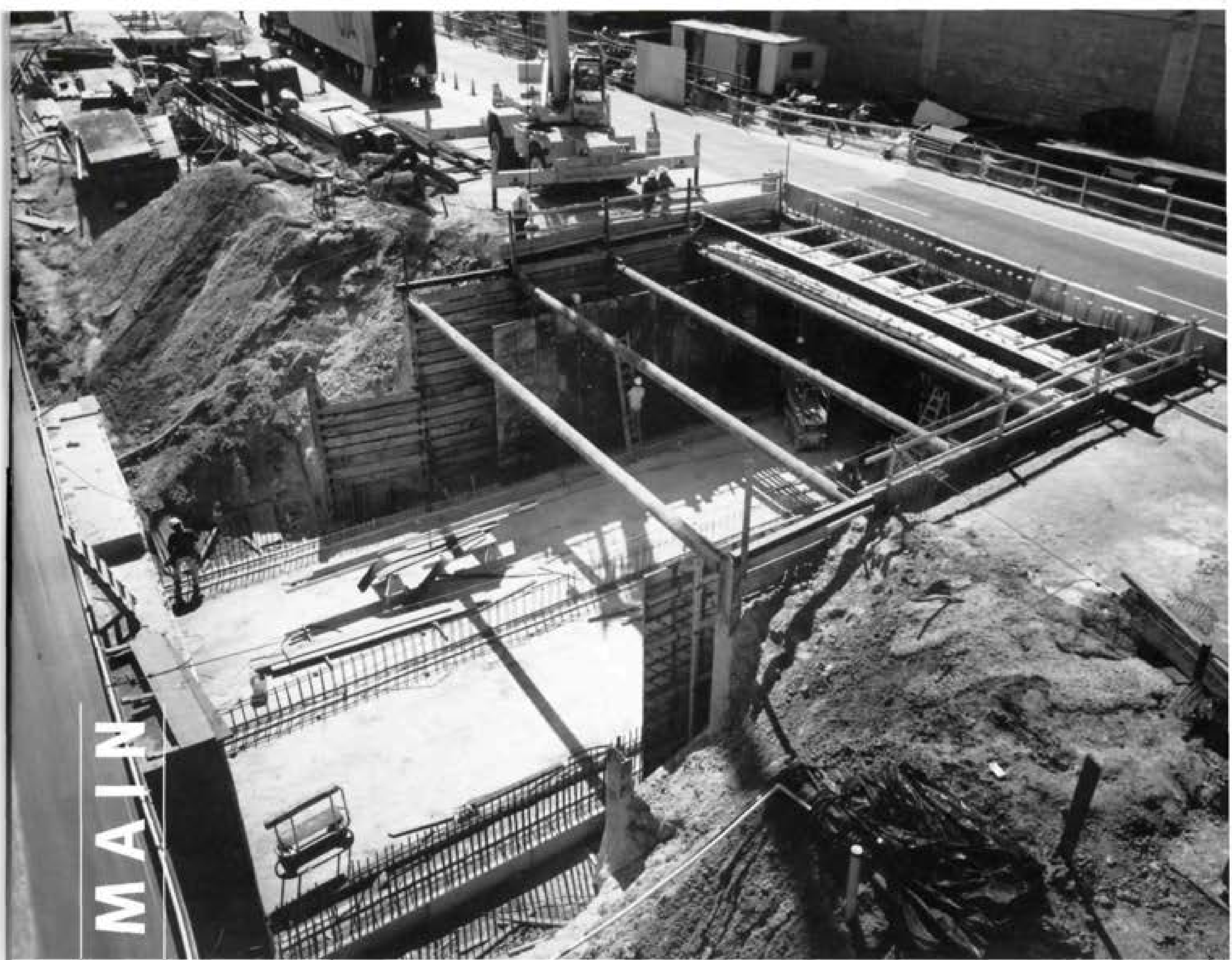
TUNNELING MAIN



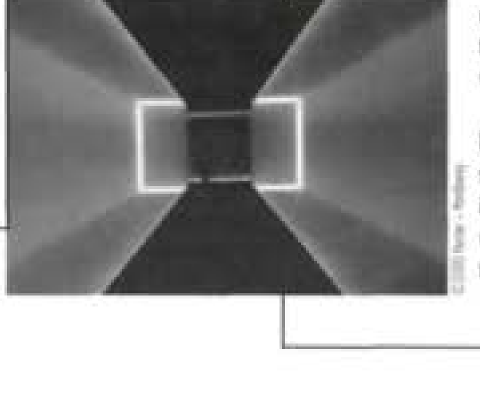
Above: The tunnel connecting the MFAH's Caroline Wiess Law and Audrey Jones Beck buildings, seen mid-construction.

Below: The completed tunnel, with lighting artwork by James Turrell.

Most of Houston's tunnels, no matter how technically advanced, are built and used in obscurity. The Museum of Fine Arts, Houston's Main Street tunnel, by contrast, has received considerable attention, not just as a way to access the new Audrey Jones Beck Building from the museum's older wings, but as a work of art in its own right. Ironically, it is technically straightforward.

Cost issues determined early on that the tunnel would be cut-and-cover. In layman's terms, that means an open ditch is dug, the tunnel sheet built inside it, and the ditch filled back in. That means all work is done out in the open, and that large equipment can be used. Conceptually, it's like building a basement.

Of course, it's not quite that simple. For one thing, there were utilities in the way. A 96-inch storm sewer was buried in the middle of Main Street, right where the tunnel had to go, and many smaller utilities crossed through the tunnel envelope. It took several months to move them out of the way. Further complicating matters was the need to keep Main Street open to traffic while work was underway.



"[The city is] never going to let you shut the whole road down, so you have to build [the tunnel] in pieces. You need to come up with a plan that will maintain some traffic in both directions," explains Bob Higgins of W.S. Bellows Construction Corp., the construction contractor on the project. The city requires a detailed plan for what lanes will be open when and for signage to alert motorists. For the MFAH's tunnel, that plan had two phases, allowing for access first to one half of the project and then to the other. That's still simpler than the traffic plans required for some downtown tunnels, which have three or more phases, isolating workers and equipment in tight quarters on temporary traffic islands, surrounded by heavy barriers to keep wayward drivers out of the hole.

Traffic is only one potential hazard of cut-and-cover work. The soil itself is another. Contractors say that more injuries and deaths result from digging trenches than from digging enclosed tunnels. Part of the reason for that is complacency. Enclosed tunnels seem dangerous, so caution is taken with them. Cut-and-cover tunnels, in contrast, seem comparatively safe, which can result in carelessness. Houston clay can hold itself up for a while, so inexperienced or imprudent contractors don't always shore up the soil, leaving it open to unexpected collapse. "It's expensive to shore when you can dig a narrow hole and get a man in and out quickly," Higgins says. "That's a disaster. Most of the time when you hear about these accidents it's because no one has done the shoring properly."

Under OSHA rules, only slopes that drop less than one foot per every two feet of linear distance can be excavated without supporting the soil. For an urban tunnel, such gradual declines aren't feasible; there simply is not enough space. So the MFAH's Main Street tunnel, like similar projects, used temporary retaining walls. Vertical holes were drilled in the soil along both sides and steel H-columns dropped in. As the soil was removed between the piles, wooden planks were dropped in to support the ground beyond. As such holes get deeper, the columns have to be propped up, either by tying them back with steel cables attached to solid ground or by placing braces across the width of the excavation.

Once the hole is completed, the tunnel itself can be built. What's really important at this point is waterproofing. With the MFAH tunnel, this started with placing perforated pipes in a gravel bed below the tunnel floor. These are linked to a pump at one end that carries water out. Over the bed of gravel is a two- to three-inch concrete slab, then a seal made up of four-foot by eight-foot sheets of Betonite clay, which swells to form a watertight bond when it gets wet. On top of the clay is the actual structural tunnel floor. The tunnel's concrete side walls are also faced with sheets of Betonite, and there are more gravel drains at the walls' base. The soil immediately adjacent to the walls is replaced with sand, which conducts water to the drains. The roof of the tunnel is another concrete slab, with further waterproofing. On top of that is maybe a foot of gravel; on top of that is the asphalt of Main Street, looking to all the world like any other stretch of road. — *Christof Spieler*

TUNNEL

PROPONENTS

SPEAK OFTEN

OF FREEING

LEVEL 0

THE LEVEL OF

THE SURFACE

FOR

HUMAN

OCCUPATION.

Continued from page 16

ings spaced every 500 feet, but unexpected geology still crops up. Few fields of construction can be as full of surprises as tunneling.

In some situations, though, surprises are expected. In downtown Houston the underground utilities are so dense, and their locations so poorly recorded, that avoiding them is impossible. In a situation like that, there's no point in using a tunneling machine. A more flexible, and ancient, technology is called for.

A 16th-century treatise shows miners deep underground using hand tools to dig a tunnel foot by foot, placing support timbers as they go. Replace the shovels with jackhammer-like pneumatic spades and replace the bellows that brought in fresh air with air compressors, and you have modern tunneling in downtown Houston. The "wood-box" tunnel, antiquated, as it may seem, is the most economic way to place new pipe under downtown, and thousands of feet of such tunnels are dug every year.

Why? "They're cheap when you're in an area where there's lots of utilities and you can't pin down their locations," says Dale Kornegay, president of Bortunco, another major Houston tunneling firm. When a wood-box tunnel hits an obstacle, the workers inside the hole can remove the obstacle or reroute the tunnel under or around it. Downtown, says Kornegay, there is a "100 percent" chance of hitting an obstacle, many of which, particularly city utilities, are unmarked.

Bortunco is placing up to 5,000 feet a year of wood-box tunnels downtown, many of them carrying chilled water from the Northwind centralized air-conditioning plant. They range in size from 5 by 5 feet to 15 by 15 feet or more. The larger sizes often require steel reinforcement. A thousand feet of tunnel can be dug in one run, and the accesses to the tunnel don't have to be open-air pits. They can be downtown basements.

Clay isn't ideal for hand tunneling, but it has its advantages. Unlike rock or chalk — it is chalk that makes London an ideal tunneling city — clay needs to be supported immediately after a section of tunnel is dug. Hence the wood box. But clay will stand by itself at the face of a tunnel. Downtown turns out to have an advantage here: at 35 feet or so, the layers of sand are a good 10 to 15 feet farther down than in most of Houston. Many of downtown's wood box tunnels are only around ten feet deep, though the trend is towards deeper tunnels as the area underground becomes increasingly congested with utilities. The Northwind pipes were put in at 18 to 32 feet below the surface.

The minimum size of wood-box tunnels is set by the technology: workers need to be able to fit inside. Microtunneling, too, has a lower limit of just under a foot. That works well for sewers and water pipes, but not so well for the small-sized strands of electrical, telephone, and data cables.

Unlike pipes, cables don't require precise alignment. Electrons in electrical lines or photons in fiber-optic strands have no trouble going uphill, so what matters is where the cable gets to, not how it gets there. That allows the use of a cheaper technology: directional drilling.

Some would say that directional drilling isn't tunneling at all. "It's more akin to drilling an oil well than tunneling," notes BRH-Garver's Cliff Tubbs. That is, in fact, where the technology comes from. Oil firms wanted to be able to tap an extended area from one offshore platform, so they developed a way to drill wells sideways. In the early 1970s, that technology was brought to tunneling. The first applications were in the placement of pipelines under rivers, such as the relocation of 92 pipelines for the deepening of the Houston Ship Channel.

Recently, directional drilling has found another use. Several companies — household names such as MCI and specialized firms such as Qwest — are installing national networks of fiber-optic cable to carry Internet and other computer data traffic. These lines radiate into major metropolitan centers such as Houston, connecting to hubs of high-speed servers that hold Internet sites and corporate databases, and to local fiber networks that reach office towers and institutions.

The national networks run in existing rights of way, alongside railroads or highways. In open country, contractors lay the cable in ditches dug with specialized earth-moving equipment. In more built-up areas, though, cross streets — which would have to be dug up and then repaved — make this difficult. So directional drilling is used. The local networks, which run under city streets, are also placed with directional drilling.

Directional drilling uses a drill bit attached to the front end of a long pipe; the entire pipe is rotated by a machine on the surface that also pushes the pipe forward, chewing into the ground with the drill bit. A liquid "drilling mud" mixture is pumped through the pipe to cool and clean the bit as it drills. Used this way, the pipe simply goes straight. Making bends requires a modification. The front segment of pipe has a seven- to nine-degree bend that, when the pipe is spinning, makes the hole slightly larger. When a turn is required, the operator stops the spinning; instead, the pipe is locked with the bend in the desired direction, and the bit alone is spun by a small turbine. Once the new direction is established, the standard drilling resumes.

