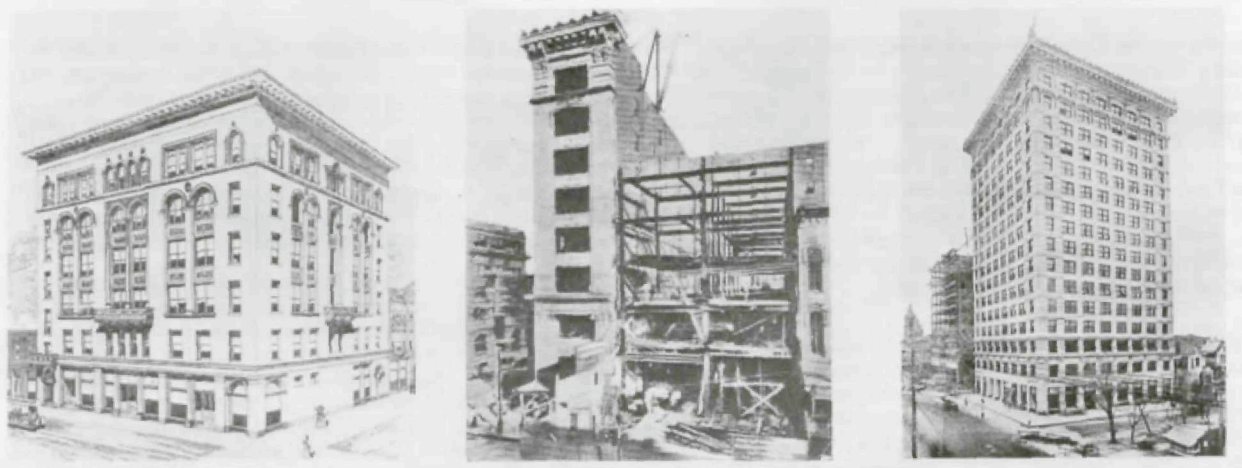


Left to right: Binz Building, 1895, Lorehn and Friz, architects, demolished. Houston's first skyscraper. (*The American Architect and Building News*, vol. 46, Fondren Library, Rice University). First National Bank Building, 1905 and 1909, Sanguinet and Staats, architects. View of steel erection for 1909 addition (right) to 1905 original (left). Houston's first steel-framed skyscraper. (Houston Metropolitan Research Center, Houston Public Library). Main Street looking south from Rusk Avenue, 1911, showing the S.F. Carter Building (center) and the Hotel Bender under construction (left). House of Mrs. A.C. Allen, in lower-right corner, demolished later that year. (Houston Metropolitan Research Center, Houston Public Library)



The skyscraper is a building type that underwent its initial phases of development in New York and Chicago in the last three decades of the 19th century. Its distinguishing characteristic was the height achieved by piling floors of habitable, rentable space on top of one another. Two technological developments contributed especially to the formation of this building type: the steam-powered passenger elevator and structural framing in high-strength, low-density, non-combustible metals. The passenger elevator made it possible to transport people vertically beyond a height that stairs ceased to be practical. "Skeletal" framing in steel (and eventually in steel-reinforced concrete) made it possible to construct buildings higher than was practical with masonry bearing walls. Technical developments in foundation design, artificial illumination, and mechanical ventilation additionally contributed to the practicability of the tall building. The construction of tall buildings was a response to the burgeoning growth of American cities after the Civil War, accommodating greater numbers of people in existing urban centers and providing space from which to conduct efficiently the centralization of American business enterprise.<sup>1</sup>

Tall office buildings first began to be built in Texas during the 1890s.<sup>2</sup> Fort Worth, Dallas, and San Antonio already had experienced tall office-building construction by the time Houston's first skyscraper, the six-story Binz Building, was constructed at Main and Texas in 1894-1895. Just before the Civil War two four-story buildings had been built in Houston; the Capitol Hotel of 1883 was five stories high and possessed a passenger elevator, as did the five-story Kiam Building of 1894. Therefore, the Binz Building (demolished in 1950-1951) did not dramatically alter the profile of Houston's skyline. But because of its height it caught local imaginations. And when illustrated in *The American Architect and Building News* of 17 November 1894, the Binz Building became the first Houston building to be published in an architectural journal.

Designed by Olle J. Lorehn, a young architect recently arrived in Houston, the Binz Building was decorated with Italian Renaissance ornament. Although it possessed an interior frame of cast-iron and steel, its exterior walls were of load-bearing brick. It was not until after the turn-of-the-century that Houston's first steel-framed skyscraper was constructed, the eight-story First National Bank Building of 1903-1905.<sup>3</sup> However, the First National Bank Building retained its superiority for even fewer years than had the Binz Building.

