

THE APARTMENT BOOM

It is still going strong—but will it last? The answer depends on what the apartment builders have learned about better design and better financing, and about the nature of their market.

Apartments are the *only* modern building type in which the U.S. has consistently lagged behind other countries—at least in terms of design.

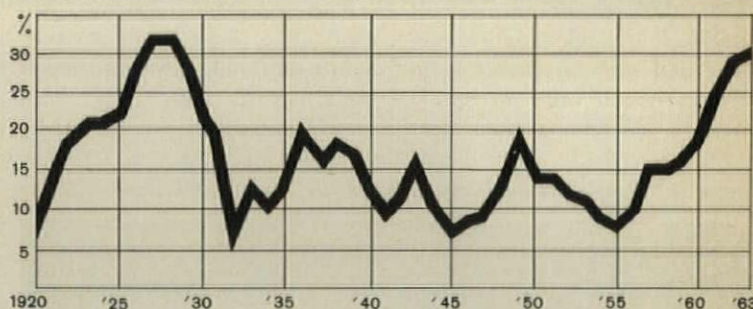
This rather shocking fact is explained, in part, by the nature of the apartment building business in America since the early 1920s: its booms have been spectacular but short-lived; to profit from them, investors usually had to get in fast—and be prepared to pull out just as fast.

So there has never been much time to “waste” on good design. The best apartment building, from the point of view of the speculative investor at least, was the familiar, ready-made model that could go up first thing Monday morning.

As a result, the architectural quality of most U.S. apartments over the past 40 years has been a disgrace. Indeed, some of the solid apartments of the 1920s look better than their notably less solid neighbors of the 1960s. Still, the outlook is not all black: more discriminating tenants, more discriminating builders, somewhat improved financing, more economical methods, better mechanical equipment—plus a more realistic design approach on the part of some architects—all this has produced a new promise of better design.

This is the story of the problems and the promise.

PERCENTAGE OF APARTMENTS TO TOTAL NUMBER OF DWELLINGS BUILT 1920-63



Statistics tell us that there has been a rousing apartment building boom underway for some time—1.6 million units since 1956, 410,000 apartments last year alone.

Yet, in New York, Denver, Los Angeles, Cleveland, and elsewhere, vacancy rates have been rising right along with new apartments, and prospective tenants are being lured with several months' living rent-free, with free furniture or even free baby-sitting. What, then, is going on?

A glance at the statistics of the past 40 years (above) provides part of the answer. Apartment booms have come—but unhappily, they have gone just as quickly. In the six years from 1923 to 1928, over 1.3 million apartments were built, but the depression and World War II cut apartments drastically, and it took 20 years to equal that volume.

Five years after 1927, when 257,000 units were built, annual production had sagged to a bare 9,000 apartments. After World War II, apartment production rose again, under the spur of the federal "608" program. But the windfall scandal investigations punctured that balloon, and it was another decade before 200,000 units were built in one year.

Still, today's market presents quite a different picture from that of the 1920s, or even from that of the immediate postwar period. Dale M. Thompson, president of the Mortgage Bankers Association of America, last month pointed to the two key elements underlying today's apartment market: first, "the large and growing number of small families in the younger and older age ranges," and second, "a substantial increase in the number of single-person households." Thompson added a third important reason for the current apartment boom: "the growing scarcity and cost of land for house building and the growing cost and inconvenience of transportation. . . ."

These three reasons—more small families, more single-family households, and growing problems in suburbia—sound valid enough to ensure a continuing apartment

boom. But all three phenomena may vary from city to city. So the answer to "is the boom here to stay?" is—obviously—"it depends on what you mean by 'here.'"

Are apartments for families?

The population structure is especially important. Net new family formations will stay up around 700,000 or more for several years at least. This year, marriages will total a record 1.5 million, and the marriage rate is expected to continue to increase. Moreover, the two age groups which most favor apartments—the 20 to 25 category and couples over 55—are growing fast. By 1970, these two groups will have grown from 24 per cent of the total population to 27 per cent.

In the past decade, the number of persons living alone has more than doubled, from 2.3 million to 4.8 million. In Manhattan, for instance, almost two-thirds of the women over 20 are either single or widowed, divorced or separated. (This is one reason why Manhattan's apartment builders concentrate on efficiency units.)

The population structure will continue to favor apartments over houses until today's young couples begin having children and need more living space. But then these

couples will run smack into the other factor boosting apartment construction: a shortage of land for suburban tract development. Land prices have more than quadrupled in most big city suburbs, with much land now selling for better than \$10 per square foot. This makes it tougher to get desired returns on single-family structures, and makes builders look more favorably on apartments.

Apartment for suburbia?

At the same time, suburban communities have come to realize that apartment buildings pay more than their fair share of community costs, particularly for schools—whereas tracts of single-family homes invariably create deficits in community budgets.

A recent study in Stamford, Conn. showed that apartments produce a cost-revenue "surplus" of \$33.34 annually for each unit surveyed, and this surplus covered school costs only, which comprise about 40 per cent of that city's budget. One reason: high-rise apartments attract young families without school-age children, and older families whose children are on their own or in college. On the other hand, in the average single-family dwelling, there is one school child from every two houses compared to one public school child from every eight apartment units.

Love those taxes!

Suburbs are also beginning to realize that apartments represent much more intensive—and profitable—use of the increasingly scarce land. On an acreage basis, apartments are valued as much as five times higher than single-family houses.

For example, a 1962 study by the Urban Land Institute showed that in one Philadelphia suburb, land developed for houses had an average market value of \$40,000 an acre while land on which high-rise apartments were built showed an average value of over \$200,000. The Philadelphia survey reinforces

the Stamford findings: high-rise apartments, particularly luxury units, can provide more than twice as much tax revenue as any suburban land use.

These statistics are not lost on the suburbs—zoning restrictions, which once were formulated to keep out high-rise apartments, are fast being reshuffled to invite them.

Mortgages are easier

There is a third factor that has helped create the apartment building splurge of the past two years: the relatively "soft" mortgage money market. In fact, the supply of investment capital looking for the handsome returns traditionally associated with building (15 to 25 per cent) is so plentiful, that many apartment projects have seen the light of day just because an investor pressed a builder to "get something up—anything!"

Not only have interest rates declined over the past year or so, but lenders are allowing thinner equities and higher loan-to-value mortgages than in postwar years. As Economist James C. Downs says, "Despite a dawning surplus of income property, we are creating it faster than ever in history. As a result, we see declining profits and higher vacancy rates. . . ."

But overall vacancy rates don't tell much about local situations. The national vacancy rate for rental units actually declined last year, from 7.7 per cent to 7.3 per cent. Even in cities, the rate went down, from 6.9 per cent to 6.6 per cent. However, the picture changes radically when you consider the five cities which have been the scene of 52 per cent of all apartment building at the peak of the boom—New York, Los Angeles, Chicago, San Francisco, and Washington.

For the past three months, New York's newspaper strike has aggravated an already sticky situation: the city had a fantastic eruption of new apartments (largely because of a change in zoning regulations, which meant that every would-be

Typical of Manhattan's apartment boom are these Third Avenue co-ops



builder was trying to get his plans approved before the old law ran out). A three year's supply of applications for apartments was filed in 1961 alone to beat the deadline and now the first of those apartments are beginning to come on the market. And that market, particularly for luxury units, was nearing saturation before this latest flood.

The upshot is a dizzying array of concessions—free furniture, air conditioning, television, baby-sitting, and, of course, several months' free rent in just about any of the newer apartments. In short, the New York market appears temporarily glutted. Builders who used to count on having their buildings 75 per cent rented within six months are now happy to get half their tenants within 18 months. If they somehow seem to scrape along and meet their obligations nonetheless, it makes one wonder what profits there are—or used to be—in New York City apartments.

Tough all over—but not very

In Los Angeles, where 61 per cent of last year's record 110,000 housing starts were apartments (compared to 36 per cent just three years before), there is now a vacancy rate of over 10 per cent, and it threatens to grow. Local bankers predict that apartment starts will drop 8 per cent this year. Despite the present troubles, however, one Los Angeles mortgage banker insists that "the long-term apartment prospects remain good."

In Chicago, apartments last year comprised half of all housing starts, compared with 25 per cent in 1959. But vacancy rates have doubled too, from 3 to 6 per cent, and the softening market is expected to result in a 5 per cent drop in total starts this year. Apartments in Chicago's suburbs, however, are still being built at a record pace.

San Francisco and Washington are faring better than the bigger three. A month's free rent on the eastern shore of San Francisco Bay is not uncommon, but apartments in the city itself are renting well,

despite a record 3,943 units built last year (about 75 per cent of all housing starts). And Washington, in the midst of a record building boom of all types (FORUM, Jan. '63) has almost no vacant apartments. Yet apartments last year made up over two-thirds of the city's total housing starts.

The changing market

Still, despite the soft spots in some cities, the outlook for apartment construction in the next few years appears good. Volume should stay between 350,000 and 400,000 units a year, at least, and vacancies, except in a few locations, are probably about as low as they will get.

But, in the midst of the boom, there are still several unanswered questions. Design quality, as indicated earlier, is one of them, and a big one. The modest gains already made in this direction, as reflected by some of the projects shown on the following pages, are encouraging, but there is still plenty of room for further advance in both planning and design.

Above all, there is the unanswered problem of building moderate and low-rental apartments in urban areas. The boom we have been experiencing has not touched upon the problem to date: not more than 40 per cent of all apartments built since World War II can be called middle income by any standard. But the problem must be faced squarely if cities are to maintain their diversity and provide the new housing their *diverse* group of citizens so badly need. The boom has not touched the forgotten middle class—too rich to qualify for public housing, and too poor to be able to afford luxury living. These wage-earners are, of course, members of that frequently forgotten group: the majority.

One possible solution, the FHA's Section 221d3 program, may offer the best hope for obtaining moderate-rental apartments on urban sites. Its potentials are explored in the following story.

221d3: The key to moderate-income housing?

The most amazing statistics of the great apartment boom are not the 410,000 units built last year. They are the low rents for a relatively few units built in the past year and a half—e.g. \$105 per month for three-bedroom apartments in Hartford; \$96 for three bedrooms in New Haven; \$77.50 for two bedrooms in Baltimore. When new city apartments elsewhere are renting for at least \$40 per room, this seems phenomenal indeed.