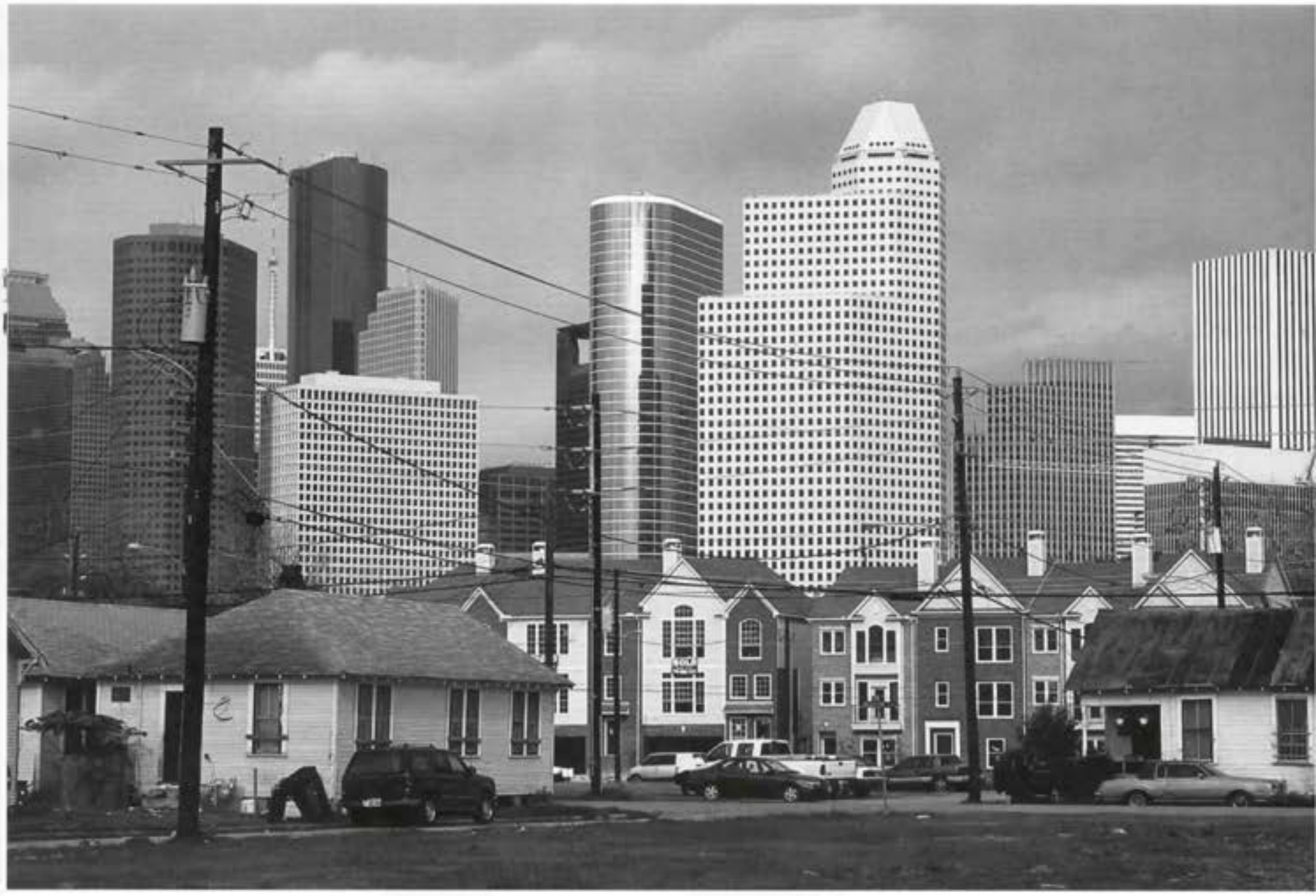
The equipment is portable, usually mounted on a truck, and can be repositioned easily. The hole is started from the surface, so no deep pit is required. For large projects, such as river crossings, a long-term construction site with support equipment is set up at the launching point. For small utility work, the equipment is moved frequently, and sites may be occupied only overnight.

Since there is no room inside the pipe for optical equipment, the miniature tunnel is located by using a small radio transmitter in the bit. Receivers on the ground are used to track the bit's location. This works well when the bit is close to the surface, but is not very accurate otherwise. Because of its technical simplicity, directional drilling is less expensive than microtunneling, but the limits in accuracy make it risky in areas with too many utilities. Still, directional drilling has found a niche.

By its nature, tunneling is hidden. As a result, few in Houston realize just how much work is being done underground. Even though many of the larger tunneling programs — the Greater Houston Wastewater Program, Northwind, the pipes in the Ship Channel, and the fiber optic lines — have been completed or are winding down, there is still a variety of smaller utility projects underway. There are also a variety of specialized tunnels being dug, such as a 2,300-foot microtunnel at Bush Intercontinental Airport. Carved though the ground under active runways, the microtunnel carries jet fuel — which is delivered to the airport by pipeline from a Pasadena refinery.

Advances in tunneling technology over the past few decades have proven fortuitous. As a culture, we require more infrastructure than ever, yet we're less willing to put up with disruptions during its construction. In the United States, urban growth and new environmental regulations have required new sewer and water supply systems just as the increasing effectiveness of citizen protest has led governments to seek less invasive construction techniques. Meanwhile, in developing countries massive increases in urban density require new transportation systems. Fifty years ago, the world had less than ten subway systems; today it has almost 50, and new ones are being planned every year, particularly in Asia.

Tunnel proponents speak often of freeing "level 0" — the level of the surface — for human occupation by moving all infrastructure underground. That means not just utilities, but transportation. In sprawling Houston, that dream is far away. But Houston makes clear the dream's appeal. In Boston, a downtown freeway is being moved underground to make way for a park. Once, that would have been unthinkably difficult; today it is merely staggeringly expensive. One day, perhaps, technological progress will make it routine. ■



THE HOUSTON TOWNHOUSE

IT'S BEEN ARCHITECTS VERSUS THE MARKET SINCE THE BEGINNING. TODAY, THE MARKET IS WINNING.

BY STEPHEN FOX

Top of page: Old and new in the Fourth Ward. Today, townhouses are squeezing in everywhere they can in Houston — and often squeezing out the row houses that preceded them.

THE "TOWNHOUSE," a real estate marketing term of the late 1950s for the house type more accurately described as a row house, is remaking many parts of Houston. The construction of new townhouses, especially in existing neighborhoods, raises questions about whether this house type can be integrated with such neighborhoods or whether it portends a scale and spatiality so different that they obliterate all that has preceded it. Examined in a historical context, the Houston townhouse reveals a split between what ambitious architects understand as the type's spatial potential and what developers and their design consultants understand to be its performance as an economic instrument. These paradigms lead to differing, even antagonistic, approaches to city building and residential design. More so than detached houses or multistory apartment buildings, the Houston townhouse represents this sharp divergence in local building practice.

The townhouse did not figure in the history of Houston housing until the middle of the 20th century. Architectural historian Barrie Scardino discovered that a single pair of New York-San Francisco type row houses was built in Houston in the 500 block of Fannin Street in the 1880s. Research has not been done to determine who built these houses or how they were received locally. That nothing similar was attempted for another three-quarters of a century suggests that the brick-built row house seemed to offer no advantage — economically, environmentally, or in terms of social status — to the freestanding, wood-built house in Houston.

Isolated projects of the 1920s and '30s emerge as precursors to the mid-20th-century Houston row house. American architects of the 1920s delighted in scaling down buildings, especially residential

L'Encore, 1927, Frederick Leon Webster, designer.

Top: 5000 Longmont, 1961, P.M. Bolton Associates.
Bottom: Lovett Townhouse Apartments, 1965, James Dalrymple.

Barkdull Townhouses, 1973, Burdette Keeland Jr.

buildings, to achieve effects of quaint diminution. The theater director Frederick Leon Webster pursued this approach in his house, L'Encore, in Hyde Park of 1927. It is a three-story tower, rising from a ground plan 20 feet by 22 feet in area. Rather than being constructed in the center of its lot, it is built at one corner, right on the sidewalk line. In its vertical organization and street-related orientation, L'Encore embodied the urban spatial arrangements characteristic of the row house, though L'Encore is freestanding, rather than part of a row. Twelve years later, Houston architects Talbott Wilson and S.I. Morris Jr. designed the Chilton Court Apartments of 1939 at 2301 San Felipe Road, on the edge of River Oaks. Rather than organizing the apartments as blocks of flats, Wilson and Morris configured them as two-story maisonettes, rotated in plan so that each of the attached units had outside exposure on all four sides. Wilson and Morris aligned the apartments in a pair of rows framing a central lawn. This feature is no longer evident, since one of the rows was demolished in 1997 to facilitate redevelopment of the property. Demolition has obscured the significance of Chilton Court, which demonstrated that it was environmentally feasible to organize housing in rows in Houston and implicitly proposed, as had L'Encore, that Houston could sustain a garden-city urbanism of higher densities and more urban spatial relationships that included landscaped green spaces.

During the 1950s, when the suburbanizing impulse in the United States seemed to triumph over all other real estate alternatives, there were, even in Houston, isolated explorations of alternatives. Architects were especially prominent in these explorations. The architect and interior designer Robert H. Wilson Jr. designed his house of 1956 in the Mid Lane corridor as a duplex of flats. What makes Wilson's house a precursor to the townhouse was his use of walled courtyards that extended out from the interior of the house. Bailey Swenson and his partner Herbert Linnstaedter explored the vertical organization of domestic space in a four-story tower house of 1957 in the 400 block of Rosalie Avenue. They attached this house to an existing garage apartment building that Swenson and Linnsteadter adapted for their studio and where Swenson's wife, Kathryn, operated her New Arts Gallery. The architectural historian Henry-Russell Hitchcock characterized the Swenson House as a San Francisco-like apparition in suburbanizing Houston. Hitchcock's observation condensed the Bohemian, urban, mixed-use, "sophisticated" attributes that the term "townhouse" seemed meant to evoke at the end of the 1950s. Hitchcock noted, "If the tide of flight to the suburbs ever turns, now that projects of urban renewal are being considered in many cities, such private houses, developed vertically instead of horizontally, if built in quantity, might provide a viable substitute for apartment living."[1] The emphasis on compactness and verticality, and the exploration of spatial strategies to extend the range of domestic outdoor space suitable for middle-class habitation, mark the Swenson and Wilson Houses as townhouse forerunners.

Row houses, called townhouses, began to be published in U.S. architectural and building trade journals in the late 1950s. In some U.S. cities, such as Philadelphia, row housing had continued to be built into the postwar period. Allowable under the Federal Housing Administration's Section 220, row houses were especially associated with urban renewal projects in the late 1950s. Complexes by I.M. Pei & Partners and Harry Weese & Associates for the developer Webb & Knapp, and by Ludwig Mies van der Rohe for Herbert F. Greenwald, contrasted with examples by architects and developers who were not as high profile. The modernist townhouses tended to be designed as uniform blocks. The market-oriented examples tended to treat each house front as stylistically singular, often with house fronts stepped in plan so that the rows did not have a uniform front wall-plane. All were built as components of larger subdivisions, so that they did not engage the public street as 19th-century row houses did. The builders' magazine *House & Home* emphasized the retail popularity of the new house type, which minimized landscape maintenance, provided alternatives to free-standing suburban houses and apartments, and could be built in existing cities rather than in the suburbs. The earliest Houston examples of the townhouse reflect the dichotomy between modern architects' emphasis on exploration of planning and construction alternatives and builders' emphasis on imagery and marketing.

Ira Berne, the developer of the Westbury subdivision in southwest Houston, built the first townhouse complex in Houston in conjunction with his specialty shopping center, Westbury Square. Today, Westbury Square is a near ruin, its shops abandoned and half its central plaza destroyed. But from 1960 to 1971 it was the most popular specialty shopping center in Houston. Berne was farsighted in many respects. He built apartments on the upper floors of the two-story retail buildings that encircled and radiated out from the fountain court at Westbury Square. He built a row of 12 townhouses in the 5400 block of West Bellfort in 1961 and made property available to build more townhouses facing Chimney Rock Road, some of which adjoined Westbury Square and were connected to it by pedestrian walkways. All of his two-story townhouses were rental apartments with shared driveway spaces adjoining their rear walled courtyards.

Berne's architecture was not sophisticated. Each house front was different. Westbury Square and its adjacent townhouses bore a resemblance to the Main Street USA sector at Disneyland. Berne and his architect, William F. Wortham, favored what *House & Home* described as "storybook" styling, evoking New Orleans, French Mansard, Georgian, Regency, Mediterranean, and Victorian decorative themes. Westbury Square was Houston's first urban ensemble of kitsch architecture.

By 1960 kitsch was poised to become the preferred architecture of residential and retail construction in Houston. Reference to the dense materiality and enclosed spaces of pre-industrial cities, encoded in kitsch architecture, represented a critique of the spatial dispersion of Houston in the 1960s. Kitsch architecture uncritically accepted the dispersed spatiality and expedient construction practices that characterized postwar American suburban development. Its critique, therefore, was insubstantial. Yet because kitsch detached issues of architectural look and feel from the construction and spatial organization of buildings, it performed efficiently within the economy of speculative development, unlike the architects' alternative. In a market context, architects' insistence on formal coherence and technical and spatial integration proved rigid, costly, and unpredictable. If the market didn't buy it, the architects' alternative did not easily lend itself to readjustment, which kitsch architecture did because it

Dunstan Townhouses, 1973, William T. Cannady & Associates.

Graustark Family Townhouses, 1972, Howard Barnstone.

Grove Court, 1980, Taft Architects.

wasn't integral.

Designed and built at the same time as the Westbury Square housing was a far more sophisticated project that represents the developer-architect dichotomy. Architect Preston M. Bolton planned and developed 5000 Longmont, a townhouse community on the edge of Tanglewood, in 1960-61. Bolton divided his site, comprising four lots, with a private street. House sites were lined up facing this street. All houses were designed to be sold in fee simple. They filled their 45-foot-wide lots, with façades built on the sidewalk line of the private street. All houses were to contain interior garden courtyards rather than peripheral open space. Bolton designed the first five houses for individual clients, and architect Hamilton Brown designed two additional houses. Bolton's were adaptations of the Miesian courtyard houses he had produced during his partnership with Howard Barnstone, "softened with ... colors and traditional accents," as Bolton explained in an interview with *Houston Post* columnist Charlotte Tapley.[2]

Although Bolton's design sensibilities were more refined than William Wortham's, 5000 Longmont also represented a nostalgia for architecturally defined urban space. The stunning paradox of both the Longmont and Westbury complexes, a paradox that would characterize Houston's urban development for the rest of the century, was that they were built in the midst of quintessential, mid-century ranch house suburbia. Bolton explained this as a factor of real estate prices — which made land acquisition for a complex the size of 5000 Longmont too expensive nearer the center of Houston — and the potential clientele for such houses: widows, couples whose children had left home, young couples, and bachelors. Rather than the factors of land-use demand, transportation accessibility, and concentration of population typically cited by urban historians at mid-century to account for the appearance of such new high-density buildings types as the skyscraper, or the disappearance of such established types as the row house, Bolton articulated a linked sequence of development cost calculations, "lifestyle," and upper-middle-income life cycle conditions to account for the paradoxical reappearance of a high-density urban house type in low-density, suburban settings.