#### Houston's First Skyline

Between 1908 and 1913 a construction boom endowed downtown Houston with a respectable skyline of buildings ranging from seven to seventeen stories in height. These tall buildings adhered to the planimetric, volumetric, and architectural conventions introduced in the Binz Building. In plan, they comprised U or L shapes to facilitate illumination and ventilation. They were slab-sided, rising straight from the sidewalk to the overhanging cornice. Elevations were divided into base, shaft, and attic zones with architectural decoration (usually of classical derivation) reserved only for the street sides; the party-wall sides were left unadorned.

In addition to offices, retail stores, hotels, and hospitals came to occupy tall buildings, as did flats. By 1913, Houston had three high-rise apartment buildings, the Savoy Apartments, the now-demolished Rossonian, and the Beaconsfield Apartments, the first two seven stories, the third eight stories. These were all located on major thoroughfares but in suburban neighborhoods rather than downtown. Beginning with the Binz Building, tall buildings were used to transform Houston neighborhoods and forcibly absorb them into the expanding commercial district. When the 16-story S.F. Carter Building (the tallest of Houston's pre-World War I skyscrapers, although the Rice Hotel of 1913 had 17 floors) and the 10-story Hotel Bender were built at either end of the 800 block of Main Street between 1910 and 1911, a two-story wooden house, set in its own little garden, was left sandwiched in between.

The design of Houston's first generation of skyscrapers was dominated by out-of-town architects. Houston clients seemed not to trust the ability of local firms to take on this building type. Two firms — Sanguinet and Staats of Fort Worth and Mauran, Russell and Garden of St. Louis (Mauran, Russell and Crowell after 1911) — were especially prolific, with Sanguinet and Staats opening a Houston branch office in 1903 to handle its local commissions. D.H. Burnham and Company of Chicago, Jarvis Hunt of Chicago, and Warren and Wetmore of New York designed one tall building apiece in Houston for local entrepreneurs or for national corporations requiring regional headquarters buildings.

As the names (Binz, Paul, Stewart, Scanlan, Settegast, Carter, Bender, Rice, Cotton) of many of Houston's earliest skyscrapers attested, they were built in part to commemorate their owners. One entrepreneur, Jesse Holman Jones, declined to comply with this practice. Instead, he named his buildings after their major tenants. Jones shrewdly understood the skyscraper to be an economic phenomenon. He built to make money and his projects were designed especially to achieve this purpose. Jones was intimately involved in the design of his buildings, which were planned to incorporate a number of profitable uses, to be expandable, and to be constructed and maintained as efficiently as possible. With the exception of the Rice Hotel, all of Jones's early buildings were built with structural frames of reinforced concrete, making them among the tallest concrete buildings in the United States during the early 1900s and, more to the point perhaps, cheaper to erect than steel-framed buildings.<sup>4</sup>

#### The Soaring Twenties

Sanguinet and Staats's S.F. Carter Building, for only a few months the tallest building in Texas, remained the tallest in Houston from 1911 until 1926. After 1913 the pace of tall building in Houston slowed. During 1917 and 1918 it halted altogether and resumed only slowly in the early 1920s. But as Houston expanded to become the largest city in Texas by 1930, another surge of tall building construction dramatically changed the appearance of the city. This was marked not only by a general increase in the height of tall buildings, but by striking compositional and stylistic developments, and by the tendency to define new suburban subcenters, far from downtown, with tall buildings. Dispensation for such developments stemmed from a mythology of the skyscraper that Rem Koolhaas has described as "delirious."<sup>5</sup> This romantic mythology designated the skyscraper as symbolic of a new era, an icon of the glamor of an impending modern, urban civilization.

Despite these trends, Houston skyscrapers of the 1920s still adhered to the use of U- or L-shaped plans, tripartite compositional divisions, and the custom of architecturally ornamenting only the street sides of a building, irrespective of its height. The perpetuation of these tendencies derived in part from a much greater reliance on local architects than in the previous decade. Sanguinet and Staats (whose Houston office became, in succession, Sanguinet, Staats, Hedrick and Gottlieb, then Hedrick and Gottlieb) and Alfred C. Finn (a former Sanguinet and Staats draftsman who became Jesse Jones's architect) were Houston's chief skyscraper architects during the 1920s, with Joseph Finger and James Ruskin Bailey distant runners-up. Sanguinet, Staats, Hedrick and Gottlieb were the most accomplished. Their work was especially evident on the east side of downtown, where they participated with the entrepreneur Ross S. Sterling in defining a new corridor of high-rise development along Texas Avenue. Finn (and Jesse Jones) concentrated on the Main Street corridor, which they continued to expand up the street.

New downtown buildings typically ranged from 16 stories to 22 stories in height, with two taller than 30 stories, while suburban skyscrapers rose from 8 stories to 11 stories high. Tall buildings constructed to house specialized professional or commercial tenants, a development of the '20s, resulted locally in the 16-story Cotton Exchange Building of 1923-1924 and the 21-story Medical Arts Building of 1924-1926, Houston's only neo-Gothic skyscraper, both by Sanguinet, Staats, Hedrick and Gottlieb.<sup>6</sup> In the near-downtown area tall-building construction remained an acceptable way to induce change in existing land use, site coverage, and height patterns. But the two tall residential hotels built near The Museum of Fine Arts in the middle 1920s, 2 1/2 miles south of downtown, drew criticism for encroaching on newly-developed neighborhoods of single-family housing. The *Report of the City Planning Commission*, published in 1929, singled out Joseph Finger's 8-story Plaza Apartment Hotel on Montrose (1924-1926) as an example of the environmental consequences of Houston's lack of height control and zoning ordinances.