The key to these low rents is a program of 3½ per cent federally insured mortgage loans. In the New Haven development, for example, which was one of the first in the nation, annual carrying charges were cut from \$66,082 (which is what they would have been under a normal FHA mortgage insurance program) to \$42,900. This alone resulted in rents 20 per cent lower than they would have otherwise been. The low interest rate is, of course, made possible through an indirect government subsidy.

In setting up a 221d3 development, FHA determines maximum rental amounts by "working backwards" from each city's median family income as determined by the Census. Thus, projects in Memphis, Tenn. (where the median income is \$5,500) cannot rent for more than \$1,100 annually (or 20 per cent of income), while New York projects can rent for \$1,520 a year. This obviously means low-cost construction, and so far most 221d3 projects have been built for about \$10,000 per unit. Even FHA's complex procedures have not prevented the creation to date of 129 projects (costing over \$131 million) since the program got underway in 1961. And this is despite the fact that sponsors must be either non-profit or limited-dividend corporations.

Section 221d3 has great potential for urban renewal, too. (It

was originally conceived for relocation of families from slum clearance projects, but has now been made available to all low-income families.) On a renewal site, for instance, the sale price of the land for a 221d3 project must be set low enough to be consistent with the expected rentals.

So far, only one high-rise project has been built (in Passaic, N.J.) and it attains low rents only through use of another cost-cutting device—tax abatement.

These two features—low-interest mortgage loans and tax abatement—offer what some builders believe to be the best solution yet devised for privately built low-income housing. In New York City Title I projects, the potential saving in rents is striking. For instance, the Lindsay Park project being built in Brooklyn, if done under a combination of 221d3 and low real estate taxes (set at predevelopment levels), could rent for only \$21 per room, a better than \$5 per room savings over current rents.

So far, New York City has not seen fit to grant tax abatements to the extent needed for low rentals, since this would sometimes mean an abatement of taxes of perhaps as much as 80 to 90 per cent for a 20-30-year period. But the chance to build new apartments in New York City—or any other large U.S. urban center—for \$120 monthly for a three-bedroom unit obviously is too good to pass up, particularly since most of that city's new apartments are high-rental units.

The 221d3 program could break the bottleneck of unmet needs for moderate-income families—and builders will never have to worry about vacancies.

FORUM gratefully acknowledges the help of Mr. Roger Schafer, of Rose Associates, in the preparation of the above article.



QUALITY CO-OP IN MANHATTAN

Into the genteel block of Twelfth Street west of Manhattan's lower Fifth Avenue have come several recent and rude intrusions: tall, staring, blank-faced new commercial apartment houses. But somehow the neighborhood balance has remained one of brown-stone; the block is one of the unfrayed—and very expensive—fringes of Greenwich Village. Most surprisingly, one of the buildings responsible for this restrained atmosphere is the newest: Butterfield House, just completed, a carefully scaled, dominantly brown-brick façade that is thoroughly at home with the old stone houses. It may even be the only new apartment house in Manhattan which can be called courteous in its architecture.

Yet this decorous design is also quite shrewd. Butterfield House contains 102 costly co-op apartments. Where are they all? Take a look at the plan (2). There are two wings to this block-through apartment house—one high, one low—connected across a central open court (4). This doubling was made possible when Builder Daniel L. Gray assembled the site, because, to match his two old 25-foot-wide Twelfth Street brownstones, he also bought 215 feet of frontage on the next block, the more commercial Thirteenth Street. There he put his bulky 12-story (plus penthouse) wing (1), without changing the character of those surroundings. He could have gone up just as high on Twelfth Street (with a slight setback) under the old zoning law, which pertained when his plans were filed by Architects Mayer, Whitteley and Glass. Another commercial operator down the street had done exactly that (3). But instead he stopped at seven floors; here was one builder who actually anticipated an upzoning, rather than cramming cubage into an existing law.

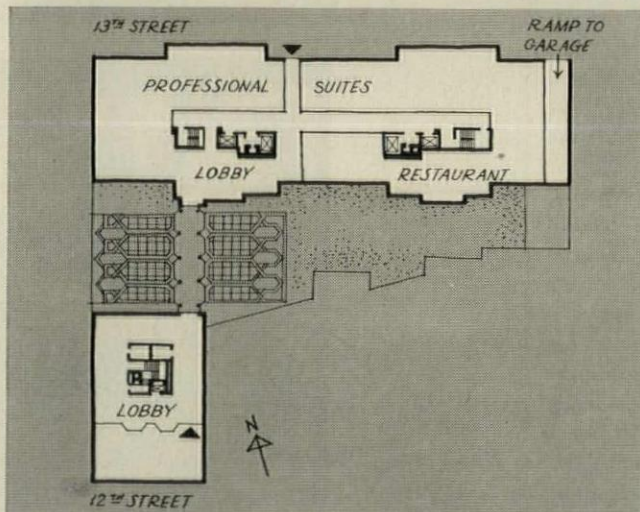
Nor is the handsomeness of this design merely façade deep; the building also has a very kind heart. Connecting the Twelfth and Thirteenth Street wings is a glass-walled passage through a pleasant interior yard: a large-scale mosaic of pools with fountains and patterned tiles, and greenery. At night, it is lighted by festive pedestal fixtures.

This means that every apart-

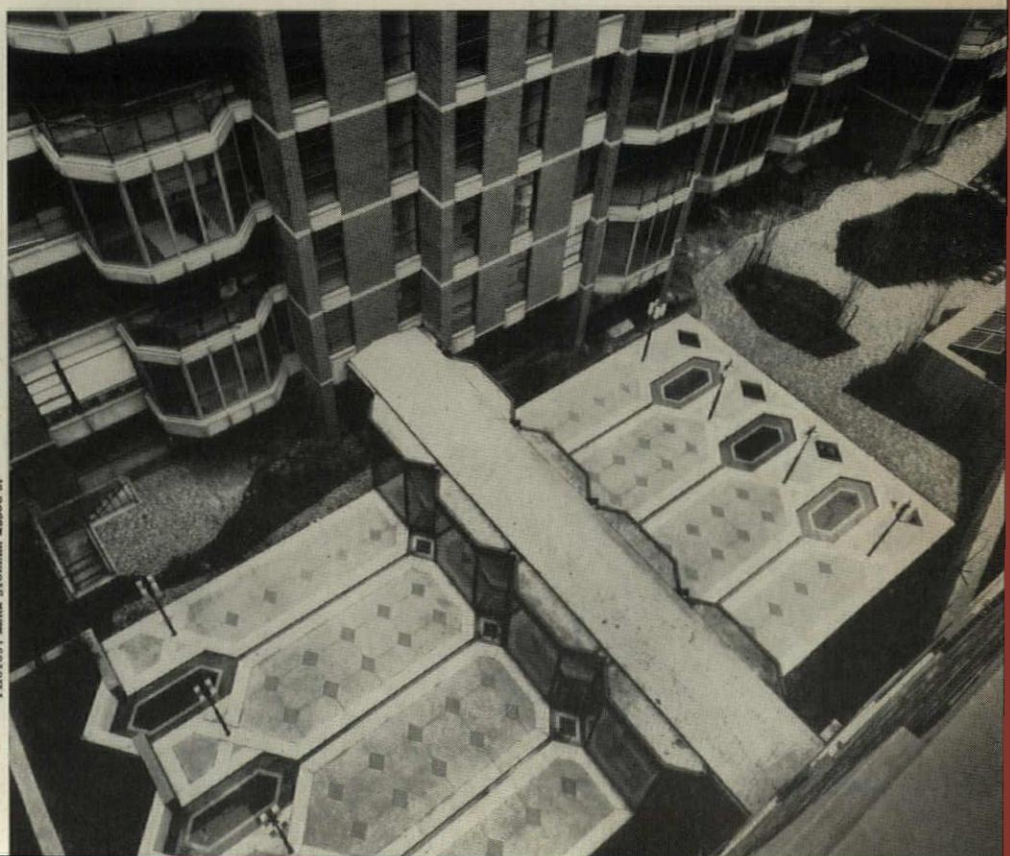
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PHOTOS: KEN STOLLER ASSOC'N.

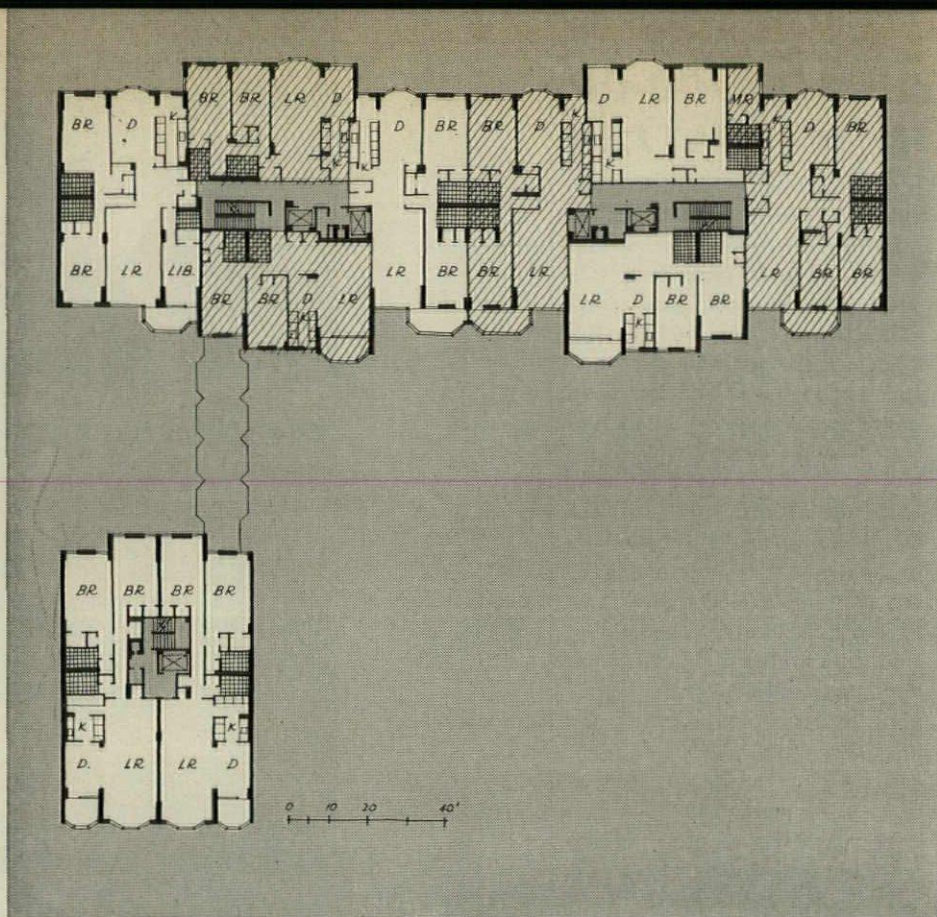
ment has a bay window with a decent view (4). Almost all of them also have matching balconies or garden rooms (balconies with jalousie glazing), and the penthouses boast concrete gazebos as well on their terraces. This is luxury housing (plan, 5); most of the apartments sell for about \$5,000 per room (the typical price is \$28,000 for a two-bedroom apartment, with approximately \$350 monthly maintenance; the top is \$60,000 for the penthouses—with \$520 monthly maintenance). Like all co-ops in Manhattan since the stock market stumble of May 1962, these are selling slowly; and the building is reported in a precarious financial condition. But people who buy into Butterfield seem to buy with zest. On the Twelfth Street side, one buyer has taken two apartments and knocked out the principal partition. Result: a living room 50 feet long facing Twelfth Street. Cost: \$56,000 cash plus \$780 maintenance per month.