Until the mid-1960s, townhouses tended to be built in purpose-developed, multi-unit enclaves in new, outlying sectors of Houston rather than in older, center-city neighborhoods. The Marble Arch complex, a subdivision of apartments and townhouses built by different developers, and J. L. Philips's Briargrove Townhouses, designed by Langwith, Wilson & King, were completed in 1964-65 along Westheimer between Fountainview and Hillcroft. Sagetown, off Sage Road, and the adjacent Del Monte Place, designed by Clovis Heimsath in 1964, were other multi-unit townhouse enclaves. Townhouse complexes were built in 1964 in Sharpstown and at Nassau Bay, the latter adjacent to the new town of Clear Lake City, 25 miles from downtown Houston.

Two complexes completed in 1965 illustrate the divergent tendencies in Houston townhouse design as the townhouse migrated from the suburbs into the city: Howard Barnstone's ten-unit Vassar Place complex at 1305 Vassar Place and John R. Wheeler's 29-unit Lovett Townhouse Apartments at 811 Lovett Boulevard. Barnstone, who developed as well as designed Vassar Place, carefully shaped the complex of rental apartments to its curved site at the end of an esplanade-centered boulevard. Barnstone downplayed the façades of the units, emphasizing instead an intricate weaving of indoor and outdoor spaces. He developed a sequence of small outdoor spaces leading from the street through entry courts or terraces into each unit, then to private patios and a shared garden court. He integrated the car with street-facing carports that buffered each unit from the street and did away with onsite driveways and parking lots. At the Lovett Boulevard complex, emphasis was on the differentiated architecture of the façades. The townhouse units were lined up along the public sidewalks on Lovett and Stanford, imbuing the complex's Georgetown-like architectural theme with more plausibility than the Westbury townhouses. To accommodate parking, a depressed parking garage was integrated into the complex. Provision for outdoor space and parked cars were practical issues that required resolution so that townhouses could be transformed from rental housing to fee-simple ownership, or to a new type of tenure that became legally feasible in 1963, condominium ownership.

Howard Barnstone and his colleague at the University of Houston's college of architecture, Burdette Keeland Jr., addressed these issues in complexes that each designed and developed in the Turner Addition, near Vassar Place, in the early 1970s. Located in the Museum District, the Turner Addition, along with Montrose, was a favored location for the construction of in-town townhouses beginning in the late 1960s. The architect John Halbert Hackney designed a townhouse for Dr. James Crawley at 1201 Berthea in the Turner Addition in 1969 that displays the influence of Preston Bolton's architecture. Hackney configured the Crawley House around an internal courtyard. He shaped the street front of the house to set the stage for the row of townhouses he assumed would be built alongside it.

Barnstone built three houses in the backyard of a duplex he owned in the 4900 block of Graustark Street in 1972. Each is 16 feet wide, the width of a single garage stall plus an adjoining interior passage and stair. Barnstone described this as a "professor-ish experiment" to test the feasibility of building on such narrow frontages, while incorporating the car. Within this compressed space, Barnstone used sectional differentiation to introduce a sense of spatial expansiveness. The rear-facing living room is two stories high. It overlooks a rear garden court, and is overlooked in turn by a dining balcony on top of the garage. The exteriors of the four-level houses are domestic in appearance without involving historical imagery.

In 1973, in the 1100 block of Barkdull Street, Keeland used the full depth of town lots to design houses with 25-foot-wide street frontages. This made it possible to incorporate street-facing, double-car carports with each unit. Rather than simply repeating unit plans, Keeland introduced internal variations. In one, he had the rear-facing living room, which opened out to a shallow rear court, span the full width of the parcel. In another, he treated the living room as a glass-walled box that projected into this rear court, with very narrow slots of outdoor space separating the glass side-walls of the room from the side party-walls of the adjoining units. The effect was magical rather than oppressive, because of the play of reflected light off the exterior side-walls. Roof terraces increased the amount of usable outdoor space. As Barnstone did at Vassar Place, Keeland underplayed the façades. Barnstone and Keeland addressed the problem of limits with spatial ingenuity. Each demonstrated the feasibility of building spacious-seem-

Southampton Court Townhouses, 1983, Ziegler Cooper.

Arlington Court, 1985, William F. Stern & Associates.

Haddon Townhouses, 1983, Arquitectonica.

ing houses in a row configuration, with no side windows, on fractions of town lots that could be sold in fee simple, like conventional, freestanding houses.

Other Houston architects in the early 1970s sought to demonstrate the adaptability of the fee-simple row house to existing town lots. Jim Powers, who worked for Barnstone on the Graustark Townhouses, designed and developed three townhouses at 4409-13 Mount Vernon that externalized single-car, gable-roofed garages as freestanding "gatehouses" in front of a row of two-story townhouses. R. H. Donnelley Erdman, Winton F. Scott, and Peter C. Papademetriou, three instructors at the Rice University School of Architecture, collaborated on the design of a six-unit complex developed by Erdman at 3301-11 Roseland in Montrose. This row employed concrete tilt-wall construction, interior steel joists and decking, and stepped-section interior planning to test the feasibility of applying warehouse construction practices to the townhouse. William T. Cannady, who also taught at Rice, designed a number of row houses in the early 1970s. In a subdivision that permitted duplexes, he designed a pair of freestanding houses on a single lot at 2366-68 Dunstan Road in 1973 that were, in effect, elongations of their street-facing, double-car garages. The stained wood siding reflects the emerging ecological look of the 1970s, typically essayed with a formal restraint and lack of extroversion that set them apart from developer housing. Each of these complexes resolved the issue of the garage. The Powers and Cannady complexes had the advantage of full lot depths, which enabled them to maintain existing front yard setbacks. The Erdman complex, like Barnstone's Graustark Townhouses, was built astride the narrower dimension of a corner lot, so that houses face the side street rather than the main street. They override existing setbacks and fill the lot, walling up the interior side lot-line of the house next door.

During the early 1970s, the type of the Houston townhouse was formulated. It involved a rectangularly-planned row house incorporating a street-facing double garage, with living spaces stacked two or three stories behind and above the garage. This enabled the house to be sold in fee simple and eliminated communal spaces that required an owners' association, regulations for use, and maintenance fees. As the South African-trained Houston architect Alan E. Hirschfield observed of such arrangements, "Texans don't like to share." Architects William J. Anderson and Tom R. Wilson designed and developed a number of exemplary row house projects in the late 1960s and early 1970s in the Bissonnet and Virginia-Ferndale corridors that adapted the Houston row house type to various site configurations.

In the period of intense construction activity that occurred between the expansion of the international oil market at the end of the 1970s and its collapse in 1982-83, a number of more complexly conceived townhouse developments were built. These complexes were architecturally predicated on an attribute of Preston Bolton's and Howard Barnstone's row house designs of the 1960s: the townhouse as urban design. They also relied on architectural design as a marketing tool.

Taft Architects designed the six-unit Grove Court Townhouses of 1980 at 4318-4320 Floyd Street in the West End as an exploration in layering outdoor and indoor space to create staged degrees of community and privacy. Their analytical aesthetic differed from the more spontaneous approach of Howard Barnstone, but they addressed similar issues. Neartown Development Corporation, which developed and built townhouse complexes, emerged as the principal talent broker, emulating at smaller scale the practice begun by Gerald D. Hines in the late 1960s of hiring well-known architects (in Neartown's instance, Houston architects) to give its projects a marketable degree of design distinction. Ziegler Cooper, William F. Stern & Associates, the Houston branch of the Miami firm Arquitectonica, and Alan Hirschfield produced designs for Neartown as well as other investors.

Ziegler Cooper and Stern gave special emphasis to the design of community space in their complexes. Southampton Court of 1983 by Ziegler Cooper involved the incorporation of a private street on a series of residential lots in which townhouses were stacked two deep. Ziegler Cooper had collaborated with Barnstone on the site planning of the Institute Lane Townhouses nearby; they absorbed Barnstone's ability to configure outdoor and indoor spaces in intricate ways to create layers that made the complex's public thoroughfare seem more like a compact street fronted with houses than a driveway bordered by garage doors. Stern's Arlington Court of 1985 in the Heights also involved the redevelopment of a line of former single-family lots. He, too, stacked row houses two deep on the lots, while maintaining the front setback along Arlington Street. Stern's communal space is not an interior street but a central greensward that begins with a street-facing gatehouse — identifying the complex as a community — and culminates in a walled swimming pool court. In each complex, rounded window and stair bays shape interior spaces within units while creating points of focus that visually organize outdoor spaces.

Arquitectonica, in the Haddon Townhouses of 1983, the first of four Houston townhouse complexes it designed, worked with two corner lots across the street from each other near the River Oaks Shopping Center. The Haddon Townhouses are aligned in a terrace formation facing Haddon Street, the side street, rather than McDuffie, which all other adjoining houses face. The exteriors of the townhouses act as street walls to channel space in a neighborhood of 1920s brick veneer cottages. Their rear elevations and the side elevations that confront each other across McDuffie participate in this effort to configure urban space, an effort not much appreciated by neighbors, however, because of the change in scale and house type that Arquitectonica's townhouses aggressively imposed. Arquitectonica's exterior designs were as formally extroverted as any developers', but their recesses, projections, and color combinations code changes of use and volume inside each house, as they do in Ziegler Cooper's and Stern's designs.

The Houston real estate depression that lasted from the mid-1980s through the mid-1990s sharply reduced the market for new speculatively-built townhouses. Consequently, the practice of commissioning well-known architects, as opposed to architects specializing in row house design for developers, was curtailed. An exceptional project from this period, the Wroxton Townhouses of 1992 by Albert Pope and William Sherman, two young instructors at Rice, reaffirmed the issues that ambitious architects typically considered critical in new row house design. Rather than stressing exterior imagery,

West End townhouses, 1999, MC² Architects.

Wroxton Townhouses, 1992, Albert Pope and William Sherman.

West End Lofts, Detering Avenue, 1999, Larry S. Davis & Associates.

Pope and Sherman layered exterior space with simply composed front wall planes. Built on a row of lots in a neighborhood of single-family houses, the townhouses respected the prevailing front setback so as not to overwhelm the next-door neighbors. Pope and Sherman reconsidered the spatial sequence of entry to produce a captivating lobby courtyard, an outdoor room replete with built-in furniture, as a prelude to the front door.

The recovery of Houston's economy in the second half of the 1990s resulted in a boom in new, expensive, inner-city row house construction. A few major developers, such as Perry Homes and Lovett Homes, dominated the market. They rationalized the production of housing units so efficiently that design distinction, as practiced in the early 1980s, did not command a competitive edge in this market cycle. In turn, this confirmed the position of such architects as Marion Spears Architects, who specialized in producing townhouse designs for developers. Designs conformed to the market version of the Houston townhouse type. Façades are architecturally maximized with scenographic devices, although in a row of houses, house fronts tend to repeat, rather than vary as they did in the 1960s. Since the late 1990s, there has been a tendency to maximize site coverage and minimize outdoor space. Townhouses in the '90s cycle are noticeably more spacious inside than those of the '80s cycle.

There are fewer architectural alternatives to prevailing market types than in the early 1980s. Those that stand out as exceptional are often developed by architects and other design professionals. The landscape architect James Burnett developed the four-unit Haskell Townhouses on two lots overlooking Memorial Park in 1995. His architect on the project, Natalye Appel, absorbed the lessons of the 1970s and '80s in her design. As with Stern's Arlington Court, she took advantage of a rear alley to provide garages on the back of each house. She and Burnett provided a double layer of gardens between the street and the front door, as Taft Architects did at Grove Court. Appel was as ingenious as Arquitectonica in stepping internal sections and introducing light from multiple sources to avoid the boxcar sensation that results when light enters only from the narrow ends of the house. She provided roof terraces, as Burdette Keeland Jr. did, to maximize usable outdoor space.

MC² Architects, Chung and Chuong Nguyen, have developed, designed, and constructed townhouse rows in the West End and the Sixth Ward Historic District. The extroversion characteristic of market housing is internalized in their projects to produce highly activated interior volumes. Larry S. Davis has established an identity for his West End Lofts in Houston's inner-city market by developing and designing Galvalume-surfaced row houses, first in the West End and more recently in the Midtown Tax Increment Reinvestment Zone Number Two. Davis, who is preparing to export the tin townhouse to Dallas and Austin, has brought an architect's sensibility to the marketplace, crafting a series of design variations that can be reproduced in row house arrangements or in larger gated enclaves. Architecturally, Davis' houses are modern. His interiors are efficient in their allocation of space rather than theatrical but ill-planned. His skill in producing visually memorable yet spacious, flexible, light-filled living environments causes his townhouses to stand out competitively in a field populated with extroverted but poorly integrated eclectic designs. Davis is especially proud that a significant percentage of the buyers who purchase his townhouses are architects and other design professionals.