It was just such legal strictures that led to the shaping of a distinctive formal type for the 1920s skyscraper. The New York Zoning Law of 1916 established formulas for height control, mandating that as a building rose, it step back in plateau-like stages from the street line. The result was a tiered profile that architects often capped with an elaborate city crown terminus — the "setback," which by the middle 1920s had become the architectural symbol of the modern skyscraper.

The first two setback skyscrapers to be built locally were the 32-story Niels Esperson Building of 1924-1927 by the Chicago architect John Ebersson, and the 22-story

# Scraping the Houston Sky: 1894-1976

Stephen Fox

Top to bottom: Main Street looking north from Capitol Avenue, 1913, showing the Rice Hotel (left), the Binz Building (right), and the Scanlan Building (right background). (Houston Metropolitan Research Center, Houston Public Library). View of Plaza Apartment Hotel (left) and adjacent Reid House on Montrose Boulevard reproduced in the Report of the City Planning Commission (1929) above the caption: "The result of no zoning. An expensive residence heavily depreciated by a large apartment." (Report of the City Planning Commission). View looking north from Hermann Park toward the Warwick (right) and The Museum of Fine Arts (left), 1927. (Houston Metropolitan Research Center, Houston Public Library)







Left to right: Niels Esperson Building, 1927, John Ebersson, architect. (American Architect, vol. 132, Fondren Library, Rice University). View of the Gulf Building (right), the S.F. Carter (Second National Bank) Building (left foreground), and the Niels Esperson Building (left background), 1930. (Houston Metropolitan Research Center, Houston Public Library). Humble Tower, 1936, John F. Staub and Kenneth Franzheim, architects. The first Houston skyscraper to be built with a central air-conditioning system. (Houston Metropolitan Research Center, Houston Public Library).

Petroleum Building of 1925-1927 by the New York architect Alfred C. Bossom. The Esperson Building was an ebullient production that terminated in a steel-framed, terra-cotta clad *tholos* memorializing the eponymous Niels Esperson. The massing and decoration of the Petroleum Building derived from Bossom's proposition that the Meso-American stepped pyramids of Central America represented the most valid precedent for shaping the modern American setback. The last two skyscrapers to be completed in Houston before the Depression, the 37-story Gulf Building in 1927-1929 and the 21-story Sterling Building of 1929-1931, incorporated what, in the late '20s, became the canonic modern style of the setback skyscraper, *Art Déco*. By allying flat, low-relief decoration concentrated near the ground with sculptural massing that emphasized vertical ascent, *Art Déco* eclipsed both the use of classical decor and neo-Gothic detail for the exteriors of tall buildings.

Jesse Jones's Gulf Building, at 450 feet the tallest of Houston's 1920s skyscrapers and, for one year, the tallest west of the Mississippi, summed up the extravagant skyscraper euphoria of the late 1920s. Although the design — a collaboration of Alfred C. Finn with the New York architects Kenneth Franzheim and J.E.R. Carpenter — was based on Eliel Saarinen's Chicago Tribune Building project of 1922, its stepped profile evoked Manhattan, skyscraper capital of the world, and promised to transform Houston magically into the New York of the South. The Gulf Building also exemplified what might be called the urbane skyscraper of the '20s. Its six-story base, which extended from Main Street through the block to Travis, contained the specialty store of Sakowitz Brothers, several small shops, a compact elevator lobby, and the majestic banking hall of the National Bank of Commerce. The setback tower of the Gulf Building was free-standing, square in plan, and obtained four architectural façades rather than two. Atop its four-story crown were mounted an observation deck and the Jesse H. Jones Aeronautical Beacon. At night the towers of the Gulf and Niels Esperson buildings were brilliantly illuminated, highlighting their role as the twin *stadtkrone* of the Houston skyline.

#### Downs and Ups

The Great Depression abruptly halted Houston's race for the sky, quashing such "delirious" proposals as a 20-story City Hall of 1929 modelled on the Los Angeles City Hall, a 21-story First Christian Church skyscraper of 1929, and a deluxe, 18-story cooperative apartment tower of 1931, to have been built alongside the residential enclave of Shadyside. The only one of these exotic visions to be built was Joseph Finger and Alfred C. Finn's Jefferson Davis Hospital on Allen Parkway (designed 1931, built 1936-1938). This was a free-standing, 12-story, cruciform-planned, setback skyscraper architecturally finished on all sides, a belated tribute to the 1920s' propensity for skyscraper public buildings.