Butterfield House, if not a bargain, does demonstrate quite well what makes an apartment house luxurious in Manhattan: the generous bay windows (on the Twelfth Street side, a person sitting in the middle of one of these windows can swivel his head to see both ends of the block); a few inches extra in the 8 foot 6 inch ceiling heights; an air-conditioning system with thermostatic control in every room; intimate elevator corridors upstairs, with but few apartments off each one (this was accomplished by putting an extra elevator core into the design; there are five elevators); two exposures in the majority of apartments; lobbies (6, 7), with an air of generosity.

But most agreeable of all, and very unlike the usual frigid co-op fortress, this new house's kindness does not stop at home. Butterfield House declines to exploit the old neighborhood; it joins.

FACTS AND FIGURES

Architects: Mayer, Whittlesey & Glass; M. Milton Glass, partner in charge; William J. Conklin, associate partner in charge of design. Designer: James S. Rossant. Engineers: Weinberger, Friedman, Leichtman & Quinn (structural); Emil Gruenberg & Assoc. and I. M. Robbins & Assoc. (mechanical and electrical). General contractor: Dangray Construction Corp. Total cost, including land (\$1.85 million) and fees: approximately \$6 million, for 230,466.69 square feet.



5.



6.



7.

PHOTOS: KERA STOLLER ASSOC'S.



PHILADELPHIA TOWN HOUSES

The first of Architect I. M. Pei's new town houses for Webb & Knapp in the old Society Hill section of Philadelphia are completed and being occupied. The neighborhood is old, full of eighteenth-century grace and ornateness. The street façades of these three-story (plus basement) row houses are undecorated except in the careful placing of the openings (1, 4). Yet their quality is courtly.

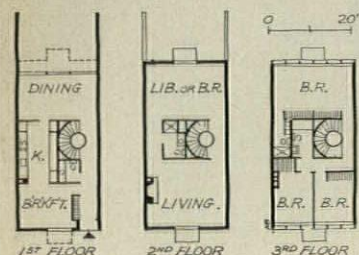
At street level is a row of arched entrances, and, up under the flat roof, a continuous stretch of bedroom windows. In between are the only breaks in the brick façades—long, regularly spaced slits which run from high on the first floor up past a little iron balcony to become floor-to-ceiling openings in the second-story living room (3). The houses are spacious—about 3,200 square feet on four levels, including basement, and sell for \$45,750 (\$46,750 for the corner houses). The houses are centrally air-conditioned.

To the rear, each house has a small walled-in private garden; beyond (2) is a central parking lot (condominium-owned by the householders) in which shade trees have been started. What the design demonstrates better than anything else is the possibility of building simple (if luxuriously spacious) contemporary houses elegantly in an old neighborhood. This not only recreates a way of urban living for families who can afford it, but also plants a graceful neighborhood background for the tall Pei apartment houses which will come later.

FACTS AND FIGURES

Society Hill Town Houses, Philadelphia, for Webb & Knapp Re-development area.

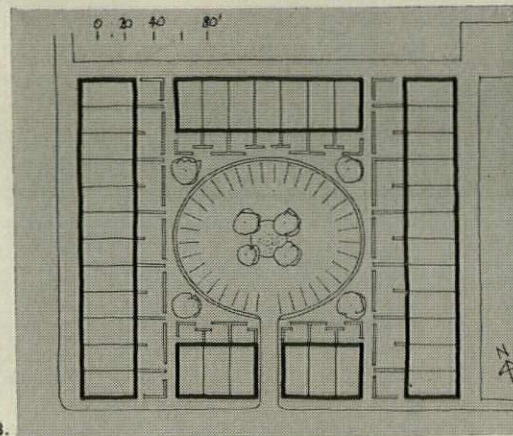
Architects: I. M. Pei & Assoc. (job captain, Owren J. Aftreth). Associate architects: Wright, Andrade & Amenta & Gane. Landscape architect: Robert Zion. Structural engineers: Severud-Elstad-Krueger Assoc. General contractor: Jack Feldman.



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2. 3.



PHOTOS: WURTS BROTHERS

4.



BOOMERANG IN PUERTO RICO

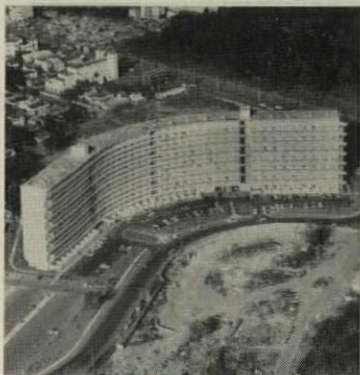
The big, curved El Monte Apartments in Hato Rey, near San Juan, Puerto Rico, rise from a thicket of lower buildings (below) and they break the local residential pattern in an equally definite financial manner. For these are high-quality rental units in an apartment market where quality units usually are for sale, rather than for rent—where the condominium is king.

Most of the 311 apartments—the first building of a planned pair—are duplexes, entered off long galleries which cling to alternate floors of the façade (1, 2). The elevator is skip-stop, with smaller apartments clustered around the elevator cores. The design gives almost every apartment through ventilation, which, in Puerto Rico's kind climate, is usually sufficient for comfort. (The top floor, however, up nearest the sun, is fully air conditioned.)

Other local habits which were adopted by the architect, Ed Barnes, include the use of metal louvers rather than windows in bedrooms and in kitchens on the gallery side. The other side of the building wears private balconies, with sliding glass walls. There are also scores of flat sun screens to shade the walls from the high summer sun.

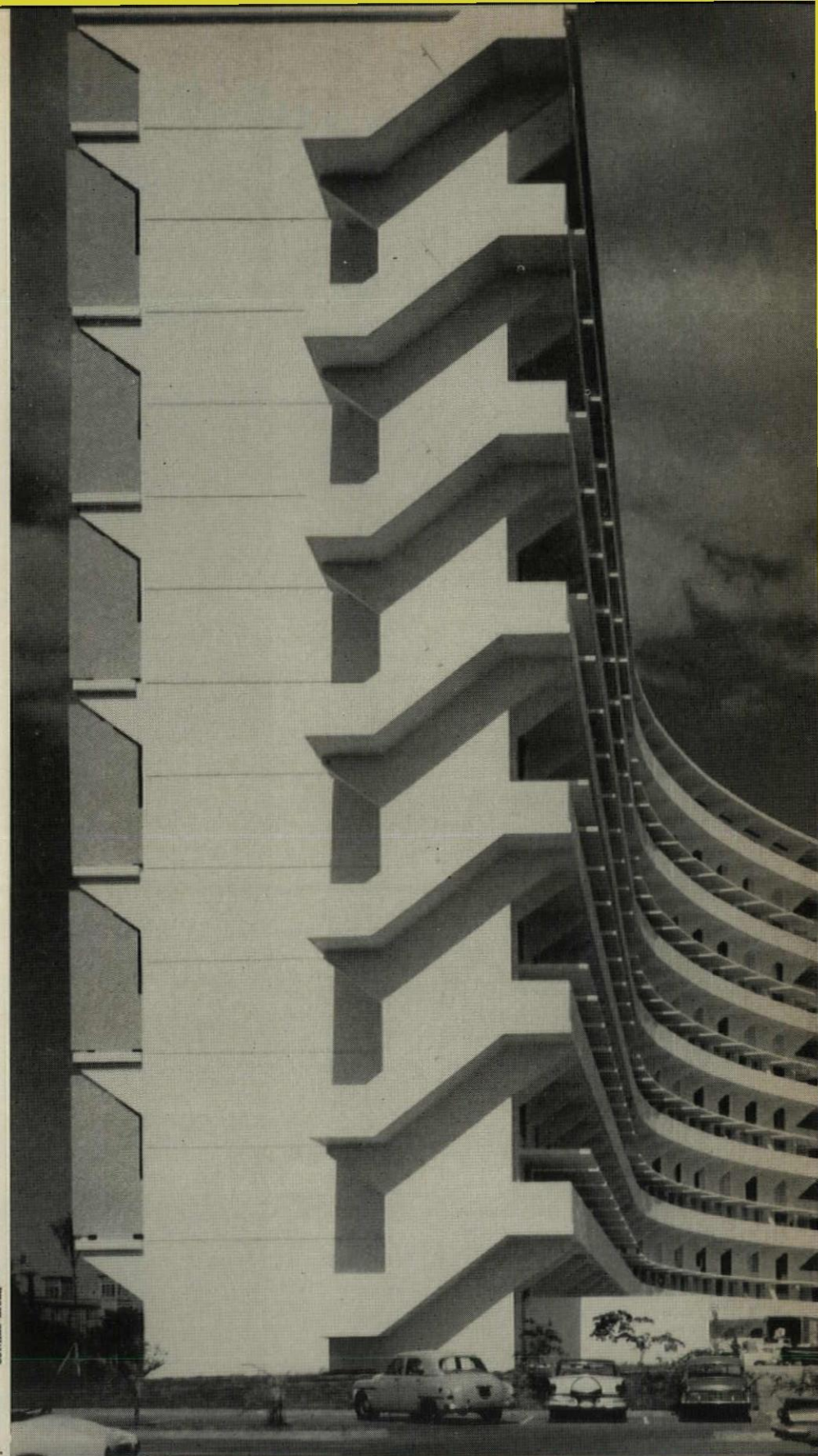
FACTS AND FIGURES

El Monte Apartments, Hato Rey, Puerto Rico, for Renewal & Development Corp., New York, N.Y. Architect: Edward Larrabee Barnes. Associate architect: Reed, Basora & Menendez. Landscape designer: Hideo Sasaki. Engineers: Farkas & Barron and Martinez & Costa (structural), Francisco Viscal (electrical), Francisco Rodriguez Olivieri (mechanical). Square footage: enclosed, 306,440; open, 91,490. Field construction cost: \$4,300,000. Total cost: \$5,950,000, financed under an FHA 220 mortgage.