In two inner-city neighborhoods, Midtown in the old South End and the Freedmen's Town Historic District in Fourth Ward, townhouses have figured as the architectural shock troops of the City of Houston's effort to retake the inner city for the affluent, even though this entails displacement of low-income residents and the destruction of historic cultural landscapes. Both neighborhoods demonstrate that the market, even when adhering to design guidelines imposed by tax increment reinvestment zone boards, is unlikely to produce architecturally distinguished, or even ingratiating, urban settings. Unbundling exterior design, interior planning, and site planning into discrete features, characteristic of the way the market has treated the townhouse in Houston, may make sense economically, but it fails to produce coherent architecture. The quest for architectural coherence, and the consequent desire for urban coherence, have consistently set architecturally aware Houston townhouses apart from those formulated to respond to market preferences. The Houston townhouse emerged after 1960 in response to a market searching for an expanded array of middle-income housing types. But despite the recognition at Westbury and 5000 Longmont that the townhouse had the potential to shape urban space in ways that might prove appealing in the market place, its architectural value as a tool of city formation has never outperformed its economic value as a type of housing unit.

The hard, though not immutable, truth is that the Houston townhouse is a distinct local type, as is the kind of urbanism it presupposes: opportunistic, aggressive, fragmented. Houston's civic culture of "anything goes" tolerates architectural exceptions that are more rigorously and responsibly executed than the norm. But the very traits that ensure the rigor and responsibility of the exceptions — site specificity, spatial ingenuity, tectonic clarity, formal restraint — don't lend themselves to the economies of marketing and serial reproduction. Even when design guidelines have been implemented, as in the tax increment reinvestment zones, the practices they institutionalize reflect the middle of the spectrum rather the extremes.

The dilemma that the Houston townhouse illustrates — is it primarily an economic instrument or a spatial place? — touches to an extreme degree on the contradiction that animates Houston's urban development. Examining the Houston townhouse in historical perspective externalizes the conflicts between the ways architects tend to conceive of architectural and urban issues and the ways these issues are framed in the larger culture, which in Houston is entrepreneurial culture. The architectural point of view is a minority position, at one extreme of a continuum whose middle, in Houston, is the marketplace and its measure of value, maximum profit. This dichotomy makes it likely that the Houston townhouse will continue to enshrine the market's images of "house" rather than enlightened architects' visions of "town."■

1. Henry-Russell Hitchcock, "Introduction," *Ten Years of Houston Architecture*, Houston: Contemporary Arts Museum, 1959, unpaginated.

2. Charlotte Tapley, "Town House Trend Rising in Houston," *Houston Post*, July 23, 1961, section 7, p. 1.

BUILDING THE BETTER TOWNHOUSE

By Danny Marc Samuels

At long last, Houston is densifying. The evidence, once primarily anecdotal, is now obvious wherever you look. A wave of construction is washing over the inner city, filling in the empty spaces with a variety of new residential structures. Early in the current boom the focus was on apartments by the block, which have been built in great numbers everywhere in Houston, most notably in the Midtown area. Downtown, an unlikely market for loft conversions, has taken off, quickly exhausting the supply of old buildings. So far, high-rise residential towers have been sparse, but tower cranes on the horizon signify new loft and condominium construction on Shepherd, in Rice Village, and on Montrose. But cities are not built only of apartments, lofts, and towers.

Instead, the focus of this densification is set a little lower, at the two- and three-story level of the townhouses that are appearing in every available empty space — and sometimes pre-empting spaces that are not empty. Townhouses have become the symbol of a changing community, and a lightning rod for an often rancorous debate about what Houston should, and will, look like in the future. For some, it is a welcome step toward true urbanization, a move in the direction of a traditional metropolis in which people congregate, walk the streets, leave their cars at home, and otherwise fulfill the daydreams of New Urbanists. To others, they signal an abandonment of what has made Houston unique, and an unwelcome step toward the death of the bungalow, with its semi-suburban patch of green flanking the streets. But given the current real estate market, townhouses are probably inevitable. Few people can afford a single house on a close-in lot. So the townhouse has become the default option for the urban denizen, be she a young executive newly arrived to Houston, or a boomer couple who have just shipped the last kid off to college. In a townhouse, you own your own turf from the ground to the sky. You can walk on it, plant on it, park your car on it. A reassuring wall separates you from the idiosyncrasies of your neighbors. You can call it home.

It is no longer a question of whether we should have townhouses. We will. But what should those townhouses be like, how should they fit into Houston's existing urban fabric, and what might they suggest about Houston's future urban character? Most of the recent townhouse construction has looked to other times and other places for its inspiration. And while there are lessons to be learned from the past, perhaps there has been too much emphasis on surface architectural styling, and too little on how a dense building-type can create a city. Which leads to yet another question: How can Houston create its own townhouse building tradition, one founded on the city's own distinct urban principles?

The pressures Houston now faces for more efficient utilization of scarce inner-city land are hardly unique to this part of Texas at the turn of the century. In fact, they are an important aspect of the entire history of urban development that, from Roman times to the present, has resulted in infinite variations on the problem of how to house more people in a limited amount of space. Excluding apartment-type construction and high-rise housing, those variations have tended to be based on a general townhouse typology, one with a few basic principles: make the lot frontage narrow on the street with units right beside each other; construct two or more stories using parallel common walls which provide fire separation and bear the floor and roof loads; and within these boundaries, maximize the amount of light. Front elevations are repeatable bays of windows and doors, usually two or three windows wide and two, three, or four stories high. Using these principles, builders have generated a variety of traditional townhouse types: burgher houses in Amsterdam, terraced houses in London, brownstones in New York, brick row houses in Baltimore, and painted Victorian houses in San Francisco, to name a few. Each of these cities developed a characteristic townhouse style that responded to local conditions. Often there has also been a larger-scale urban strategy formed by rows of houses: the grand places of Paris, the squares and crescents of England, the alleys of Philadelphia.

In 17th-century Paris, the partition of suburban royal estates to provide housing for the aristocracy resulted in the development of highly formed urban spaces, beginning with the Place Royale (Place des Vosges) in 1607-12 and continuing with the Place des Victoires, the Place Dauphine, and the Palais Royale before culminating with the Place Vendôme (1677, but completed much later) by Jules Mansart. The Place Vendôme employed a novel strategy of constructing the façade

A FEW SUGGESTIONS FOR AN URBAN STYLE

on a square according to an integrated architectural scheme, then selling the lots behind the walls to different developers. This uniform façade system later flowed out to the Rue de Rivoli, and eventually became the basis for Baron Hausmann's standard apartment façade for the boulevards of 19th-century Paris.

The speculative development of estate property also drove the construction of brick terraced houses in London in the 17th century. Aristocrats fallen on hard times could turn their land into income by subdividing and leasing the property to various developers, typically for 99 years at a time. Construction of houses was controlled by covenants in the lease, which stipulated such things as uniform heights, setbacks, and quality of construction. Often, larger-scale architectural intentions influenced the façades of entire blocks and the establishment of urban green squares. After the fire of 1666, municipal bylaws did much the same as the private covenants, specifying four grades of house construction, from four-story plus basement and attic down to two-story. Developers employed pattern books that suggested architectural treatments. London as we love it now was built then.

During the 18th and 19th centuries, distinctive townhouse typologies also evolved in the young United States. Although land was still abundant, in burgeoning cities such as New York, Boston, Philadelphia, Baltimore, Savannah, and San Francisco, among others, there was a demand for greater housing density as people clustered together to be close to the centers of employment. In many American cities, blocks of these townhouses provided a homogeneous background that remains an important part of these cities' urban character.

The townhouse typologies evolved over a long period of time, emerging from a balancing act between public and private interests, speculation and regulation, and boom and bust. During most of this development the same basic townhouse types served as homes for the wealthy, the emerging bourgeois, and the working class. Eventually, the resulting conditions of overcrowding and squalor induced by such dense housing were roundly criticized. As streetcars, then automobiles, made the open spaces surrounding urban areas accessible, the flight of the upper and middle classes to the suburbs was assured, draining cities of their tax base. Larger inner-city townhouses were divided to accommodate rental rooms, and townhouse districts came to be seen as slums.

In the 20th century, large tracts of urban heritage were destroyed, in Europe by wartime strategies of incendiary bombing and in the U.S. by post-war policies for building low-income housing. Inspired by the aspirations of the modern movement, large sections of urban residential neighborhoods were razed and replaced by high-rise housing towers. It is only in the last few decades, as these housing policies proved an urban failure, that the advantages of townhouses have been rediscovered. As the high-rise blocks have come down, new townhouse districts have replaced them. And surviving areas of old townhouses have become objects of gentrification. These centuries-old typologies, and the cities that they generate, have proven to work reasonably well for modern uses. The flexible floor plans are adaptable not only to current housing preferences, but to commercial and institutional uses as well.

What does this have to do with Houston's townhouses? Historically, not a great deal. Houston has no long tradition of dense housing. It wasn't until the 1960s that the city reached the requisite threshold density and land value to make townhouses appear as a housing option. Surprisingly, they were accepted by the market, appearing in areas that were not otherwise dense, such as Montrose and even suburban west Houston. Typically modest in scale and often only two stories high, these suburbanized townhouses emphasized the individual unit by stepping the plan and varying the materials. These builder townhouses, constructed without apparent benefit of an architect, have weathered well and settled into a maturing landscape.

During the boom of the mid-'70s to mid-'80s, architects did get on board, producing many interesting townhouse variations, sometimes exploring extremely tight floor plans or communal images of open space. In the current boom, townhouses have become even more ubiquitous, with builders active everywhere inside the Loop, often on properties that few would have considered conducive to middle- or high-priced housing. The increased demand has driven up land prices, ensuring that more and more existing buildings meet the wreckers' claws. This time around the scale of the townhouses is anything but modest, with builders often placing a four-story

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Making Peace With Perry Homes

By Yolita Schmidt and Gerald Moorhead

All Photos by Gerald Moorhead

Small changes, big differences: Top photos show how the standard Perry Homes kitchen can be transformed with new cabinets and color choices. Bottom photos reveal the advantages of removing trim, fireplace, and fan.

Before: A light well goes through from the second to the first floor. After: Closed in, the light well become a light-drenched seating nook.

Our friends were surprised when we, a pair of architects, moved into a Perry Homes townhouse. Now filling the inner city and transforming old neighborhoods, these spec structures are hardly the image of quality design and construction that would attract a design professional.

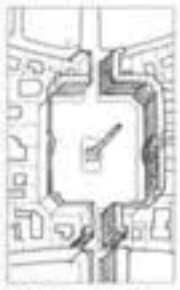
But last year, when we decided to look for a new house, we realized that land prices in our neighborhood at Shepherd and Alabama made building something we had designed ourselves prohibitive. We have lived in the area for more than 20 years and wanted to stay. Not eager to take on remodeling an old house again, we decided a spec townhouse was our only other economic option.

Driving to work, I watched as old tenement apartments on Woodhead came down and 16 Perry Homes townhouses went up. We were attracted to one unit in particular that had a north-and-east orientation and a large, open living and kitchen space filling the second floor. We knew what to expect from this type of construction and how to make the most of a few simple changes to adapt the townhouse to our taste for a clean, modern space.

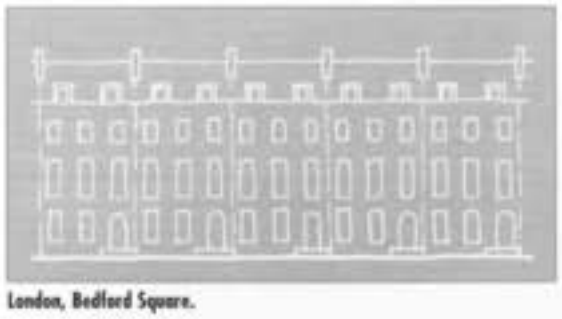
We bought the property during framing, which allowed us to make some alterations in the Perry Homes norm, alterations Perry Homes was quite accommodating about. We had the fireplace taken out, giving us more wall space for books. A light well over the entry was floored over, providing a second-floor seating nook. Then we simplified the trim, eliminating all crown moldings and changing the baseboards and door trim to a simple, plain profile. These small revisions did a remarkable job of making the rooms feel more light and open. Since we couldn't get the kitchen cabinets — marked by heavy moldings and an inefficient use of volume — changed, we replaced them after we moved in.

We unified the three floor levels with the use of colors inspired by Mexican paper flowers on the three walls that form the stairwell: a golden yellow, intense magenta, and a clear true blue. A softer set of complementary colors derived from Frank Lloyd Wright's palette turn the sliding doors of the new kitchen cabinets into a variable, three-dimensional Mondrian composition.

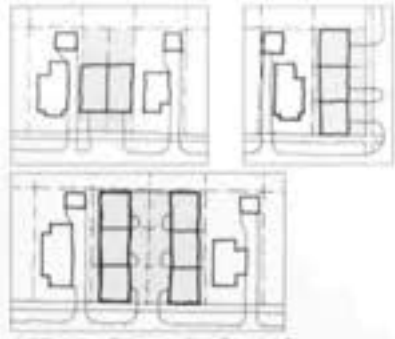
Like any architects, we're still making modifications. But we're pleased that we have a suitable house to work with, and happy we were able to change the heavy, traditional character of the interior to a light, modern space using simple means at a modest cost. It's evidence of the possibilities inherent in even the most basic townhouse forms. Someday, builders may respond to that evidence and provide more design choices for various tastes. Until then, sadly, the options are few. But they're not, as we discovered, nonexistent. ■



Paris, Place Vendôme.



London, Bedford Square.



Subdivision of Houston lots for townhouse construction.

"Bookend" pattern of Houston townhouse development.

All illustrations by Barry Blair Tannen

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behemoth on a third of a lot. And architects with design ideas are mostly conspicuous by their absence.