Although the Depression proved to be a temporary setback, none of the tall buildings built between 1934 and 1942 competed in height with those of the '20s. Most were additions or annexes to existing tall buildings, the highest new buildings being the ten-story Federal Office Building of 1936-1938, the ten-story City Hall of 1937-1939, and the ten-story YMCA Building of 1938-1941. While Kenneth Franzheim's YMCA retained a somewhat 1920s-ish flavor with its picturesque setback massing and Renaissance detail, the Federal Office Building, designed by Louis A. Simon, Supervising Architect of the Treasury, and Joseph Finger's City Hall were more typical of the 1930s. The City Hall was a blocky, stepped mass accentuated by a smooth limestone skin, vertical channels containing the window bays, and panels and screens of "modernistic" ornament, the '30s successor to '20s *Art Déco*. Finger exchanged the previous decade's model (the Los Angeles City Hall) for a

Oil and Gas Building, 1939, Kenneth Franzheim, architect, demolished. (Photo by Elwood M. Payne, Architectural Record, vol. 87, Fondren Library, Rice University)



more up-to-date reference, Holabird and Root's modernistic Racine County Courthouse in Racine, Wisconsin of 1932.

American skyscrapers of the first half of the 20th century did not reflect architecturally the technological developments that made their construction, maintenance, and inhabitation possible.<sup>7</sup> Houston was no exception. The introduction of air-conditioning in the early 1930s, although widely heralded, did not exercise any radical effect on the design of tall buildings.<sup>8</sup> The nine-story Humble (now Main) Building of 1919-1921, by the New York architects Clinton and Russell, became in 1932 the first local office building to be equipped with a central air-conditioning system. Its annex, the 17-story Humble Tower of 1934-1936 by John F. Staub and Kenneth Franzheim, was the first local tall building to be built with central air-conditioning, a fact acknowledged only by the handsome neoclassical penthouse with which Franzheim capped the building to conceal the sys-



View of preliminary scheme for McCarthy Center, 1945, Hedrick and Lindsley, architects. The central building became the Shamrock Hotel, completed in 1949. (Houston Metropolitan Research Center, Houston Public Library)

tem's cooling tower. The most visible architectural concession to technological development among Houston skyscrapers involved the automobile. A limited number of buildings — three downtown and the two hotels near The Museum of Fine Arts — contained built-in parking space or minuscule (but stylistically harmonious) parking garages.

It was Kenneth Franzheim, having moved his office from New York to Houston in 1937, who embraced both the car and cool air in one of his most urbane buildings, the now-demolished Oil and Gas Building of 1937-1939. The small, seven-story, L-shaped building contained a double-level attached garage, a Conoco service station (Continental Oil was the chief tenant), a ground-floor shopping arcade, street trees along three sides of the building, a setback level with extensive terraces occupied by the Ramada Club, and a crowning modernistic penthouse concealing the air-conditioning equipment.

#### The End of an Era

A postwar building boom that ran its course between 1945 and 1951 concluded, rather than superseded, the "delirious" era of the skyscraper that began in the 1920s. It was the last gasp of the urbane, setback skyscraper tradition in Houston. Its monuments were the 23-story City (now Southern) National Bank Building of 1945-1947 by Alfred C. Finn, the 18-story, 1,001-room Shamrock Hotel of 1945-1949 by Hedrick and Lindsley, the 16-story Hermann Professional Building of 1947-1949 by Kenneth Franzheim and Hedrick and Lindsley, and the 18-story Prudential Building of 1950-1952 by Kenneth Franzheim.

The most interesting were the latter three, for they defined an extension of the museum-area subcenter in "uptown" Houston, adjacent to the newly-established Texas Medical Center. Glenn H. McCarthy, who built the Shamrock, envisioned it as the centerpiece of McCarthy Center, a suburban skyscraper city based on the model of Rockefeller Center in New York of 1930-1940. Franzheim mixed modernistic details and massing with historical ornament at the Hermann Professional Building, as had Hedrick and Lindsley at the Shamrock. Historical quotations were dispensed with at the Prudential Building (now the University of Texas Health Science Center), which occupied a 27½-acre site containing gardens, tennis courts, a swimming pool, and parking lots. Instead, Franzheim composed it as a series of stepped slabs, also on the Rockefeller Center model. The Prudential's architecture was stodgy but it met the ground confidently and put on a good show up top, where the company's name and insignia, the Rock of Gibraltar, were featured in spectacular, Texas-sized neon displays. The Prudential Building was the first tall office building to be constructed outside downtown Houston. All three of these uptown buildings were free-

standing, but the Shamrock still preserved a distinction between its front façade and its massive rear elevation, which abutted the one- and two-story houses of Braeswood.