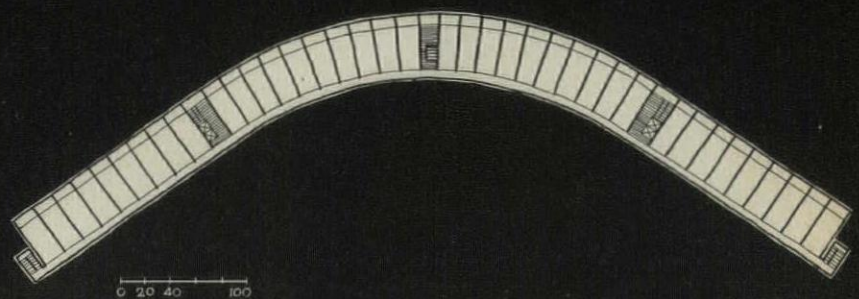


CONRAD EIGER

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2.



PHILADELPHIA LANDMARK

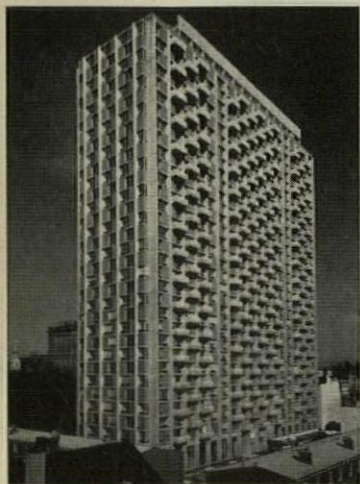
Hopkinson House, designed by Architects Stonorov & Haws, is the first landmark of Philadelphia's Washington Square renewal area. The 33-story, 596-apartment building towers over the square, casting its long shadow almost to nearby Independence Hall. It is a large and assertive element in the emerging pattern of the new Philadelphia.

Hopkinson House rises from a huge (90 by 254 feet) floating concrete mat 4 feet thick. Its frame consists of reinforced concrete columns and flat plate floor slabs (1), with bearing walls rising to the twentieth floor to resist shear. Exteriors are busy checkerboards of recessed aluminum window walls, brick closet boxes, and precast concrete balconies.

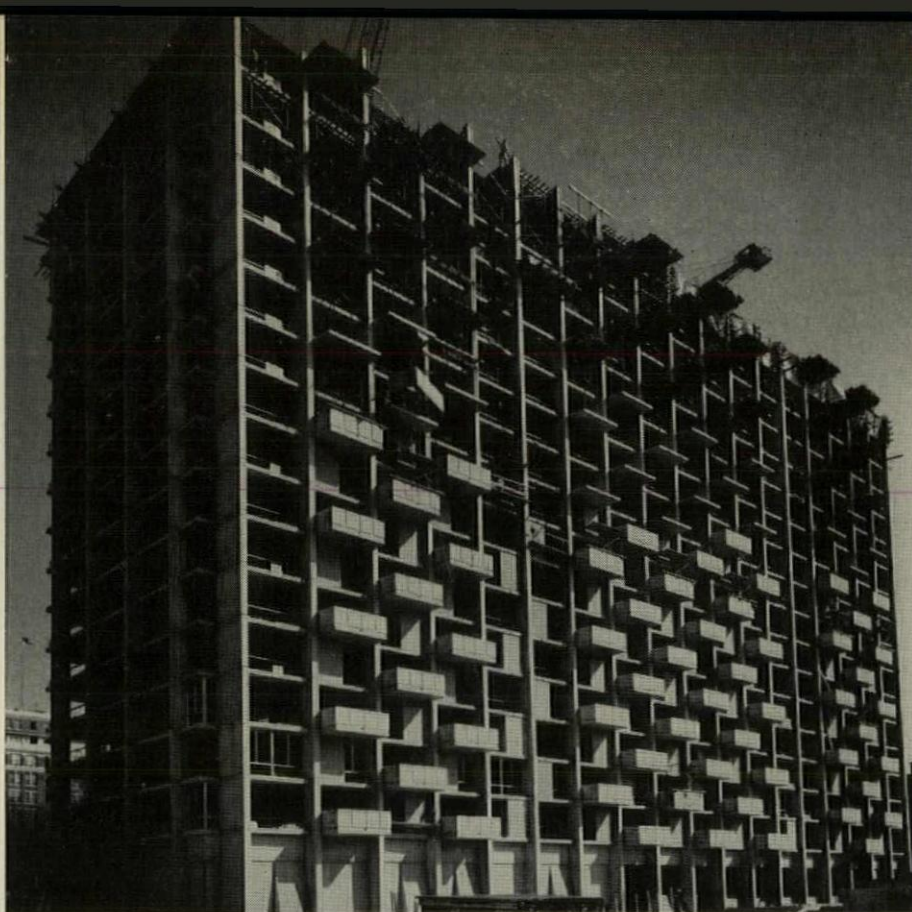
Base rentals begin at \$95 for efficiencies, with a median of \$175 for a standard one-bedroom apartment, and a high of \$335 for three bedrooms (all increase five dollars with each five floors in height). Amenities include a large ground-floor terrace, a roof-top pool, and a thirty-third-floor clubhouse. To date, nearly a quarter of the apartments are occupied, and the rental rate is said to be running somewhat higher than for other similar buildings in Philadelphia. The tower shares the L-shaped site with 18 four-bedroom town houses, now nearing completion (2).

FACTS AND FIGURES

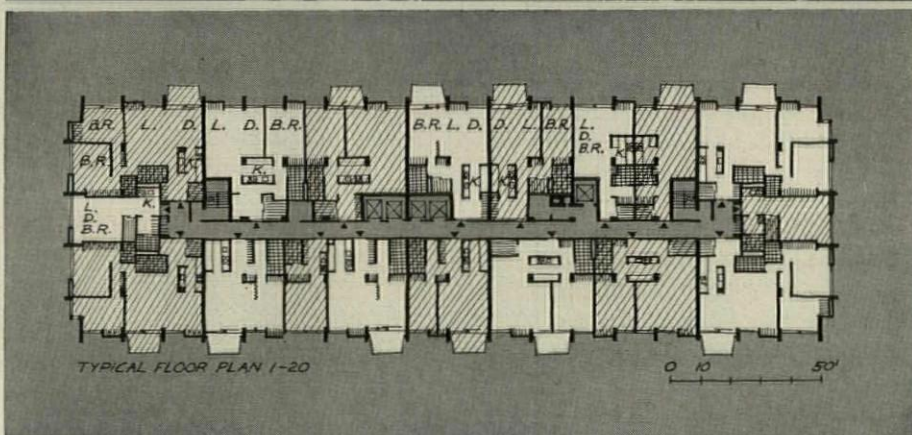
Hopkinson House, Philadelphia. Owner: Major Realty Corp. Architects: Stonorov & Haws; George W. Smith, project captain. Engineers: Garfinkel & Marenburg (structural); Garber & Cohen (mechanical and electrical). General contractor: R. M. Shomaker Co.



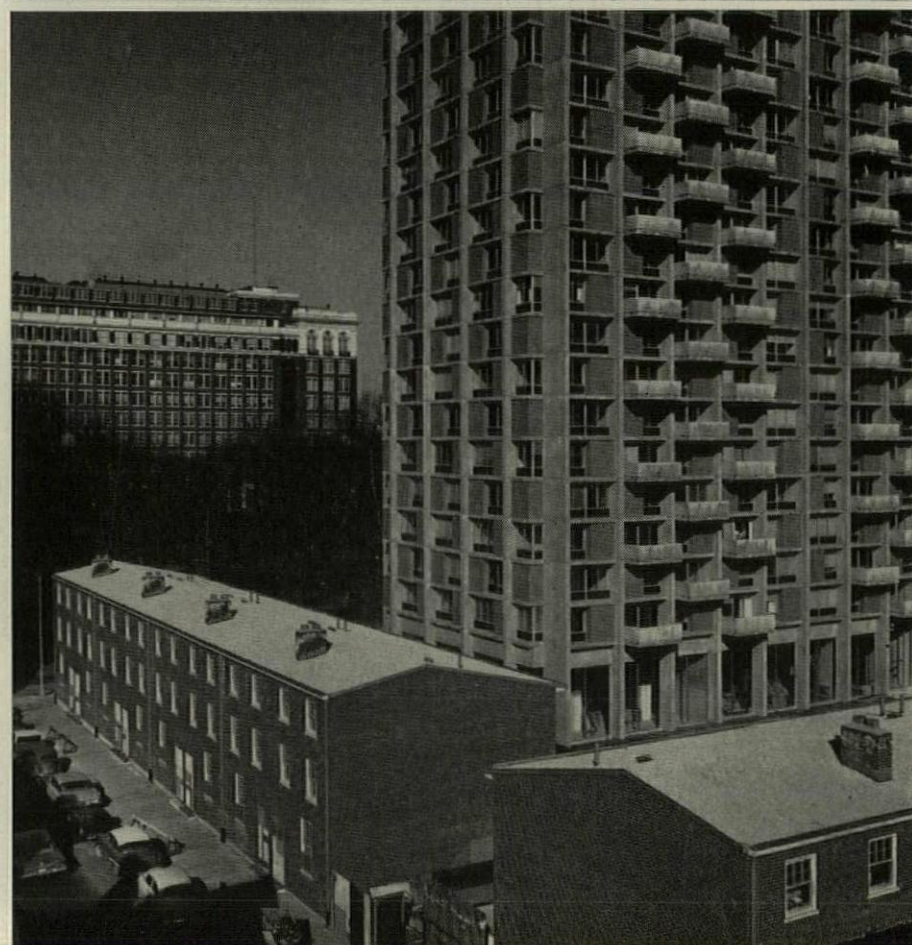
1.



CORTLANDT V. D. HUBBARD



2.