Still, through sheer force of numbers, a Houston approach to townhouses appears to be emerging, for good and ill. Unlike in cities such as Paris or San Francisco, where the townhouse type served to homogenize the background fabric, in Houston the emphasis has been not on uniformity, but rather on eclecticism, a reflection perhaps of the city's hodgepodge nature and the primacy of the individual house. A few townhouse developers have sought large parcels of land on which to think in larger terms, and block-size developments appearing on previously unused land have transformed the character of large parts of southeast Midtown. In other areas, such as the vicinity of the River Oaks Shopping Center, the redevelopment of smaller tracts has been so pervasive that entire residential streets have changed from single-house scale to block after block of townhouses. But while there have been some interesting interludes here and there, at the urban scale something is still missing. Individualism still trumps urbanity.

The more typical strategy in Houston has been to develop at a smaller scale in more established neighborhoods, subdividing as few as one or two lots. The geometry of subdivision and the current building restrictions dictate that a 50-foot by 100-foot interior lot can feasibly be divided into two 25-foot by 100-foot lots — interestingly enough, the same lot size as a New York brownstone. But by placing a 20-foot drive down the middle, two interior lots can support six townhouses. And a single corner lot can be divided into three 33-foot by 50-foot lots. Since a corner lot can support one more townhouse than a similar interior lot, and because each unit has direct access to the street with no need for construction of a common drive, corner lots are the most desirable to developers.

Such piecemeal development of smaller properties for townhouse use can radically alter the texture of existing neighborhoods. Not surprisingly, owners of houses and bungalows object to the disruption of scale and density, the violation of prevailing setback lines, and the long shadows cast by high walls caused by the incursion of townhouses. The revised development ordinance at least gives property owners who are not otherwise protected by deed restrictions an opportunity to enforce prevailing setback lines, and this in itself can greatly discourage developers. But in the end, you cannot make a denser city out of the existing bungalow texture, and since Houston will be denser, something has to give.

Perhaps a solution for Houston's urban growth lies in encouraging the latent pattern of "bookend" development, capitalizing on the existing predilection of townhouse developers toward the more efficient corner lots. Imagine a pattern where rows of consistent townhouses occur along the short block collector streets, and act as "gatehouses" to single-family houses on quieter long block streets. Small adjustments in the planning ordinance could foster such growth, while further discouraging development on streets where strong housing patterns already exist. Here one might hope that designers could learn the trick of turning the corner with an effectively designed unit for that special location.

But if the city is beginning to develop an urban pattern based on the townhouse, it has yet to create much of a townhouse style. The designers of modern townhouses have to contend with several problems not faced by older builders. The most basic of these is how to deal with the automobile, at least two of which are typically attached to each dwelling unit. The accommodation of a 20-foot-wide garage, with its accompanying door, drive, and curb cut, has been widely seen as detrimental to the pedestrian character of the street, especially in a unit that itself may be only 20 feet wide. The problem of the garage is not unprecedented, however. Even historic townhouses exhibit raised floor levels, as a way to get away from the dirt and odor of the street and to provide a lower service or basement floor, with bridges across the coal chute and steps up to the entry level. So the difficulty is less the need for a garage than how the garage is handled. Here, some design inspiration is called for, to shift emphasis from the garage to the entry and the floors above. The *piano nobile* is a great tradition. At least an automobile entry at street level implies some connection to the street. A more egregious anti-urban relationship that has appeared along with many new townhouses is a wall facing the street, shutting off completely any connection between the public and the private realm.

Another design difficulty is the general thinness of current construction and materials. This thinness arises not so much from the lightness of the wood frame — which is often criticized as being somehow inadequate, when in fact it is an extraordinarily strong and, if properly maintained, durable building system — but from the thin veneer and window systems that are too often used along with it. A brick bearing-wall, as traditionally used, is 12 to 18 inches thick or more, while a modern brick veneer on a wood frame is 8 inches thick, and the ubiquitous EIFS — external insulation finish system, commonly called by the trade name Dryvit — is one inch over the frame. The real problem here is not the thinness itself, but how builders have reacted to it, which is to use EIFS' plastic characteristics to apply a cake icing of decoration to the entire building. Typically, these decorations violate all rules of classical ornament, good taste, and general restraint. And, on the subject of inappropriate and excessive ornamentation, can't we do without those goofy parapets and those little precast keystones above every window and door?

Traditional wood double-hung windows have visual depth and shadow, while their contemporary aluminum counterparts have frame, mullion, and glass all essentially in the same plane, resulting in a certain flatness. In addition, the entire window is set at the surface of the sheathing, making it very close to the exterior veneer. In English terraced houses, window recesses of nine inches or more were required by regulation to minimize the interior's exposure to burning embers. Though burning embers aren't a serious urban problem anymore, the shallow depth they led to remains appealing. A window manufacturer could do a real service by designing a window with some thickness to it that would not be prohibitively expensive.

But there is a much deeper difference between the traditional townhouse and its modern Houston counterpart than thin windows and over-decorated surfaces. It is a basic philosophical difference, and a crucial point to address if Houston is ever to discover its own townhouse building tradition. In the case of the traditional townhouse, each single property has tended to be seen as a part of a greater urban continuity. Traditional townhouse builders subscribed to a common vision of the city. The design of their buildings came from a body of common experience, a tradition of construction often expressed in pattern-books. Houses linked together to form streets, and streets combined to make cities. Consistent building lines, materials, and window types and sizes made each townhouse a piece of the larger urban whole, a backdrop to the variety of life that occurred not just inside, but also outside on the streets. Even Houston developers of the 1920s and '30s had such a vision: the bungalows many people love so much were the developer products of an earlier period.

But in Houston today, a single townhouse is more likely to be seen as the ultimate expression of the individual, even though it may be designed by a developer trying to distinguish himself in the marketplace. Each townhouse, or group of townhouses, can shout, "Here I am." A city generated by this attitude is an accumulation of disconnected local episodes, each competing for attention. Ironically, this approach does little to support a public discourse. Rather, it enables the individual to turn within, to pursue his interests in private.

And what about the architects? Either by builders' disinclination to utilize their services, or the architects' disinclination to provide them, architects have not been involved to any great degree in the current round of townhouse production. But even more fundamentally, architects may be disinclined to engage in anonymous city-making. The architect is trained to see each building as a critique of the status quo, a work of art. Expression and novelty are highly valued and rewarded. To look at housing as part of the urban fabric, however, requires the opposite point of view. The architect must participate in an ongoing process, must accept the prior steps in the evolution, and then improve upon them to pass on to the next stage of development.

What that means for townhouses in Houston is simple in concept, if difficult in execution. It means looking to what others are doing not in order to come up with something radically different, but in order to come up with something compatible. It means not endless self-expression, but an active search for a Houston style, or at least a Houston approach.

What should that style, that approach, be? There are no easy answers, but there are some urban principles that might serve as guidelines. Eschew novelty; embrace repetition and build for the continuity of the urban fabric; address the street; keep the façade simple; restrain embellishment; use good materials and concentrate them where they will do the most good. And in a city that is growing ever more dense, where the space between people is shrinking as the connections between them expand, always strive to do one thing: Respect your neighbors. ■

A WALK DOWN MONTROSE REVEALS

The many views along Montrose, begining with the museum district as seen from the Warwick Hotel (left). Above: MFAH Central Administration and Glassell Junior School building.

The Lillie and Hugh Roy Cullen Sculpture Garden.

BY BRUCE C. WEBB

THERE ARE PLACES THAT HOLD our interest because they seem to compress time and space into a picture of the city in miniature. Grady Clay, a longtime editor of *Landscape Architecture Quarterly* and a keen observer of cities, called them "epitome districts" — places that are crammed with clues that trigger our awareness of the larger scene — things around the corner, processes out of sight, history all but covered up."

Montrose Boulevard is one of those places. In a city with few notable contenders, it, or at least that portion of it that begins at Mecom Fountain and ends at the intersection with Westheimer Road, is arguably Houston's most urbane street. It serves as a bridge between the refined, right bank culture of the Museum District and the left bank counterculture strung out along Westheimer. Along the way it gathers up an eclectic collection of businesses, cultural institutions, apartments, and restaurants — a few of them squeezing alfresco dining into the narrow sidewalk right-of-way — and arrays them in a way that has the look and feel of that rarest of Houston happenings: a pedestrian zone. It is also the source of often curious discoveries, among them such entities as the Consulate General's Office of the People's Republic of China, a proletarian, concrete-block stronghold with a small signboard holding a brace of fading photographs of Chinese celebrations.

You can actually take a decent stroll along the Boulevard and feel reasonably well accommodated and diverted. North

EVOLVING A BOULEVARD

THE EVOLUTION OF AN URBAN STREET, HOUSTON STYLE

A hypostyle hall bridging the street: the U.S. 59 viaduct.

Montrose developer J.W. Link's Montrose mansion, Sanguinet, Staats & Barnes, 1912, now part of the University of St. Thomas.

View looking north toward the Alabama Street crossing and the high-rise Parc IV Condominiums.

of Westheimer, the boulevard sheds some of its dignity, unravels into an inner-city version of a strip and becomes more aware of the view from the automobile than the view seen from up close.

Epitome districts change, with only traces of a former life surviving from one generation to the next. Present day Montrose Boulevard is a product of such changes, and is a far cry from its original formulation as the spine of a 260-acre subdivision built on the then-outskirts of Houston. One of several residential developments in the city's street-car suburbs, Montrose Place was put together in 1911 by J.W. Link, a lawyer, lumberman and former mayor of Orange, Texas. Link assembled land between Richmond, Pacific, Taft, and Graustark streets from 25 separate owners and set out to create Houston's poshest neighborhood, naming it after the Royal Borough of Montrose in Scotland. In a precursor to what would happen in dozens of later themed subdivisions that sought metaphorical respite from the heat and relentless flatness of Houston's topography, he gave Scottish Highland names to most of the streets as well.

The Houston Land Corporation, which Link formed with several other leading Houston businessmen, provided a modern, comprehensive infrastructure for the new development, one that included complete water, sewer, gas, paving, curbs, sidewalks, and landscaping in the selling price of lots. A feature of the plan were four major boulevards — Youkum, Audubon, Lovett, and Montrose — with esplanades that were landscaped with seven train-car loads of palm trees and 4,000 large shade trees.

Montrose Boulevard was not planned just for the wealthy; Link provided a hierarchy of lot sizes and locations so that even persons of modest means could afford one. Houses were required to cost a minimum of $3,000. But to encourage others to think in grand terms, Link built a mansion for himself on Montrose Boulevard at a cost of $60,000. The neoclassical house was designed by architects Sanguinet, Staats & Barnes of Fort Worth, and constructed of limestone imported from Carthage, Missouri, and cream colored vitrified brick with enameled terra cotta glazed accent tiles. The lavish interior included a 40-foot by 20-foot living room with high wood wainscoting, wood-beam ceilings, and fireplaces of English Caen stone. There were five bedrooms on the second floor and a large ballroom on the third. Link sold the house to oilman T.P. Lee for $90,000, and in 1946 Lee in turn sold it to the Basilian Fathers to form part of the nascent campus of the University of St. Thomas, where it presently serves as the administration building. Other fine houses followed, and by 1925 Montrose Place was essentially built out. It continued to be a distinguished address up until World War II, with many of Houston's elite families calling it home.

Although the Montrose tract that Link developed is still a neighborhood of distinctive houses, very little evidence remains of the stately homes he promoted along Montrose Boulevard. Including the Link Mansion, only eight houses remain on the boulevard, and all of them have been converted to non-residential uses. Among them are two houses designed by Alfred C. Finn. One, the Fondren House at 3410 Montrose, 1923, is now La Colombe d'Or restaurant, and the second, the Westheimer House at 3700 Montrose, 1919, now contains offices. Another Finn house at 3504 Montrose was razed in 1998 to make room for the awkward backside view of an addition to Annunciation Orthodox Church.

The deed restrictions that had protected the exclusively residential character of the Montrose development expired in 1936, abetting a chain of dislocations. By then the automobile had become a primary determinant of the form of cities. New suburban developments were luring people away from the inner city, and the unprotected properties along Montrose Boulevard became more valuable as sites for gas stations, offices, and other commercial uses. Many houses were converted to rentals, subdivided into duplexes or apartments and then demolished to make room for a strip of purpose-built commercial buildings, apartment buildings, and cultural institutions. In the late 1940s in response to the growing volume of vehicular traffic, Montrose Boulevard south of Westheimer was enlarged by removing its esplanade.

During the 1960s and 1970s, Montrose became more a state of mind than a location. It was Houston's version of Greenwich Village — albeit a "drive-in" version, according to a 1971 *Houston Chronicle* article. The relaxed attitude in the area, a reflection of the ethos of the Age of Aquarius, appealed to a wide range of people looking for or already experimenting with alternative lifestyles. The central axis for this action stretched out along Westheimer, which developed into a kind of free zone. Houses were converted into antique shops, topless joints, boutiques, bars, and restaurants, and were frequently treated to decorative makeovers that reflected the anything-goes aesthetic of the hippie culture. The intersection of Montrose and Westheimer became an epicenter for students, dropouts, and runaways looking for the zeitgeist. The action didn't spread very far along Montrose Boulevard, but the big old homes in the neighborhood were often subdivided into apartments or used to house communes. There was tension. Westheimer nightlife did not mix well with long-time residents or young families who were seeking stability.

Montrose Boulevard managed to weather the impacts of these changes reasonably well, in part because prestigious institutions gave it a solid anchor. It was a case in which the street's prevailing character was itself a primary asset, and tended to attract restaurants and other kindred businesses whose own personae were fashionably mixed and matched. Among the major north-south streets that

Below: Montrose Boulevard, seen in panorama a block before the intersection with Westheimer. Right: The Westheimer intersection, during regular business, and for right, during the Gay Pride Parade.

slice through the residential fabric flanking U.S. 59, Montrose Boulevard stands apart as an internal street having no direct connection to the freeway system. Advertising signs on buildings tend to be small and understated, and parking is not obvious. In the section of Montrose Boulevard that runs from the museums to Richmond Avenue, only a few buildings break the dominant character — the Goodyear Tire Store, a converted service station whose orientation is more about cars than people, being the most conspicuous example.