Although Kenneth Franzheim replaced Alfred C. Finn as Houston's principal skyscraper architect during the late 1940s, his firm's work began to display a loss of direction thereafter. For in attempting to come to terms with modern (rather than modernistic) architecture, Franzheim's buildings became less convincing urbanistically and only marginally more up-to-date. The urbane formulas prevailed at the aggressively green 21-story Texas \* National Bank Building of 1952-1955 and the 24-story Bank of the Southwest Building of 1953-1956, but the magic was gone. The old formulas no longer worked. And despite the fact that the Bank of the Southwest Building was faced with Houston's first all-aluminum curtain-wall, that its underground passageways to the Commerce Building and the Ten-Ten Garage inaugurated the downtown tunnel system, and that Florence Knoll designed its immense banking hall (which contained a mural by Rufino Tamayo), the impact of the new was still too weak to compensate for the exhaustion of the old. Franzheim's last tall building in Houston was a tactful, appropriate, but no longer assured 16-story annex of 1958-1960 to Warren and Wetmore's grandiloquent Texas Company Building of 1915.

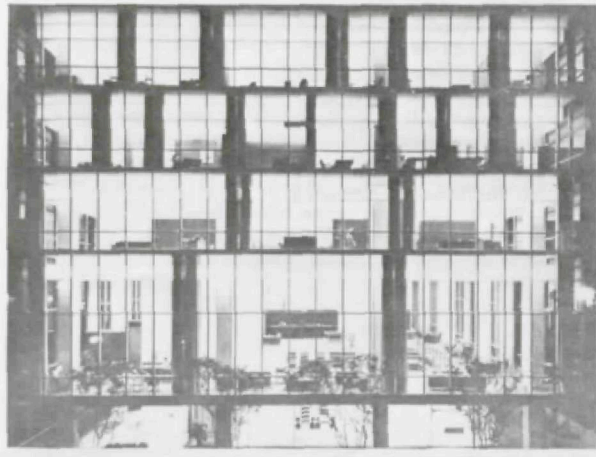
#### The Forward Look: Modern Architecture Arrives

During the 1950s most new office construction occurred outside the central business district, which underwent a period of stagnation that for a time provoked considerable alarm. The modernist counterparts of Franzheim's buildings typically were small, occupying less than full-block sites, and therefore conforming (by necessity rather than design) to the urbane tradition: U or L plans, small lobbies, retail shops and services on the ground floor entered directly from the street, even the despised distinction between "front" and "back." As an ideal form the preferred alternative to the setback was the slab, with blank end-walls bracketing long expanses of gridded glass, aluminum, and porcelain-enameled curtain-wall, "floating" above ranks of exposed structural columns at the ground-floor level. The image, derived from Le Corbusier's tall-building designs of the late 1920s and 1930s, filtered through his design for the Secretariat of the United Nations in New York of 1947 (as executed by Harrison and Abramowitz in 1950) and Lever House, also in New York of 1950-1952, designed by the firm of Skidmore, Owings and Merrill. Paradoxically, America's "modern" tall buildings of the 1950s were as dependent on the late 1920s as were their old-fashioned modernistic competitors.

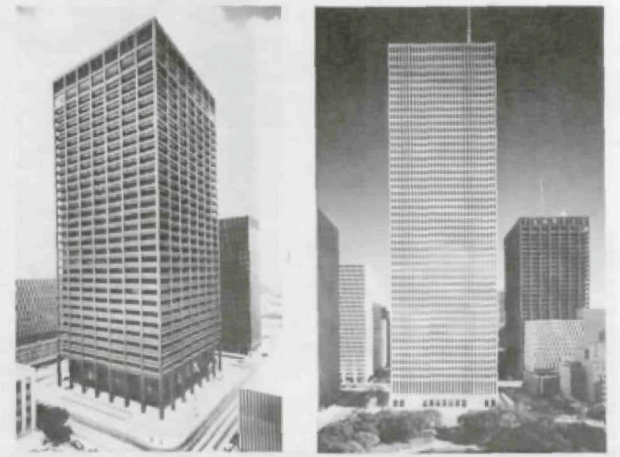
Hermon Lloyd and W.B. Morgan produced Houston's first modern skyscraper, the 21-story Melrose Building of 1949-1953, approaching the Corbusian model more closely though with The Mayfair, a 16-story apartment building of 1953-1956 near the Prudential Building. The Lever House *parti* (a horizontally aligned slab floating on structural columns, atop which a vertically aligned slab was positioned) was omnipresent locally. But it lent itself to considerable variation, ranging from the doctrine (Skidmore, Owings and Merrill's first Houston building, the 18-story Medical Towers of 1954-1957 in uptown Houston, for which Golemon and Rolfe were architects of record,<sup>9</sup> to the clunky (Wirtz, Calhoun, Tungate and Jackson's 16-story Memorial Professional Building of 1955-1958, now demolished, faced with a garish turquoise-and-gold anodized aluminum curtain-wall), to the chunky (the 11-story World Trade Center of 1959-1962 by Wilson, Morris, Crain and Anderson, where the *parti* was adhered to, but the proportions were somewhat off). In recognition of Houston priorities, the floating horizontal bases of the Medical Towers and the Memorial Professional Building were filled with parked cars. Disregarding the Lever House formula was the five-story Gibraltar Building of 1957-1959 by Greacen and Brogniez and J.V. Neuhaus III. Sheathed on three of its four sides entirely in heat-absorbing solar gray glass, Houston's first all-glass curtain-wall was indebted nonetheless to Le Corbusier, who had proposed such an all-glass curtain-wall with his *mur neutralisant* of 1929.