PHOTOS LEFT AND OPP. 1: GEORGE ADAMS JONES



ANGULARITY IN MILAN

The walls of this Milanese building, by Architects Angelo Mangiarotti and Bruno Morasutti, move continually in and out, trying first one angle and then another, taking the eye of the beholder on a bumpy but exhilarating ride (1). They are composed of uniform parts, but the parts are freely, almost randomly put together. The building's most consistent quality is variety.

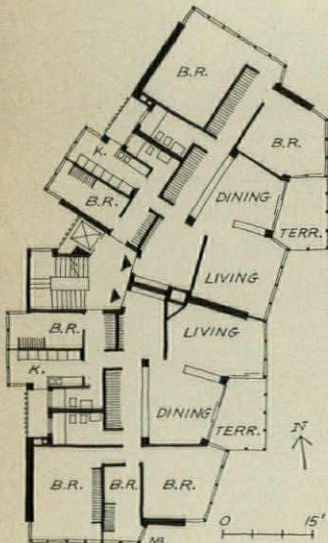
There is variety in the interior spaces, making this the antithesis of the filing-cabinet school of apartment design. There is variety in the views, in the fenestration, in the placement of balconies. There is, finally, an endless variety in the play of light against the glass, making the exterior a mosaic of reflections.

The building thus takes the life and motion of the street, and gives it back in fragmented, prismatic form. Mangiarotti says that he and his partner wanted to create "a continual series of diverse but interrelated spaces," and they have succeeded admirably. A second unit, twice as big, is planned next door. Together, the two will stretch along nearly the full length of the block.

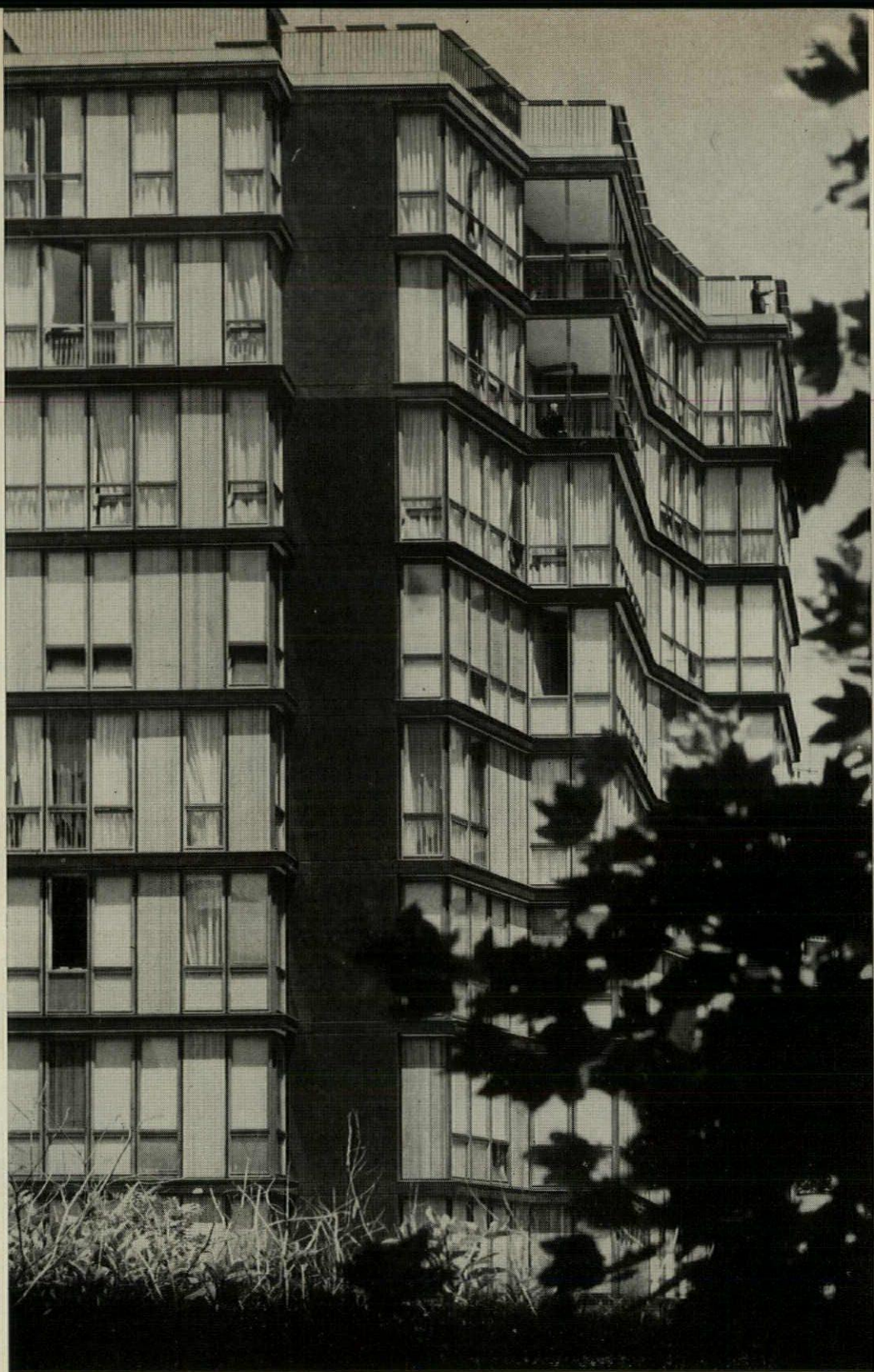
Components of the exterior walls are slender metal-framed panels (2). Most are glass, but some are wood, and others, at the balconies, are open. The structure is reinforced concrete, painted black where exposed. Floor slabs project slightly and crisply outline the paneled walls.

FACTS AND FIGURES

Apartment building, Milan, Italy. Architects: Angelo Mangiarotti, Bruno Morasutti. Cost: \$8 per square foot.



1.



CASALI—COURTESY DOMUS

2.



TWIN DUPLEXES IN COLOMBIA

The design of these apartments in Bogotá, Colombia, renounces the usual smooth-surfaced designs of South America in favor of a burlier character.

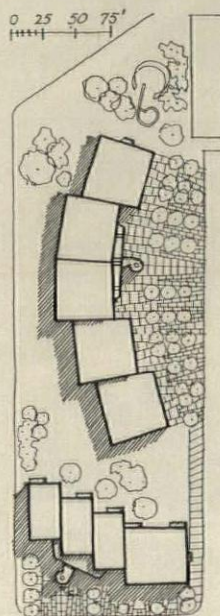
The project is composed of 30 duplex apartments, arranged in two blocks. The 20-unit block is oriented east-west, with the smaller block set north-south, giving all the occupants views either over Bogotá's savannah or the nearby mountains. The cylinders of brick (2) are stairways serving 14 of the apartments whose duplex levels are floors three and four. There are also interior stairs to all apartments.

Each apartment has a living room and study, two bedrooms with baths, and a service area including kitchen, servant's bedroom and bath, linen room, etc.

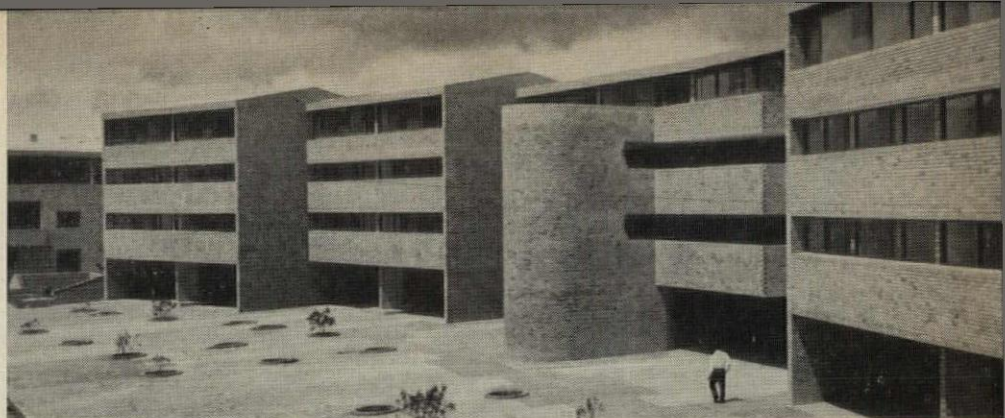
The architects extended their arrangement of bricked planes to the site as well, zoning the east yard (1) as a paved area (but with a pattern of portholes for trees in the paving), and the western side (3) to be grassed and gardened. This, plus the careful arrangements and adjustments of the apartments with relation to each other and to the view, brings a feeling of definiteness to the design which makes it stand like a landmark in the casual development of most of the cities of South (or North) America.