As a rule, other buildings are pulled close to the sidewalk, sometimes with intervening landscaping, and parking is either tucked in back or to the side. Some approaches are ingenious — the Campanile, a renovated church that houses a branch of the Houston Public Library and, in what was once the educational wing, a tail of small shops and restaurants, is a model pattern, one that addresses both the pedestrian and the car. It provides a token parking court up front, while accommodating the greater part of the parking behind in a lot and a tiered garage. Other buildings take a more ad hoc approach, relying on curbside parking and, in the case of the Chelsea Market, using fringe space under the elevated section of U.S. 59. Even two chunky suburban-styled buildings north of Richmond, the Kroger Grocery and the Walgreen Drugstore, both with large, front-loaded parking lots, are more companionable than might be expected. Other formulaic strip centers, a block-long, mustard-yellow one at 3939 Montrose and an L-shaped model at 3407 Montrose whose parking lot is spatially framed by a ten-story modern office building across the street, benefit from being lodged in the urban fabric rather than being spaced out, as they would be in the suburbs.

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Cross streets offer major points of syncopation in the structure of a street. Each crossing brings another character into a conjunction that is highlighted at the corners. Like a tangential conversation, the crossings dissipate the singular focus of an avenue, connecting it with other places. A hierarchy develops: sometimes one street dominates, sometimes another. Still others, recognizing the potentials of a corner to unite rather than separate, treat their two faces more or less equally.

The southern portion of Montrose Boulevard is marked by four major street crossings and one freeway overpass. The first crossing, at Bissonnet Avenue, is Houston's best example of the City Beautiful movement. Here, three museums are brought together: the Museum of Fine Arts, Houston, with its modern neoclassical Brown Pavilion by Mies van der Rohe, 1974; the shiny-skinned, parallelogram-shaped Contemporary Arts Museum, Gunnar Birkerts & Associates, 1972; and the Lillie and Hugh Roy Cullen Sculpture Garden, Isamu Noguchi, 1986, a labyrinth of free-standing planes, hillocks, and free-formed landscaping. Also part of the crossing is the anomalous villa that Houston architect William T. Cannady built for himself in 1991, a house that is imposing enough to fit in with the neighboring museums.

The buildings are wildly divergent stylistically, though with the exception of the Cannady House, which is decorated down to a domestic scale, they all demonstrate variations on a minimalist aesthetic. The interaction among the museums is complex. The Brown Pavilion, opening up its interior as an extension of a narrow fringe of sidewalk, reinforces the gentle curve of Bissonnet, a move deflected by the razor-edged corners and blank sides of the Contemporary Arts Museum, whose shape, set into the orthogonal street grid, creates a background for a triangular patch of space facing the intersection. This small but prominently positioned scrap of real estate, once embellished with temporary sculptures, art installations, and banners, has been quieted down considerably by a landscaping plan with a pool and benches that creates a street-level plaza. Both buildings push their points of view almost to the paradigmatic — the MFAH's glass box registering clarity and openness and the CAM's metal box, whose entrance is a narrow slot at one of the vertices, an air of indifference and mystery. The sculpture garden does a good job of acknowledging each by giving the MFAH a large garden space and responding to the angularity of the CAM in its interior spatial divisioning.

The controlled character of this auspicious beginning to Montrose Boulevard is extended another block north by the Glassell School of Art, S.I. Morris Associates, 1978, on the east side of Montrose and the MFAH's Central Administration and Glassell Junior School Building, Carlos Jiménez and Kendall/Heaton Associates, 1994, on the west. The latter turns an appealing and elegant entrance façade to the boulevard, with well-composed windows that express the various functional volumes within. The Glassell School, by contrast, is a mall-like structure, with its main entrance opening onto the sculpture garden and its primary axis running parallel to Montrose. This configuration leaves a long, reflective, glass-block wall facing the street that is only interesting at night, when the interior is revealed. One block north, the picturesque, regency-style Fourth Church of Christ Scientist, Wilbur Foster, 1940, and the brooding Holland House Masonic Lodge Number 1, William McGinty, 1954, address each other in a cross-axial metaphysical dialogue.

Montrose Boulevard's other major intersections are far less distinguished. At Montrose and Richmond, a gas station, opening onto Richmond, and a convenience store and branch bank, both sited diagonally, are gathered and settled by the quiet of the five-story International Bank of Commerce building. The Alabama crossing is populated by three gas

stations, two facing onto Alabama and the other onto Montrose, and the stately Link Mansion, which gives the secluded campus of the University of St. Thomas a Montrose Boulevard address. The Link Mansion, with its grand front porch and porte cochere and blocky massing, is itself reminiscent of an old-style gas station, but with much more opulent scale, detailing, and material richness. The generous landscaped lawn, which formerly opened onto Montrose, was in 1988 privatized by wrapping it behind a perfunctory brick wall with metal bars, a wall that disfigures the character of the house and diminishes its street appeal.

Where the Richmond and Alabama crossings offer hints of the changing character of Montrose as it moves northward, the Westheimer intersection, where Montrose Boulevard once ended, is a resounding finale to the street's graciousness. Here the ragtag commercialism of Westheimer prevails, producing an intersection that includes a Taco Cabana drive-in restaurant with an apron parking lot, a convenience store and gas station, a pharmacy at the tail end of an inchoate strip of long, low buildings, and a newer strip center dominated by Blockbuster — the name is Dickensian — and an Eckerd Drugstore that faces onto Westheimer.

It looks like a hundred other Houston intersections, most of them in older suburban areas, except for the little ironies that spill out along Montrose, where stores such as Atomic Music and Extreme Skin Art and Condoms Galore sidle up to the Interfaith Ministries for Greater Houston. The intersection holds a symbolic cachet as the location of the silver disco ball that's raised above the street during the annual bacchanal of the Gay Pride parade. Just north of the intersection, a jazzy pylon marks the location of the flashy Montrose Townhouse Lofts, I. Phillips/Wild Design, 1997. In places, Westheimer can be fascinatingly tawdry, especially at night, when it turns into a kind of streetwise costume party. But when it reaches Montrose, most of that character has been neutered by corporate symbols of the non-place urban realm. This is too bad, since properly configured as a people place and perhaps populated by institutions such as the Art Car Museum and a few kindred bars and restaurants, the intersection could become a lively meeting place for the cultures of the two streets.

As notable as the intersections is a cross axis that appears in the form of the U.S. 59 viaduct, a formidable intrusion whose gritty underside has been likened to a vast hypostyle hall. The viaduct segments Montrose, creating a shadowy underworld where, to the consternation of neighboring residents and business owners, vagrants often take up residence. All this will come to an end in the next few years, when this section of U.S. 59 is depressed below ground level. Like the successful effort by J.W. Link to get an existing railroad line relocated outside the boundaries of his development, lowering the freeway is an act of purification. The remarkable project was spearheaded by a coalition of neighborhood groups and civic associations who convinced the Texas Department of Transportation that this was a more reasonable solution than widening or double-decking the overburdened roadway. The scale and expense of the project is daunting, but when completed it will open new continuous vistas along Montrose Boulevard. The cross-axial gap that Montrose will soon cross, however, will remain, unless the bridge built to span U.S. 59 can itself mend the rift, perhaps by becoming a contemporary version of the Ponte Vecchio.

Many of the buildings that line Montrose Boulevard are nondescript, of the kind that establish an urban background. Others stand out as a part of a repertoire of little urban experiments that have popped up over the years. Chelsea Market, which opened in 1985 on a burned-out block in the shadow of U.S. 59, was an attempt by architect John Kirksey and partners Lance Goodwin and Norbert Choucroun to create a commercial development that both opened out onto the public street and contained a secluded pedestrian promenade within. As a typological prospect, it suggests an alternative to the auto-dominated strip centers that fill the city's commercial hinterlands. But it was never more than a segment of the length it would have needed to be to prove itself. People found it a perplexing anomaly; stores located behind the exterior frontage, or, even worse, on the second floor, went unnoticed. Despite winning several design awards it was troubled almost from the beginning. By 1987 the center was 35 percent empty and fell into foreclosure. Not long after, it lost two of its bigger clients, Banana Republic and the upscale Anthony's restaurant. It was also troubled by mismanagement in the hands of Resolution Trust Corporation, which never seemed to understand what to do with the property. It's a good thing they didn't throw the baby out with the bathwater, though. Today, anchored by longtime tenant Butera's, a delicatessen that moved from a location closer to the museums, and the upscale Redwood Grill, the center seems to have found its metier. Main Street Theater occupies a back corner of the complex, and most of the in-between and upstairs spaces have become offices.

A little farther north at 4100 Montrose is the Campanile, Ray Bailey architects' noteworthy conversion of the Central Church of Christ, William Ward Watkin, 1941, 1947. The first non-residential building to be constructed on the boulevard following the lapse of deed restrictions, the church in 1986 had its educational wing made over into shops, restaurants, and offices, while the main sanctuary was made available to the Houston Public Library. The L-shaped plan of the complex neatly embraces a small front-court parking lot that is

sometimes used for outdoor activities.

Several large apartment projects also attract notice, among them the twin towers of the Parc IV and V Condominiums at 3614 and 3600 Montrose, Jenkins Hoff Oberg Saxe, 1963, 1965. The 12-story buildings dwarf their neighbors and could have inflicted considerable damage to the street had they followed the present-day practice of garnishing upscale apartment buildings with garish, thematic decoration. Instead, they exude the studied simplicity and precision of the modern movement in clearly expressed modular construction of a white concrete frame and brick infill. The two buildings are well sited, with one holding the street edge and the other stepping back to create a front open space.

The Court at Museum's Gate, a somewhat overbearing postmodern, period piece of 1980s vintage at 4004 Montrose, Compendium, 1985, is low-rise in fact but bulky and over-coded in effect. The intricate plan densely fits 47 units and necessary parking onto a relatively small lot, but smothers its exterior space within a formidable brick wrapper, giving it the look of a fortified enclave, a look partially relieved by exuberant landscaping of the narrow strip of ground between the building and the sidewalk.

Nearby at 4801 Montrose was, until recently, a vividly painted, suburban ranch house that had been moved from a lot across the street to make space for Bell Park, a neighborhood-scaled garden respite with a pool and fountain. The house had marked the entrance to Gramercy Gables, F. Stanley Piper, 1928, a revivalist British, Tudor-style residential village located in a landscaped 1.37 acre setting. Apartments are still there at the rear of the site, but where the house was is now empty land on which a 19-story high-rise apartment building will soon be erected. The Montrose-fronting section of Gramercy Gables was the subject of a battle between preservationists who wanted to save the buildings and the Finger Companies, which sees the land supporting some 280 loft-style units. In the context of Houston's weak preservation regulations, attempts to save the Montrose section of Gramercy Gables were too little too late. The new building will not be very companionable to the surrounding residential neighborhood, and may portend more of the same to come.

A similar case of disfiguring the sectional properties of the street occurred some ten years ago, when the vertical scale of the museum district was changed by the construction of 5000 Montrose, Golemon and Rolfe, 1982, a hefty 22-story concrete apartment building that squeezed and dwarfed its neighbor, the once fashionable Park Plaza hotel. Prior to the towering condominium, the Plaza Hotel, Joseph Finger, 1926, the Warwick Hotel, and two nearby church towers gave the area a more or less uniform vertical scale. The Finger Companies toyed with the idea of redeveloping the nine-story Plaza Hotel as an offset to the damage they were planning to do to Gramercy Gables, but have abandoned the project as too costly.

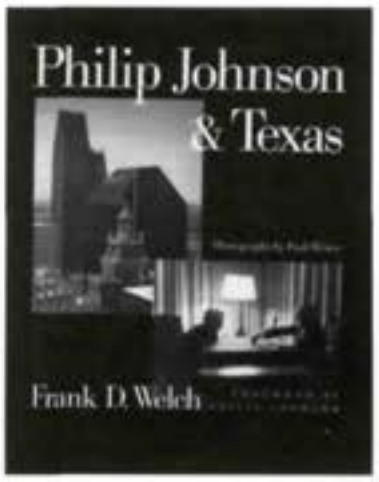
Within its urban frame, Montrose Boulevard is more artifactual than contrived. It represents a street that has evolved out of real events occurring in real time. There is an uncanny spatial composition there that is hard to explain. Against the prevailing building line, pockets of space and open lawns take on a distinct figural character that does not exist on streets where building lines and other homogenizing principles are scrupulously followed. Robert Maxwell, the former dean of Princeton's School of Architecture, sets out an argument for such places as having the quality of "sweet disorder and the carefully careless." "It is possible," Maxwell writes, "to see all cultural manifestation as a mechanism whose aim is to ensure a balance between control and inspiration, between order and disorder, in a dynamic system of change. Difficult as the attributes may seem to be, and in spite of the fact that at any one time they may be in opposition, they are both concerned positively with the same issue — the degree of control needed to assure and to structure an ever surprising future."

IN THE BEGINNING, CIRCA 1911, MONTROSE BOULEVARD WAS MORE SUBURBAN THAN URBAN, FLANKED BY OPEN SPACES AND SPLIT BY AN ESPLANADE, WHICH WAS REMOVED IN THE 1940S TO MAKE ROOM FOR MORE TRAFFIC.