The changes that these modern buildings made to the appearance of Houston in the 1950s were slight. In contrast to Dallas, where Harrison and Abramowitz's Republic National Bank Building (1954), William B. Tabler's Statler Hilton Hotel (1955), and Welton Becket and Associates' Southland Center (1958) were the biggest and most conspicuous of a group of modern towers exhibiting the forward look in '50s modern architecture, Houston's skyline still peaked at the Gulf and Niels Esperson buildings. There were no concentrations of new tall buildings. Most were dispersed along the Main





Left to right: Night view of Gibraltar Building, 1960, Greacen and Brogniez and J.V. Neuhaus, III, architects. (Photo by Harper Leiper, Arts and Architecture, vol. 77, Fondren Library, Rice University). View of original scheme for Cullen Center, 1960, Welton Becket and Associates, architects. (Arts and Architecture, vol. 77, Fondren Library, Rice University). Tennessee (now Tenneco) Building, 1963, Skidmore, Owings and Merrill, architects. Surrounding it are the Oil and Gas Building (lower left), the Medical Professional Building (middle left), and the Southwest Tower (middle right), all demolished. (Houston Metropolitan Research Center, Houston Public Library). One Shell Plaza, 1970 (center), and Two Shell Plaza, 1971 (left background), Skidmore, Owings and Merrill and Wilson, Morris, Crain and Anderson, architects. (Photo by Ezra Stoller, Skidmore, Owings and Merrill)



Street corridor. Even in uptown Houston the skyline was dominated by Franzheim's and Hedrick's postwar setbacks.

### The Tower in the Plaza

This trend reversed suddenly in the late 1950s. Between 1958 and 1960, the 32-story First City National Bank Building by the New York office of Skidmore, Owings and Merrill with Wilson, Morris, Crain and Anderson (1958-1961), the 44-story Humble (now Exxon) Building by the Los Angeles architects Welton Becket and Associates with Golemon and Rolfe and George Pierce-Abel B. Pierce (1958-1963), the 33-story Tennessee (now Tenneco) Building by the San Francisco office of Skidmore, Owings and Merrill (1960-1963), Cullen Center, a 6-block urban renewal-style planned development by Welton Becket and Associates (1960-1963), the 28-story Sheraton-Lincoln Hotel (1960-1962), and the 21-story Southwest Tower (1960-1963, now demolished), both by Kenneth Bentsen Associates, were announced. These buildings provided downtown Houston with a sharp, clean-lined, classic modern skyline that made Dallas's look dowdy by comparison. At 600 feet, the Humble Building topped the Gulf Building and was, for one year, the tallest building west of the Mississippi.

All of these buildings were constructed by corporations for their own occupancy. Almost all occupied full block sites and those that didn't (Bentsen's two buildings) were set back from the property lines. This permitted conformance to the newest model for emulation, Ludwig Mies van der Rohe and Philip Johnson's Seagram Building in New York of 1958, which was set back from the sidewalk to make room for an open, paved plaza from which the building rose as an isolated tower. The image of the tower in the plaza governed Houston's newest high-rises. All were based on square or rectangular plans constituted by a repeating module determining the dimensions of the structural bays, the curtain-wall, the internal partitioning systems, the hung, acoustical ceilings, panels of fluorescent lighting fixtures, and even, in some cases, the furniture layouts. Central elevator and service cores permitted a uniform depth of leasable space on all sides of the buildings and helped to reduce the number of internal columns required. Such thorough rationalism made modern architecture very attractive economically. The use of nationally-known architecture firms brought to Houston's new high-rises a level of currency and quality not experienced since the early part of the century. Moreover, the practice of having Houston architects associate with the imported firms raised local standards of tall-building design considerably.

The deployment in most of these buildings of an externalized structural frame (what Skidmore, Owings and Merrill called an "exo-skeleton") that doubled as a *brise-soleil* (literally a "sun-break," another invention of Le Corbusier) rendered them "truthful," environmentally responsive (therefore "regional"), and more interesting visually (and more dignified) than the flat, flashy curtain-walls of the '50s. The grid remained, but the scale was more monumental. External finishes, whether of glass and porcelain enamel, anodized aluminum, marble, or precast concrete, were monotone and sober. The creation of ground-level plazas finished with elegant paving, planting, and fountains seemed to represent a tasteful, enlightened alternative to the crowding of drug stores, beauty parlors, coffee shops, and shoe repair stands up to the sidewalk. Such services were tucked discreetly into the basement if their presences were deemed necessary.