FACTS AND FIGURES

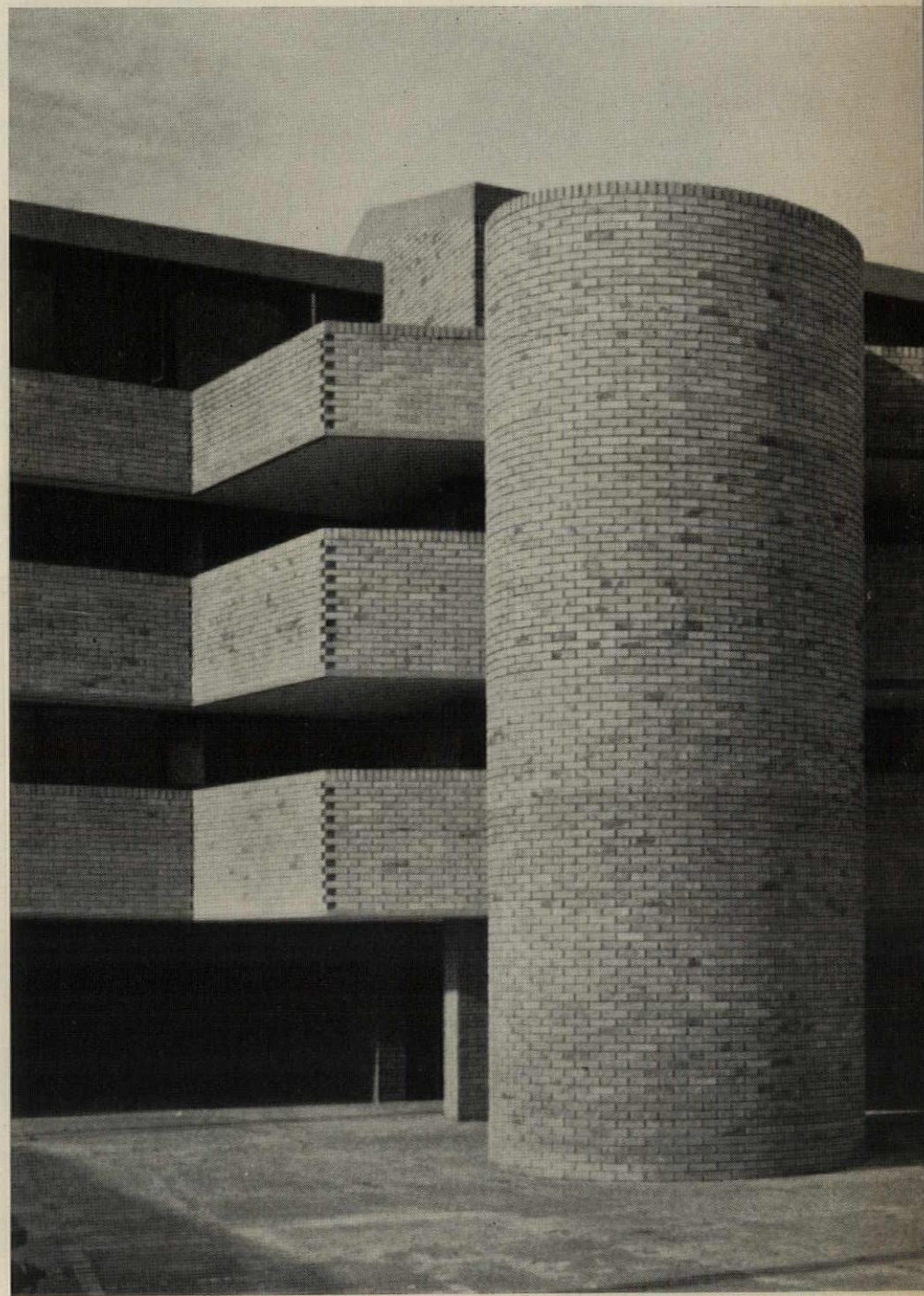
Polo Apartment Buildings, Bogotá, Colombia. Architects: G. Bermudez and R. Salmona. Total of 30 duplex apartments in two units of four-story brick and frame.



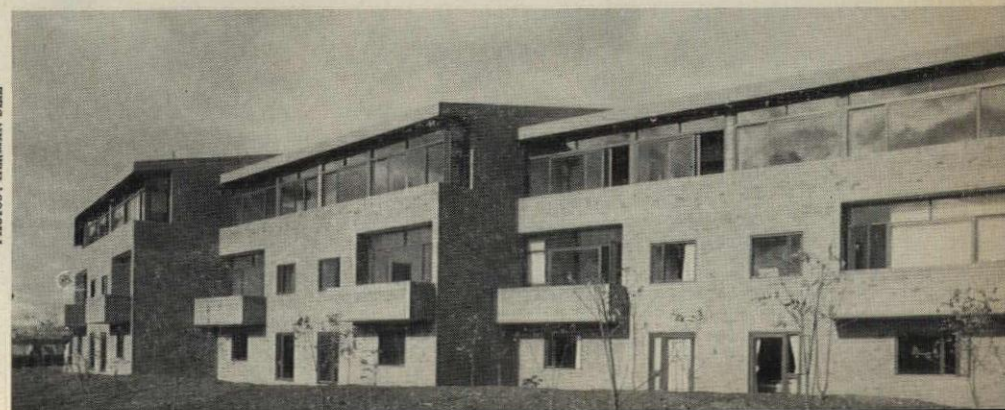
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2.



3.



PHOTOS: HERMAN DIAZ



BOLDNESS IN NEW JERSEY

The twin buildings of Horizon House are more rough cast than most luxury apartments. Their broad east façades (left), 14 stories high, are bold compositions of considerable depth and strength; their end walls (1) are of raw concrete and bear striking, jagged fire stairs. The guts thus displayed have something to do with current architectural directions. But they also reflect an attempt by the developers, Tishman Realty & Construction Co., to attract moneyed tenants by sheer architectural force.

The east walls and syncopated stairways express the unusual arrangement of the apartments, which, in turn, evolved from the nature of the site. Horizon House (or more properly, Horizon Houses, for there eventually will be somewhere between five and seven buildings to the development) sits in commanding isolation on 33 wooded acres in Fort Lee, New Jersey, just south of the George Washington Bridge. The land is atop the Palisades, those splendid rocky cliffs which line the Jersey shore of the Hudson River. This location brings them within close commuting range of Manhattan, and provides a spectacular view of New York's skyline (2, 3).

The primary objective of Architects Kelly & Gruzen obviously had to be maximum use of this view. Their answer was a skip-floor stacking of apartments which makes wide use of the split level, a device familiar to New Jersey but seldom used in big apartments.

The structure is a pigeon roost of reinforced concrete slabs and 8-inch shear walls; the latter, on 24-foot centers, pay valuable acoustical dividends. The distribution of units within this framework is best shown in diagrammatic section (6).

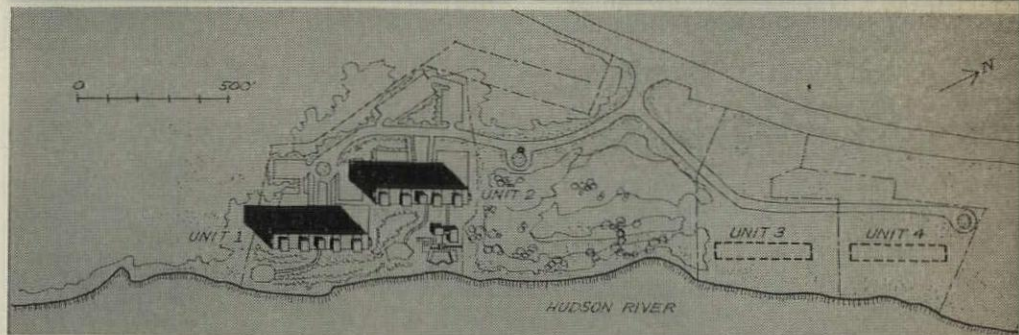
The split levels go either up or down across the building's full depth, with living areas facing the river and bedrooms looking out on the New Jersey suburb (4). On the river side, pairs of "bi-level" apartments—single-story except at the entry and two bays in width—are sandwiched between pairs of splits. On the New Jersey side, the bedrooms of the splits alternate with single-level units, again two bays wide, aligned with the corridors. There are also efficiency units and four big penthouses.

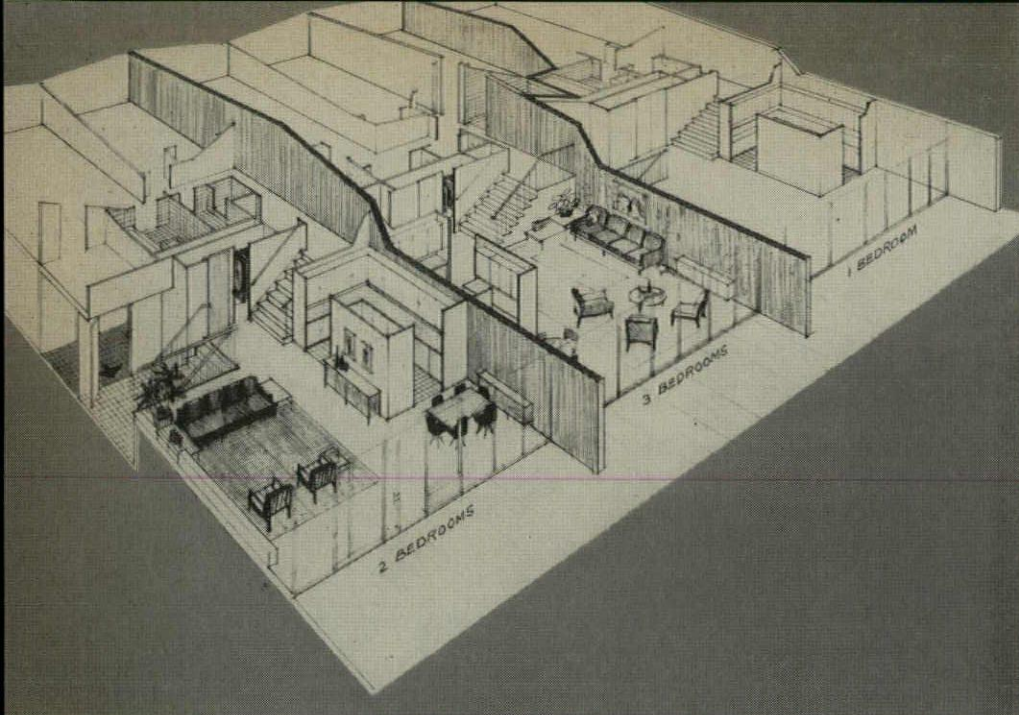
The upshot is that 80 per cent of the units enjoy the Manhattan

1.

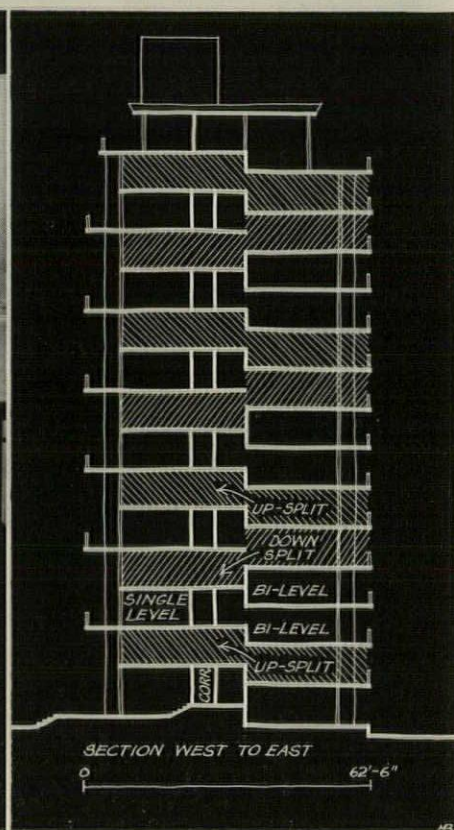


2.

3.
PHOTOS: GEORGE ZIMMEL



4.



5. 6.



PHOTO: GEORGE KIMBEL

7.

view. The splits also have some of the spatial variegation of a single-family home, and, further, a distinct separation of living and sleeping areas. All have generous (24 by 7-foot) balconies.