For architects working in terms of such an idea, the challenge is not to create everywhere the patterns of order for which their education prepares them too well. This has been tried by the planners and the architects of suburbs and model cities, and has produced little beyond social and cultural entropy and boredom. The real challenge is to mediate between a stifling pre-determined order and the disorder of individual narcissism — and through that to shepherd change. This is not a simple task, particularly in places such as Montrose, where incursions of seediness threaten stability. And when such incursions are successfully resisted, they make the area targets for profit-driven, large-scale development.

But Montrose, both boulevard and surrounding community, has a deserved reputation for self-serving activism. Here, battles have been joined over many issues, some of them quite remarkable. In 1990, a group of Montrose residents became frustrated that police were not doing enough to stem a rash of vandalism and car theft. They organized a march on the home of one of the suspected vandals, chanting "leave us alone" and carrying signs in English and Spanish. The demonstration was followed by a re-instituted citizens' patrol. In another case, a neighborhood civic association carried on a three-year campaign to get large mounds of sand removed from under the U.S. 59 overpass. The sand had been stored there for use on the highways in case of freezing weather. But it had become an eyesore, and an attraction to vagrants who took up residence under the viaduct.

Montrose Boulevard's prime location makes it ripe for plucking. Already, misguided visions of a much denser street of apartments, which in one version would create blocks of Park Avenue-like apartment mid-rises with shops beneath, dazzle some developers and architects. But urbanization doesn't necessarily mean bigger, or require the higher densities of the 19th-century East-coast urban model. Neither does it mean the wholesale recasting of areas of the city into simulations of the New Urbanism, especially when the uprooting of a genuine urban past is a part of the bargain. For Houston, the best urbanization may be the sort that has evolved along Montrose. From Bissonnet to Westheimer, Montrose Boulevard could well be an example of what an unzoned city might be expected to look like when it is on its best behavior. ■



An Architect's Journey

Philip Johnson & Texas *by Frank Welch. Austin: University of Texas Press, 2000. 298 pp., illus., $39.95.*

Reviewed by William F. Stern

Philip Johnson's career is as much identified with Texas as any place he has worked in the United States. Over the course of five decades, the Ohio-born, New York-based architect has become a Texas phenomenon, a legendary figure producing major buildings in Houston, Dallas, Fort Worth, and Corpus Christi. Twice — first with the Menil House in 1950 and then with downtown Houston's Pennzoil Place in 1976 — Johnson set precedents so strong that he influenced the direction of modern architecture in Texas. Amazingly, in his ninth decade of life and the beginning of his sixth decade of work in Texas he is completing the design of Dallas' gigantic Cathedral of Hope. Indeed, Texas and its patrons can lay rightful claim to ensuring the success of Johnson's architectural career. Without Texas patronage, that career could have been quite different. Moreover, the buildings of Philip Johnson in Texas exemplify the extremes of his work, from the rigor and refined elegance of Houston's University of St. Thomas of the 1950s to the kitsch and parody evoked by the Crescent, a Dallas office and hotel complex of 1985. Looking at Johnson in Texas is one way to understand his overall career, while at the same time providing a window into the power and patronage that built the state during the second half of the 20th century.

This is exactly what Frank Welch set out to do in *Philip Johnson & Texas*. What is most appealing about Welch's fascinating study is that it can be read both as a condensed biography of Johnson and as a book about the Texas clients who supported his work. While most of the book focuses on Johnson in Texas, Welch also includes substantial biographical information, giving the reader an overview of the architect's life and times. Welch begins and ends his book with a visit to the Glass House in New Canaan, Connecticut, Johnson's New England residence and the building considered to be his architectural masterpiece. Over his professional life, the New Canaan estate has served as a laboratory for changes in Johnson's approach to architecture. After completion of the steel frame Glass House, which was heavily indebted to the work of Johnson's first great influence, Mies van der Rohe, Johnson expanded the estate, adding a number of structures — among them the underground Painting Gallery, 1965, and the Sculpture Gallery, 1970, both to house his extensive collection of modern art; the Library Study, 1980; and the recently completed Gate House, 1995, which will serve as a visitor's pavilion when the New Canaan estate is bequeathed to the National Trust for Historic Preservation. These buildings, along with several open-air pavilions, document the stylistic shifts in Johnson's work, revealing an architect who has changed unpredictably, as if fashion, rather than a clear evolving idea, has determined his development.

Welch's prologue outlines Johnson's life from the time of his 1906 birth in Cleveland to that moment in the late 1940s when he was introduced to his first Texas patrons, Dominique and John de Menil. The biography of Johnson's early years examines his undergraduate education at Harvard, his time as the first director of the Department of Architecture at New York's then-new Museum of Modern Art, his decision at age 34 to pursue a career in architecture at Harvard's Graduate School of Design, and the beginning of that career. Welch touches on a dark side of Johnson's early years, describing his leanings towards Hitler and his attraction to right wing populist politics during the Depression. But the most important event of those years was non-political. With art historian Henry Russell Hitchcock, Johnson organized "The International Style," a seminal exhibition at the Museum of Modern Art that brought to an American audience the work of the great European modernists Mies van der Rohe, Le Corbusier, J.J.P. Oud, and Walter Gropius, putting them side by side with leaders of America's progressive architecture such as Howe and Lescaze and Richard Neutra.

By the time Johnson reached Harvard's Graduate School of Design in 1940, Walter Gropius was its director, and the school was at the forefront of the modern movement in the United States. For his thesis project, Johnson designed and built a house for himself in Cambridge modeled after Mies van der Rohe's courtyard houses. Following a stint in the army, Johnson moved to New York, where he divided his time between a small architectural practice and his old position at MoMA. The gregarious Johnson made friends easily; one was modern sculptor Mary Callery, who introduced him to an array of artists, architects, and socially connected art patrons. His association with Callery proved to be the link that first brought Johnson to Texas. In 1948, on a visit to New York, John de Menil, who knew Callery, asked her to recommend an architect for his new house in Houston. Callery introduced the young executive and collector to Johnson, who by that time was building his Glass House. Soon plans were being made for Johnson to visit Houston and meet Menil's wife, Dominique. Recalling his anticipation about that trip many years later, Johnson told Welch, "You bet I was excited — my first important house and in *Texas* to boot."

What follows is the story of Philip Johnson and Texas organized chronologically, beginning with the Menil House and ending with the Cathedral of Hope. Each building project is treated in detail, from how the commission came to be to a thorough description of the completed work. What makes this book so enticing is the telling of the story, much of which was garnered from interviews with clients, friends, critics, and associates of Johnson. Lengthy quotes from these interviews give the story a sense of immediacy, clarifying how buildings are commissioned, built, and critically evaluated. The projects are illustrated with drawings, vintage photographs, and beautifully composed contemporary photographs taken by Paul Hester. The black and white format is particularly appealing, and a reminder of just how sharp and clear architectural photography can be when it eschews full color.

Johnson's early association with Dominique and John de Menil provided the catalyst for further commissions in Texas. Not only did he design the Menils' Houston home, but it was through the Menils' connection with the University of St. Thomas that Johnson was asked to prepare a master plan for the school, as well as to design three of the campus' new buildings, establishing the direction for future construction. The Menil House and the University of St. Thomas buildings, all of which are indebted to Johnson's mentor Mies van der Rohe, set an example that encouraged the young post-war generation of Houston architects in the direction of modern design. One of these architects, Howard Barnstone with Preston Bolton, became the associate architect with Johnson on the St. Thomas buildings; later, with his partner Eugene Aubry, Barnstone would take over the building of the Rothko Chapel, the last Johnson building commissioned by the Menils. Johnson's work for the Menils also caught the eye of Jane Owen, daughter of Humble Oil co-founder R. Lee Blaffer, leading to the commission for the Roofless Church in New Harmony, Indiana, a clear stylistic departure from Johnson's Mies-influenced work in Houston.

Through their patronage of art and architecture in the 1950s, the Menils became increasingly prominent in Texas cultural circles. One of their friends, Ruth Carter Johnson, daughter of Forth Worth publisher Amon Carter, was invited to a weekend celebration for the dedication of two University of St. Thomas buildings, where she met Johnson. As she recalled later, "There was a warm immediate rapport, and we just got along famously. We talked about everything from gardening to art collecting. Before the weekend was over, I asked him if he would come to Fort Worth and talk to us about designing Dad's memorial. He said indeed he would and was soon back in Texas."

The building Ruth Johnson referred to became the Amon Carter Museum, completed in 1961. By then, Johnson had broken with his International Style roots, favoring instead an eclectic modernism described by one disapproving critic as "ballet-school classicism." The opening of the Amon Carter Museum was a significant event for a city with the nickname "cowtown," and from that day forward, Fort Worth would increasingly be viewed as a place of art and culture. As Welch perceptively points out, the hiring of nationally recognized architects to build in Texas became increasingly popular. "Wealthy Texans began to regularly hire East Coast architects to design their important buildings," he writes. "It

seemed to be culturally safe to stick with a well-known big-city Ivy League architect with design credentials. Later the range for esteemed-architect selection would broaden and become international." Just down the hill from the Amon Carter Museum is Louis Kahn's Texas masterpiece, the Kimbell Art Museum, dedicated in 1972. Now under construction across the street from the Kimbell is a tour-de-force work of architecture by Japanese architect Tadao Ando that will soon house the Fort Worth Museum of Modern Art. In 1970, at the behest of Ruth Carter Johnson, Philip Johnson returned to Fort Worth to design the Fort Worth Water Garden.

Following his successes in Houston and Fort Worth, it was inevitable that Johnson would receive a commission in Dallas. In the early 1960S, on the advice of Houston patron Jane Blaffer Owen, Dallas contractor Henry C. Beck and his wife Patty hired Johnson to design their house. Johnson had recently completed an open-air structure on an artificial pond at his New Canaan estate. The arch motif that defined the portico of the Amon Carter Museum was expanded upon in this colonnaded six-foot-high "folly," which was not tall enough to stand in without bending over. At the Beck House, Johnson exploded the folly motif to full scale, creating an odd, grandiose house that was the opposite of the refined, elegant dwelling that he had designed for the Menils. Indeed, none of Johnson's work in Dallas ever achieved the stature of his work in Houston and Fort Worth. Referring to later Dallas buildings, the Crescent and the high-rise office building Momentum Place of 1987, Houston architectural critic Stephen Fox observed that "Philip Johnson saved his worst Texas buildings for Dallas."

Indeed, by the mid-'80s, Johnson had immersed himself in the paper-thin, postmodern historicism that had invaded architectural practice throughout the United States, showing a lack of a consistent point of view that led critics to dismiss him as a mere stylist, and no longer a leader in design. Among the Johnson buildings in Texas that suffered the fate of gratuitous historicism are the University of Houston's College of Architecture, 1985, and buildings for an office park in Sugar Land. The Crescent in Dallas, the College of Architecture, and the Sugar Land buildings, while clear and logical in siting and plan, fail as works of architecture and mark the low point in Johnson's Texas work.

But before being bitten by the post-modern bug, Johnson produced some of his most significant Texas work, returning to the clarity and imagination of his earliest Texas buildings. Beginning with the artfully abstract Art Museum of South Texas in Corpus Christi of 1972, this period culminated in a series of Houston office buildings that would not only revive Johnson's career, but would also help to put Houston on the nation's architectural map. This time Johnson's patron was Gerald D. Hines, a man quite different from the architect's cultural patrons of the 1950s and 1960s. A former mechanical engineer from Indiana, Hines began his career as a Houston developer with a series of modestly designed two-story office buildings on Richmond Avenue. Working with architect Harwood Taylor of Houston's Neuhaus & Taylor, Hines was persuaded that good design need not lead to costly buildings, and might even result in higher rents. Soon Hines would retain Hellumth, Obata & Kassabaum of St. Louis to design the Galleria, which became a trend-setting mix of retail, hotel, and office space.

At that time Hines became acquainted with I.S. Brochstein, who owned land that he hoped to develop near the Galleria. Hines persuaded Brochstein to let the Hines organization lease the property, on which they would build a complex of high-rise office buildings. Brochstein agreed, but wanted a say in the selection of the architect. Hines came up with an initial list of nationally prominent architects, to which Brochstein added the name of Philip Johnson. Brochstein, who owned a business specializing in custom mill work installations, had come to know and admire Johnson when his company supplied the paneling and cabinets for the Amon Carter Museum. Once again the linked chain of Johnson patrons would lead to new commissions. The first was for what would become known as the Post Oak Central buildings. The second was for Pennzoil Place.

These buildings came at a crucial time in Johnson's career. In the early 1970s Johnson had formed a partnership with John Burgee, and together they had embarked on the design of the IDS Center in Minneapolis, an office tower and enclosed retail center connected to adjoining blocks with pedestrian bridges. Then in his mid-sixties, Johnson was beginning a seemingly new career, this time as a favored architect for high-rise office buildings. Johnson's association with Gerald D. Hines was fortuitous for both men. The Post Oak Central complex, 1975-1982, and the twin towers of Pennzoil Place, 1976, were noted for their imaginative rethinking of the standardized rectilinear speculative office tower, transformed into objects of pure geometric sculpture best appreciated from the nearby freeways while traveling at 60 miles per hour. While he was not alone in this, Johnson helped set a new direction for America's high-rise office buildings. Hines, as impresario, benefited his company and Houston with impressive architecture that attracted tenants willing to pay premium rents. The Hines/Johnson collaboration continued with the beacon of the Galleria, Transco Tower, 1983, the tallest building in America outside a downtown core, and the RepublicBank building, 1984, which sits opposite Pennzoil Place. Johnson/Burgee's practice expanded to include buildings in major American cities including New York, Chicago, Atlanta, Dallas, Boston, and San Francisco. Much of the credit for the architects' success belongs to their Houston patron, the engineer turned developer Gerald D. Hines.