The tall office buildings of the 1960s possessed as strong a type form as those of the late 1920s and 1930s. Individually, those built in Houston were exemplary, and their effect on the skyline was exhilarating. But for urbanity they substituted rational planning and good

taste. Collectively, these buildings, isolated in their plazas, tended to erode rather than relieve the fabric of downtown Houston, which, under the impact of retail flight and the economics of speculation, slowly came unraveled. For although implicitly dependent on the existing fabric to provide a dense, contrasting "cityscape," new high-rises tended to go up amidst blocks of land cleared of earlier development for asphalt-topped parking lots, awaiting the day when tall office buildings would be built upon them as well. Instead of "cleaning up" downtown Houston, these lithe, graceful, modern towers participated in its cleaning-out.<sup>10</sup>

### The Rise of Suburban Skylines

Complementing the reshaping of the downtown skyline was a suburban high-rise boom that began in the middle 1960s. Emerging as nodes of tall-building development were Sharpstown Center in Frank W. Sharp's 6,500-acre Sharpstown, 9½ miles southwest of downtown, Greenway (now Greenway Plaza), at the western terminus of the Richmond Avenue "Office City" corridor, and the Post Oak-Westheimer intersection, 5½ miles west of downtown. Predicated upon access by private automobile, each of these sites adjoined a part of the regional freeway network then under construction. Each was conceived as an internally-focused development, marrying the planning and design techniques of modern architecture and urbanism to the economics of speculative real estate development.

Of these, the two most cohesive were Greenway, a 41-acre office and residential park begun in 1963 but sold in 1967 to Kenneth Schnitzer's Century Properties, and the Galleria Post Oak at Post Oak and Westheimer on a site purchased in 1964 by Gerald D. Hines Interests. Schnitzer doubled the size of Greenway Plaza by buying-out an entire restricted subdivision that adjoined it to the west and retained Lloyd, Morgan and Jones to replan the tract. They adopted the tower-in-the-park strategy first proposed by Le Corbusier, arranging a series of 11-, 21-, and 31-story office buildings built between 1968 and 1973 atop a landscaped podium containing a parking garage and a retail concourse. Hines retained Hellmuth, Obata and Kassabaum of St. Louis and Neuhaus and Taylor to plan the Galleria as a three-level, enclosed shopping mall to which were attached two office towers of 22 and 25 stories, a 22-story hotel, and the specialty store of Neiman-Marcus. It was opened in stages between 1969 and 1973.

### New Directions

By the end of the decade Century Properties (now Century Development) and Gerald D. Hines Interests had emerged as the two major developers of high-rises in Houston. Both began planning their first major downtown buildings in 1965: Century the 28-story Houston Natural Gas Building by Lloyd, Morgan and Jones (completed 1967) and Hines the 50-story, 715-foot tall One Shell Plaza by the Chicago office of Skidmore, Owings and Merrill and Wilson, Morris, Crain and Anderson (completed 1971). These marked the course for the immediate future in Houston: new tall buildings would be built by developers rather than by corporations for their own use.

One Shell Plaza closed out the '60s architecturally as it introduced the '70s entrepreneurially. It was the perfect tall office building: economically determined, optimally planned, structurally innovative, and architecturally pure in its glistening mantle of travertine.<sup>11</sup> Slightly boring but prestigious nonetheless, One Shell Plaza established Smith Street as downtown's new avenue of skyscrapers, sired two progeny (the adjacent 26-story Two Shell Plaza and the 50-story One Shell Square in New Orleans, both by SOM and WMCA for Hines), and recaptured for a Houston building (if only briefly, once again) the title of tallest west of the Mississippi. Gerald Hines approached real estate development with the acumen of Jesse Jones; he keenly understood the economic nature of the tall building and how to exploit it for maximum profit. He also discovered that the name recognition value of designer architecture figured importantly in attracting both project financing and prime corporate tenants. Hines thereby became the first real estate developer since Herbert Greenwall and William Zeckendorf to be acclaimed a patron of architecture.<sup>12</sup> In Houston his example was instrumental in maintaining the generally high standards of high-rise architecture achieved in the early 1960s.

### The Shapes of Things to Come

By 1970 the most critical architectural problem confronting the design of tall office buildings in Houston

seemed to be the avoidance of repetition. Philip Johnson and John Burgee's Pennzoil Place (1970-1976) and Post Oak Central (1973-1976), both with S.I. Morris Associates for Hines, resolved that problem decisively and opened the present era in Houston's skyscraper history. Pennzoil, although clad in a Seagram-like curtain-wall, broke every rule that made One Shell Plaza the perfect office building. Every rule but one, that is. It was immensely successful financially. That was the point of the tall building in the first place, and in Houston it still is.