Rentals go from \$135 for the efficiencies to \$1,300 for the penthouses. A one-bedroom apartment can be had for \$200 to \$275, depending on the view and the number of levels, and a three-bedroom split can come as high as \$425. All 180 apartments in the first building are taken, and the second, now being given finishing touches, is about 70 per cent rented.

Sitework has already begun on the next two units, which will be almost identical to the first. What happens next is problematical, and thereby hangs a tale.

The original zoning on the property imposed a 150-foot height limit and a 150-foot separation between buildings. But it failed to say in which direction the 150-foot separation should occur. The initial site plan for Horizon House made full use of this loophole by taking the 150 feet in setback with no lateral separation at all. Seven slabs housing 1,260 families were to be lined up along the 1,000-foot frontage, creating what local residents dubbed "the Tishman wall."

The zoning ordinance was subsequently amended and the height limit removed. The Tishmans and their architects then changed the composition of Horizon Houses to include 30-story towers, providing at least a modicum of space between buildings. Removal of the lid was challenged by a taxpayers' suit, however, and the issue is still in the courts.

It would be rather hard to choose between the two schemes. The unbroken wall of slabs could be intolerable, but the towers might well be a major distraction from the rugged drama of the Palisades. Horizon House has achieved considerable distinction in its individual buildings, but as a complex it has not, as yet, exploited the full potential of its site.

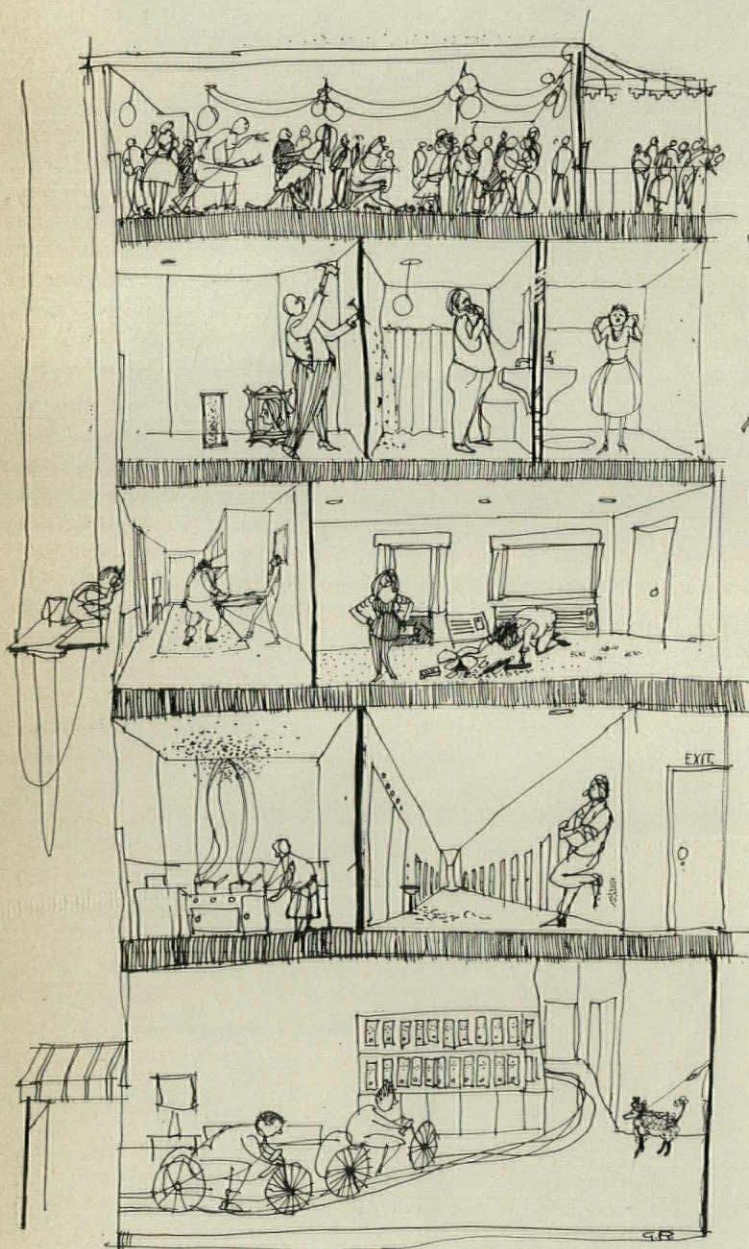
FACTS AND FIGURES

Horizon House, Fort Lee, New Jersey. Owner and builder: Tishman Realty & Construction Corp. Architects: Kelly & Gruzen; George G. Shimamoto, associate in charge; Richard H. Gordon, project architect; Irving Levett, job captain. Engineers: Farkas & Barron (structural); Cosentini Associates (mechanical and electrical). Landscape architects: Michael M. Burris.



HOW CAN YOU MAKE THEM PEOPLE-PROOF?

Keeping apartments presentable continues to be a major expense. Here are ways to avoid high maintenance costs by thinking ahead.



Maintenance costs for elevator apartment buildings in ten large U.S. cities averaged 10.7 per cent of their 1961 gross annual income. Yet, despite the obvious relationship between maintenance costs and ultimate profits, most apartments built since the War have paid precious little attention to ease of maintenance or soundness of construction.

Part of the blame for shoddy construction and correspondingly high maintenance expenses falls on the speculative apartment builder during the great postwar housing boom. His formula was to put up a building as cheaply as possible, to make an initial profit on the construction, to get the building filled up under three-year leases, and then sell it to an investor or real estate syndicate, taking a profit on the property's capital appreciation at a low tax rate. Aided by a severe housing shortage, the speculative builder was reluctant to tie up larger amounts of equity money than was absolutely necessary. By the time the building began to come unstuck (sometimes even before the first set of leases had expired), the initial owner would be out of the picture.

At the other extreme are the institutional investment builders, such as the large insurance companies. When they build, they know they will keep the property for many years and they consequently tend to pay considerably more attention to maintenance costs. In between the institutional investors and the out-and-out speculators is a third category of builder, the man who plans to hold his property until the point, usually eight or ten years after the building goes up, when interest and amortization outstrip depreciation. Quite naturally, this sort of builder will be more concerned with maintenance than the speculator, less concerned than the institutional investor.

Financing also affects the way an apartment building is con-

structed: most top insurance companies look over the plans of a building for a variety of factors, including maintenance, on which to base the loan. With FHA-insured loans, however, where the room-count method is in operation, some builders feel that projected maintenance costs are not given adequate weight in determining the loan. Consequently, much of the money spent on better maintenance features has to be equity money. Under these circumstances, it is hardly surprising that this money has frequently not been spent.

Forces for better design

Though the postwar apartment history has been unrelentingly sad (with a handful of notable exceptions), the signs are that a subtle change may now be taking place which will result in better apartment buildings for the future. For one thing, the housing shortage in many urban areas has abated somewhat. For another, today's apartment market tries to appeal to a high proportion of second- or third-time apartment dwellers who are wiser and more discriminating than they used to be when it comes to construction quality. So today's apartment builders will find it increasingly difficult to rent "a park bench with a roof over it" and they will, more and more, have to supply quality buildings that last well and are easy to maintain. Finally, buyers of cooperative apartments (a growing band) inevitably demand more than renters and, since they are self-responsible for maintenance, they have a greater stake in what maintenance costs.

Easy maintenance surfaces

Labor, of course, is by far the largest part of any maintenance budget. With floors, labor costs have been estimated as high as 95 per cent of the total. In the past, the answer has been to use materials that were hard, and therefore "people-proof," smooth

and therefore washable. Recently, however, there has been a trend in private housing to softer, richer surfaces which discourage abuse by their very luxury or to rougher surfaces which simply don't show dirt as much.

In lobbies, for example, where wear is heaviest, hard, washable surfaces are still the rule. Terrazzo floors have long been the standard, but less expensive resilient tile is frequently being used. With tile, the pattern is important since the plainer the color the more likely it is to show off dirt. Some lobbies, however, are abandoning slick surfaces for pebbly aggregate concrete which hides dirt, mellowing with age and reducing the labor expense of washing.

Lobby couches and chairs should naturally have durable coverings such as vinyl. But, cautions one big-scale apartment builder, "spend your money on the surfaces, the walls, floors, and ceilings, not on the furniture—you don't want people sitting around in your lobby anyway; they will just mess things up that much faster."

In many new apartment houses, carpeting covers the floors of upstairs corridors, replacing the more familiar ceramic or resilient tile. The carpeting is being used not just because it is more luxurious but because it is often easier to vacuum a rug than it is to wax and polish a floor and the labor savings help offset a higher first cost. In addition, careless people are less likely to throw cigarette butts on a rug than on a tile floor. Still another advantage: carpeting helps deaden sound in the corridor.

In the upstairs hallways, the persistent wear from shuffling feet on areas in front of the elevators suggests a change from carpet to tile. While waiting for the elevators, people tend to lean up against the opposite wall with hands and even feet and this, in turn, suggests a change from the painted wall, which may be perfectly acceptable along the rest of the corridor, to a more durable surface such as

ceramic tile or vinyl covering.

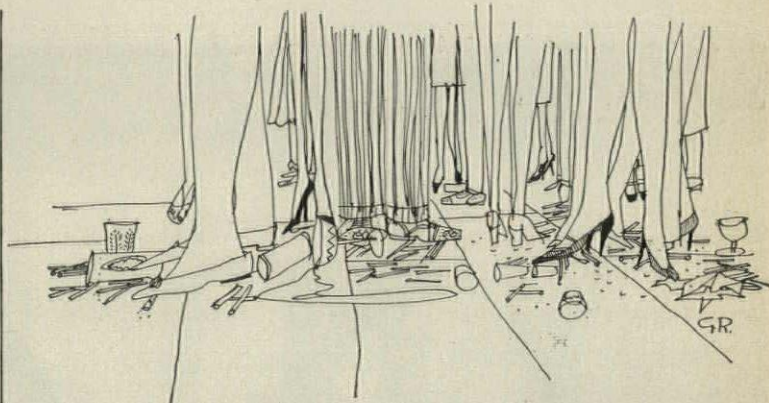
As for the elevators themselves, they are now, of course, fast becoming all self-service. Without an operator, the handsome, easy-to-maintain wood cab becomes defenseless against carved inscriptions and is giving way to costlier plastic-laminate or metal finishes. The cab floors are the worst maintenance spot in any building. They have to be cleaned often anyway, and carpeting diminishes the number of butts on the floor.