Johnson's career in Texas came full circle in the 1990s, when he was called back to the University of St. Thomas to design a chapel. Always enamored of the latest trends in architecture, Johnson abandoned the grace and modest scale of his 1950s St. Thomas buildings for a structure that bowed in part to the then-fashionable trend in architecture called "deconstructivism." As a result, the Chapel of St. Basil, 1997, feels out of place, overpowering the spare, modern buildings that form the campus' academic mall. By the late '90s, Johnson appeared more in control of this stylistic shift with his bold design for the Cathedral of Hope in Dallas, a building clearly influenced by the work of Frank Gehry, architect of the Guggenheim Museum in Bilbao, Spain. And there may be more to come — in 1998, at the age of 92, Johnson, with his new partner Alan Ritchie, was asked by Texas A&M regent John Lindsey, a successful Houston businessman, to design an expansion for the A&M College of Architecture.

Frank Welch's *Philip Johnson & Texas* is a book that should find a wide audience. It tells the coming of age story of Texas cities from the post-war years to their dynamic rise in the '60's, '70s, and '80s. Most interestingly, the book brings to life the people and patrons behind the story. Through the shifts and meanderings of Johnson's work, Welch captures trends, both high and low, in the evolution of American architecture over the last half century. While not a critical biography, *Philip Johnson & Texas* does raise appropriate questions about the qualitative disparities in Johnson's work. Frank Welch has produced a book that captures the spirit and mystique of Texas since the 1950s, a book about the individuals whose determined conviction challenged the status quo to advance the state's cultural boundaries, and, finally, a book about Philip Johnson, an Easterner who practically got his start as an architect in Texas, where his work still flourishes 50 years later.

Infrastructure Lost

Organization Space: Landscapes, Highways, and Houses in America
by Keller Easterling. Cambridge, Massachusetts: MIT Press, 1999. 209 pp., illus., $35.

Reviewed by Keith Krumwiede

Keller Easterling's *Organization Space* is not a book about architecture. That is not to say, however, that it is not relevant to architectural discourse. It is, precisely because it eschews an object-focused perspective and instead examines the processes and organizational paradigms that determine our physical environment.

In the domain of *Organization Space* architecture is symptomatic of the intelligence, or lack thereof, of larger, often invisible, infrastructures. The book is an attempt to reveal those infrastructures, to expose the underlying procedural history of the American landscape. While other observers of our suburban nation may bemoan the aesthetic degradation of the environment, Easterling is not so much worried that the environment is ugly as that it is stupid. She is, therefore, less

interested in the physical artifacts she examines — landscapes, highways, and houses — than in the organizational forces that determine their spatial arrangement.

To Easterling, the visible solids of our environment are nothing more than the concrete manifestation of the multiple, immaterial, and often conflicting protocols of politics, economics, and technology. Easterling is an architect, not a historian, and her examination of these protocols — a term she repeats throughout her book like a mantra to refer to procedures, organizational formats, rules, policies, and general development guidelines — is, in effect, a search for sites of opportunity within the systems that continue to direct our spatial development.

Organization Space is divided into three sections that address what Easterling describes as "eccentric episodes" in the planning of American landscapes, highways, and subdivisions. The episodes are eccentric to Easterling because they involved alternative design practices, ones that sought to define new relationships between various infrastructures or presented proposals that would have configured differently our most familiar environments. The first of these episodes concerns Benton MacKaye, a self-proclaimed regional planner who was a member of both the Technical Alliance and the Regional Planning Association of America, two influential technical/political groups in the 1920s and 1930s that advocated the use of emerging transportation and hydroelectric infrastructures to "sponsor distributed networks of community." Easterling describes MacKaye's attempts to forge a design methodology capable of integrating transportation, housing, and environmental needs, a methodology he referred to as geotechnics because it fused "geography, forestry and conservation, engineering, colonization, regional planning, and economics." As practiced by MacKaye, geotechnics saw the sites of spatial development as ecological in nature, sets of "interdependent parts within which small shifts in balance or orientation had enormous effect."

As opposed to conventional notions that tend to define site as a physical locale with definite limits, Easterling praises MacKaye's method of identifying site in not only "spatial, but temporal and procedural" terms as well. The presentation of MacKaye's comprehensive planning methodology — his complex understanding of site — makes it clear that, for Easterling, the reconception of site within design practice is a central issue. While Easterling claims no heroes, Benton MacKaye serves, one assumes, as a model for a productive designer engaged in an interdisciplinary, organizational practice.

His conception of the Appalachian Trail, as first presented in a 1921 article in the *Journal of the American Institute of Architects*, serves as a touchstone for Easterling in this regard. Typically understood as a hiking trail that extends from Georgia to Maine along the crest of the Appalachian Mountains, the trail as initially proposed by MacKaye would function as "a kind of public utility or reservoir of natural resources, organizing transportation and hydroelectrical networks while locating industry and community." Through a simple hierarchical inversion scaled from highway to pedestrian path, MacKaye's design for the trail sought to reorder an entire region as one vast ecological system. Conceived of as a settlement levee for the Eastern Seaboard, the Appalachian Trail was seen by MacKaye as an infrastructure along which "compact communities and industries would crystallize ... to replace the suburbs." Easterling doesn't clarify the extent to which the trail ever performed as MacKaye envisioned it, but ultimately that is not the point. Instead, she sees the power of MacKaye's proposal in the attitude it expresses toward the relationship between infrastructure, settlement, and nature.

Though Easterling's first "eccentric episode" examines landscapes through the work of a single individual, the final two episodes address the subjects of highway and house from a broader perspective, looking at the development of early alternative proposals for both the interstate highway system and the residential subdivision. For Easterling, these alternatives expose new sites of action within which architects might find opportunities to redirect conventional patterns of spatial development.

Prior to the passing of the Interstate Highway Act in 1956, several proposals envisioned a more complex highway network capable of handling a variety of transportation and community demands. Among the losses that Easterling bemoans are the ideas of intermodality and "intelligent switching" within the highway system, as well as differential treatments of highway rights-of-way. Easterling describes a variety of proposals, from Warren Manning's 1923 "trunk-line traffic tracks" that proposed "trunk-lines [lying] next to railways and waterways, and ... provided with facilities for freight interchange" to Benton MacKaye's "cement railroads" to Norman Bel Geddes' 1939 plan for a national motorway system, a plan that proposed a grid of roadways that would pass close to but not enter major metropolitan areas, instead focusing attention on subordinate centers located at the intersection of the motorways.

These and other proposals were ultimately abandoned for the present system, a relatively undifferentiated arrangement of simple traffic corridors and interchanges, indifferent to external circumstances. What we are left with according to Easterling is a "frozen" infrastructure, a "dumb network with dumb switches." Her implication is that the sprawl that now chokes many cities, and which has been encouraged by interstate construction, need not have occurred. More important for Easterling, however, is the possibility that unexplored and underused or misused sites remain within the highway system. Though vague about what might be accomplished at these sites, she nonetheless, through her citation of historical precedents that saw the highway differently, suggests ways to reevaluate our relationship to an almost 50-year-old infrastructure.

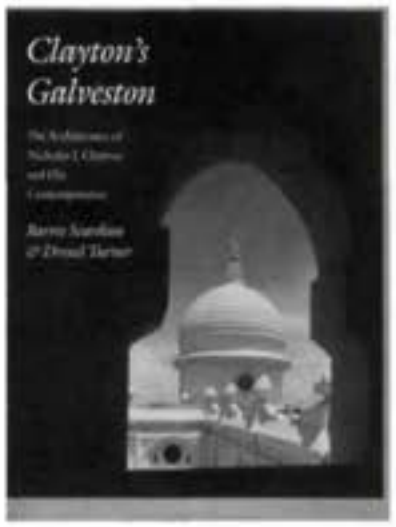
In a similar manner, various nonurban settlement proposals generated by a wide range of designers before World War II were ultimately neglected in favor of the more generic patterns associated with suburbia. Easterling examines the development of what she terms "subdivision science" through an analysis of prototypes, including ship-building communities developed for the U.S. Housing Corporation during World War I as well as New Deal demonstration projects from the 1930s.

In these early prototypes, varied approaches to housing were explored. While some of these proposals provided the basis for much of what we today recognize as the generic subdivision layout — cul-de-sacs foremost among them — they tended towards a more ecological, as MacKaye might have described it, organization. In a Radburn, New Jersey, prototype, for example, the use of cul-de-sacs worked in concert with what were called "super blocks" that left an open stretch of green park in the block's center, a neighborhood park that functioned as a pedestrian spine and reoriented the house.

Ultimately, many of the new town prototypes suffered from being labeled as socialist experiments; private development interests, including the National Association of Real Estate Boards, lobbied against them in order to procure subsidies for their own projects. Following World War II, the FHA's mortgage insurance policies, combined with demands for housing at a scale that could boost the post-war economy, effectively standardized subdivision layouts regardless of location. Ironically, it is in this understanding of the house as a product — a product filled with products — that Easterling finds what she believes to be a potentially rich site for design intervention. She speculates that it is in the individual components, such as appliances or even building materials, that are distributed throughout houses that an adjustment might be made to the larger system of housing. Easterling imagines "a fitting that does not remain neutral to the larger organization, but rather sends in an order to adjust interplay between the house and its surroundings or between groups of houses."

Collectively, Easterling's "episodes" tell a story of proposals waylaid by bureaucratic efficiencies and political dealmaking. It is a tale of design being subsumed by politics and transformed into readily digestible and rapidly deployable prototypes and rules. Her book exposes brief moments in time when the American landscape might have been made differently, and then asks how we can best use the knowledge of these lost opportunities to chart productive courses of action.

In response, Easterling tries to articulate new definitions of architectural practice, ones that would not only coordinate political, economic, and technological forces within the design process, but redefine the basic terminology and paradigms of design itself. This is a struggle; as Easterling's often-difficult prose demonstrates, architectural discourse suffers from a limited vocabulary. Ultimately, this limited vocabulary, even when supplemented by terminology appropriated from other disciplines, prohibits *Organization Space* from clearly establishing architecture's potential to effect change. We are left instead with vague assertions as to the power of minor adjustments to modify whole fields of development. While this may be possible, the stories Easterling tells tend to suggest that the power of legislative action in the service of industrial demand is far more influential. Nonetheless, *Organization Space* is an important book, important not so much for the answers it provides — they are few — but for the questions it raises.



Galveston Style

Clayton's Galveston *by Barrie Scardino and Drexel Turner. College Station: Texas A&M Press, 2000. 290 pp., illus., $45.*

Reviewed by Barry Moore

A century ago, Houston was struggling to achieve national commercial and cultural status. Meanwhile, a mere 50 miles away, Galveston, blessed by a deeper port, better climate, a seriously wealthy population, and a well-formed 19th-century idea of what a port city should be, was actually succeeding at it. Among those responsible for that success was architect Nicholas Clayton, who gave form to Galveston's instincts and aspirations and, more than anyone else, transformed the city into a Newport on the Gulf of Mexico.

As important as Clayton was, it took him a while to receive his due in print. But finally there is a book that tells the story of Galveston's great architectural epoch — *Clayton's Galveston*. To describe this handsome volume as long-anticipated would be an understatement. Local preservationists have long been aware of the seminal research into Clayton's legacy begun 25 years ago by city planner and University of Houston instructor Drexel Turner, research that was supplemented by the efforts of architectural historian Stephen Fox and photographer Marilyn Marshall Jones. In 1990, writer Barrie Scardino came aboard to mold the Clayton material into a narrative supported by carefully selected images. The result, it is safe to say, is one of the most anticipated books on Texas architecture in a generation.

Nicholas Clayton came to Galveston at the best possible time. It was seven years after the Civil War and he was a vigorous 32 years old, an Irish native who, at the age of nine, had come to America with his widowed mother and settled in Ohio. He apprenticed as an architect in Cincinnati, then landed on Galveston Island in 1872.

Clayton's Galveston is filled not only with evidence of Clayton's skill as an architect, but also with rare images of the Galveston that existed before he arrived, as well as representative images of the work of his contemporaries. Combined, they create a beautifully bracketed framework for Clayton's own designs. The book's rich photographs, as well as its illustrations from 19th-century publications, create a visceral sense of the quality and scale of Clayton's architecture. Obviously, Clayton-designed buildings still in existence, such as the Gresham House and Old Red at the University of Texas Medical Branch, offer the greatest opportunity for analysis and study. But it is the list of now-extinct structures such as Harmony Hall, the Beach Hotel, the Lasker House, old Sacred Heart Church, and the great Ursuline Academy that enchant and magnetize. It is impossible to devour this feast of images and not want more. Or to resist a trip to Galveston's Rosenberg Library to see what might be found there in the archives that is not in the book.

Nicholas Clayton described himself as the first professional architect in Texas. That he was, as well as the first Texas architect to be widely known outside the state's borders. He had a large, prosperous practice that garnered commissions up the Mississippi, through Louisiana, and around the Gulf Coast to Tampa.

From 1872 through 1900, Clayton was the right man in the right place. Galveston, with its abundant riches, provided unparalleled opportunities for a talented architect. But then came the Great Storm of September 1900, and afterwards, nothing was the same, either for the city or its leading architect. By the time Clayton died in 1916, his practice had shrunk to a bare memory of its former importance, with Clayton working alone out of his home.

Clayton's Galveston unavoidably conveys the sadness of that decline. But at the same time, it celebrates and documents the architectural legacy of the state's first great architect. ■

ModernClassics

Cassina Chaise Longue by LeCorbusier

Vitra Tom Vac Chair by Ron Arad

ICF Lounge Chair by Alvar Aalto

Kartell FPE Chair by Ron Arad

Cassina Nest Love Seat
by Piero Lissoni

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