### Notes

- 1 On the history of the skyscraper, see: Francisco Mujica, *History of the Skyscraper*, New York, DaCapo Press, 1979, first published 1929; Alfred C. Bossom, *Building to the Skies: The Romance of the Skyscraper*, London, The Studio Limited, 1934; Carl W. Condit, *American Building Art: The Twentieth Century*, New York, Oxford University Press, 1960; Winston Weisman, "A New View of Skyscraper History," in Edgar Kaufmann, Jr., editor, *The Rise of an American Architecture*, New York, The Metropolitan Museum of Art and Praeger Publishers, 1970, 113-160; Paul Goldberger, *The Skyscraper*, New York, Alfred A. Knopf, 1982; Jeffrey Karl Ochsner, "Tall Buildings: Houston as a Case in Point," *Texas Architect*, vol. 32, May/June 1982, 38-45; and John Pastier, "The Cardboard Skyscrapers of Texas, 1911-1932," *Texas Architect*, vol. 32, May/June 1982, 55-57.
- 2 Willard B. Robinson and Todd Webb, *Texas Public Buildings of the Nineteenth Century*, Austin, University of Texas Press for the Amon Carter Museum of Western Art, 1974, 111-113.
- 3 Designed by Sanguinet and Staats and expanded in 1908-1909 and again in 1922-1925, the First National Bank Building may have been the first steel-framed skyscraper in Texas, inasmuch as Dallas's first steel-framed skyscraper, the 14-story Praetorian Building by C. W. Bulger and Son, was not built until 1909.
- 4 Condit, *American Building Art*, 156-159. Jones's first downtown building was the nine-story, concrete-framed Bristol Hotel Annex of 1908-1909 (demolished 1953). This was followed by a series of other concrete-framed buildings: the ten-story Chronicle and ten-story Texas Company (now Bankers Mortgage) buildings of 1909-1910 by Mauran and Russell, and the ten-story Foster and ten-story Gulf (now Houston Bar Center) buildings, both by Alfred C. Finn (all extant but refaced). According to his biographer, Jones had wanted Houston to remain a "ten-story city," but built higher than that after the S.F. Carter Building was constructed. See Bascom N. Timmons, *Jesse H. Jones, The Man and Statesman*, New York, Henry Holt and Company, 1956, 77-83.
- 5 Rem Koolhaas, *Delirious New York: A Retroactive Manifesto for Manhattan*, New York: Oxford University Press, 1978; also Diana Agrest, "Architectural Anagrams: The Symbolic Performance of Skyscrapers," *Oppositions 11*, Winter 1977, 26-51.
- 6 The first specialized medical professional building in the United States traditionally is said to have been the 19-story Medical Arts Building of 1923 in Dallas by Bargebaugh and Whitson. The tallest concrete-framed building in the world at the time of its completion, it was demolished in 1978.
- 7 Condit, *American Building Art: Materials and Techniques from the First Colonial Settlement to the Present*, Chicago, The University of Chicago Press, 1968, 178.
- 8 The first primitive air-conditioning system in Houston was installed by the Dixie Heating and Ventilating Company in the banking hall of the Second National Bank in the S.F. Carter Building in 1922. Two years later, a Dixie system was installed in the cafeteria and coffee shop of the Rice Hotel. See "Air Engineering," *Houston*, vol. 4, August 1933, 9; and, in the same issue, "Air Cooling Everywhere," 10-11. The issue also contains an advertisement for the Dixie company on page 9 listing their installations in Texas, Louisiana, Florida, Alabama, and Tennessee, most of which were in movie theaters.
- 9 Reyner Banham identified George Willis's 21-story Milam Building in San Antonio of 1928 as the first centrally air-conditioned tall office building in the world, as well as the tallest concrete-framed building in the world at the time of its completion. See Reyner Banham, *The Architecture of the Well Tempered Environment*, Chicago, The University of Chicago Press, 1969, 178-179.
- 10 The Medical Towers was the first Houston building to win a *Progressive Architecture* Design Awards citation (1954) and the first tall Houston building to win an AIA Award of Merit (1957). The only other tall Houston buildings to receive an AIA Honor Award have been the Tenneco Building (1969) and Pennzoil Place (1976).
- 11 Because Houston had no planning controls, all sites, in theory, were eligible for high-rise construction. Those who paid high prices for "underdeveloped" property were encouraged by taxing policy to demolish existing improvements (often low-rise retail buildings leased to merchants facing increased rents coupled with a disappearing clientele), thereby allowing sites to revert to an unimproved status, lowering taxes to a minimum, but generating income by using the cleared sites for surface parking.
- 12 At One Shell Plaza, SOM's structural engineer, Fazlur Khan, devised what he called a framed-tube type of structural system, combining it with the use of light-weight concrete to achieve significant reductions in construction cost. The building's designer, Bruce Graham, articulated the structural properties of the external wall tube by rippling its surfaces where the structural loads were greatest. At the time of its completion, One Shell Plaza was the tallest concrete building in the world. See Gene Dallaré's interview with Joseph P. Colaco, "The Quiet Revolution in Skyscraper Design," *Civil Engineering/ASCE*, vol. 53, May 1983, 54-59.
- 13 Paul Goldberger, "High Design at a Profit," *The New York Times Magazine*, 14 November 1976, 76-79.