Security control systems, as well as elevators, are being automated to help reduce high labor costs. Eventually, closed-circuit television, in lobbies, elevators, and corridors, can be expected to replace the primitive buzzer-and-speaker system now in wide use.

Ventilation and noise

The argument about air conditioning is hard to resolve. Most new apartment buildings still offer individual underwindow units. And many apartment owners would like to keep it that way. The advantages, they say, are that there is no central system which can break down and leave all apartments without cooling, that individual units are cheaper for them to install than a central system, and that since the cost of electricity is usually billed directly to the tenant they do not have to raise rents to compensate for the additional service. Some of the owners also favor individual units which provide electric heating as well as cooling. With the heating bill also going straight to the tenant, the landlord can offer an apparent rent reduction while at the same time eliminating one more management headache.

Arguing against this is the undeniable fact that central systems provide much better control over the cleanliness of air—and in our increasingly smog-choked cities this is not to be taken lightly. It is possible, of course, to buy good filters for individual units but their size and cost have deterred most builders from doing so.



A further advantage to the central system, provided the hallways are pressurized and not used as return air ducts, is that air flows from the halls to the apartments, preventing the buildup of cooking smells in the corridors, which many tenants cite as a prime complaint.

Tenants who welcomed any sort of accommodation in the postwar squeeze are now reacting to noise transmission. With the change from massive walls to light, inexpensive partitions which are fast to put up and take less space, noise has in fact become the greatest single complaint. Some architects are already responding by returning to heavier walls and this has profound design implications: at the point where a wall is really thick enough to do a good job of retarding sound it may also, with the right material, be thick enough to support the building.

Impact noise through floors is also a major problem. The FHA has just published a study on how to control it, prepared by Bolt, Beranek & Newman, Inc.

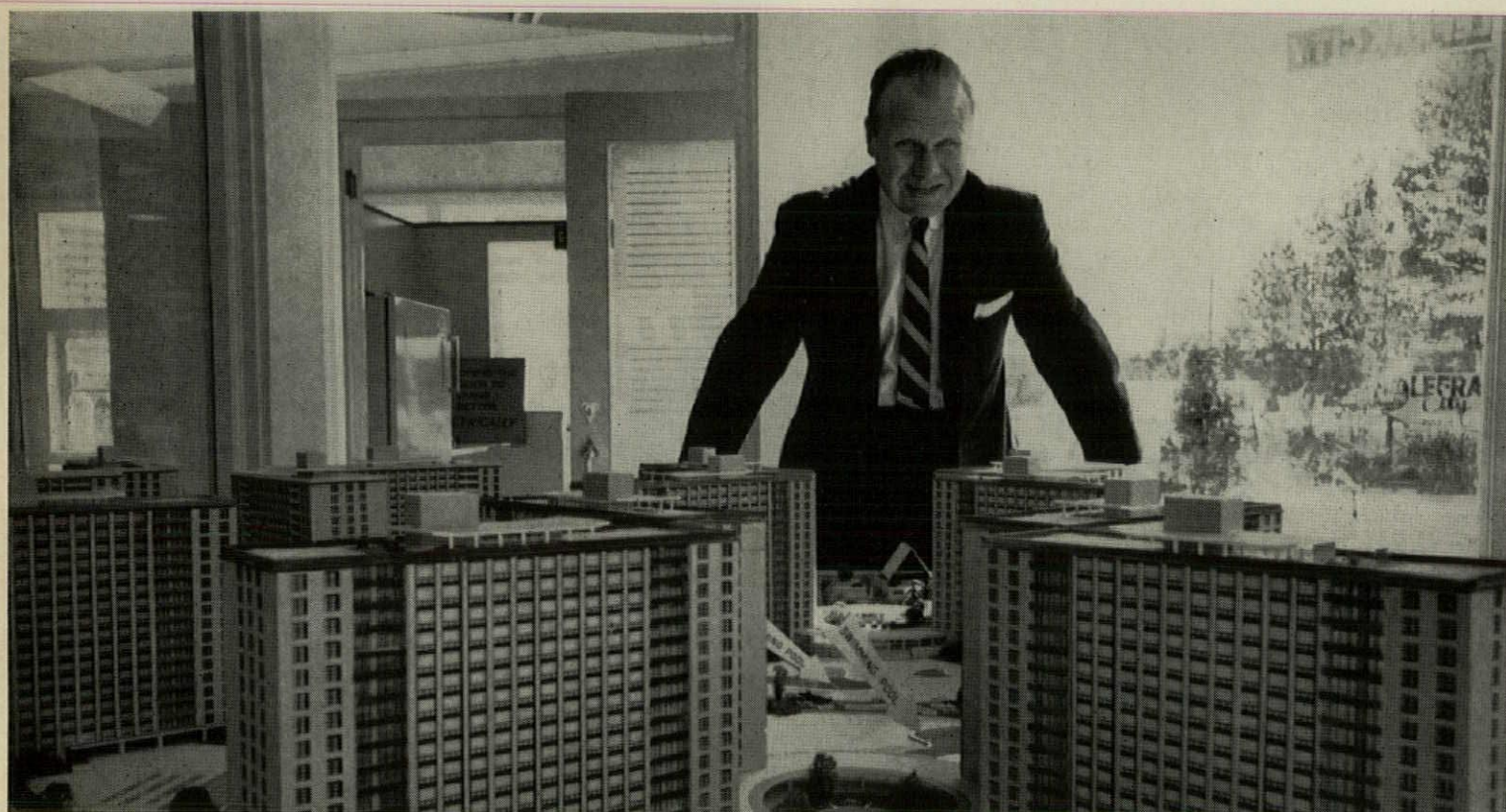


There is wide disagreement among builders about which type of window frame—wood, steel, or aluminum—makes the most sense. Both wood and steel require painting every four or five years, a delicate, time-consuming, expensive job. Aluminum does not. But, unlike wood, both types of metal frames conduct heat, causing inside condensation on cold days in rooms which are reasonably humid.

Minimizing liability

Apartment owners can also reduce their operating expenditures by saving on liability insurance. Most new builders, for example, find it necessary to provide tenants with parking garages. Increasingly these are attendant-free, self-parking facilities with a specific stall assigned to each tenant. This arrangement sacrifices some efficiency in the use of space: an attended garage with a squad of fearless car jockeys can cram more automobiles into the same area. But the savings to management in insurance as well as labor usually make up more than the difference. Heated sidewalk areas can also reduce the cost of liability insurance.

No matter how carefully the apartment builder and his architect plan for maintenance, one factor is certain to remain constant: man's capacity for messing up the place he lives in. This, plus an increasingly competitive market bidding for wiser, more selective customers, behooves him to build better than ever before.



BILL RAY—BLACK STAR

SAM LEFRAK: HE BUILDS THEM CHEAPER BY THE DOZEN

Apartment builder Samuel J. Lefrak, genial host of Lefrak City, is proud indeed of his \$150 million, 6,000-unit Queens spectacular—and considerably wealthier for it.

BY DAVID B. CARLSON

Rush-hour travelers leaving Manhattan at a snail's pace on the Long Island Expressway are faced by signs like this: "If we lived here, Daddy, you'd be home now."

This may only make them grit their teeth, but it is supposed to make them aware of just one of the advantages of Lefrak City—it is closer to Manhattan than places farther down the line. Lefrak City is an awesome apartment project in Queens—12 of its 18-story brick towers now shoulder up against the six-lane expressway, and 12 more are on the way. Over 4,000 persons already live there, and eventually more than 25,000 are expected to enjoy its advertised comforts: swimming pools, tennis courts, explosion-proof buildings.

It isn't the pools and tennis courts that set Lefrak City apart from other New York apartment projects, however, and it isn't even its size, though that is prodigious. What makes Lefrak City noteworthy is that you can rent an air-conditioned apartment with 1,080 square feet of space (two bedrooms) for about \$220 per month. Moreover, Lefrak City is conventionally financed, without government aid of any sort, and is being built at exceptionally low cost (about \$1.50 per cubic foot) compared with other projects that cost anywhere from \$1.60 to \$1.80 per cubic foot.

To understand the combination of circumstances that produced Lefrak City, it is important first to look at its builder, Samuel J. Lefrak himself. Even before Lefrak City, he had

established himself as one of the most vigorous apartment builders in the nation. He has been building apartments, mostly in Queens and Brooklyn, at the rate of about 2,500 each year for the past five years. Today, Lefrak is the landlord for nearly 250,000 persons who pay over \$5 million each month in rentals. When Lefrak City is finished, it will augment this monthly bounty by over \$1.1 million. (These are only residential rents. Commercial income will be an extra added attraction.)

The supermarket approach to apartment building

The implication of these figures is plain—Lefrak is a rich man. And he has a rich organization, with net assets of about \$150 million. Most amazing of all, however, is that Lefrak has prospered by putting up what many builders eschew as nigh impossible—middle-income housing.

Until Lefrak City thrust itself upon the scene, Lefrak had contented himself with building mostly the sort of six-story walk-up "garden apartments" which make Queens a sea of building monotony. (Lefrak alone built over 10 per cent of all Queens apartments from 1945 to 1960.) Most of these apartments rented for \$20 to \$30 a room until recently, when construction costs pushed rents up to the \$35 mark.

With Lefrak City, a new standard has been established—high-rise apartments with lots of "amenities," renting for about \$40 per room. (Cheapest efficiency: \$102 per month. Most expensive three-bedroom unit: \$264 per month.) This is moderate by the standard of most new high-rise buildings in New York, and a phenomenal buy compared with similar housing in Manhattan, which is less than a half hour away by subway (which in turn stops only several blocks from Lefrak City). There is no government aid of any sort involved, not even FHA mortgage insurance. For although he has had some experience with various government-aided programs, Sam Lefrak generally expresses vigorous scorn for all varieties of "government

encumbrances and bureaucracies."

What is the mystique whereby Lefrak does what most builders seem to believe cannot be done? Is he shrewder, richer, or what? He is a little of everything. This, in his own words, is Sam Lefrak's formula for producing new middle-income housing:

"Lefrak City is the result of a manufacturing and supermarket approach to apartment planning and building . . . and to acquiring land and materials. . . . We purchase larger quantities than the average builder and stockpile them. . . . We buy land at bulk prices, and we usually get a lower cost per square foot. And we also buy land and hold it for future construction. . . . We operate with our own money, and we have verticalized our operation. . . . We do our own architecture, engineering, painting, plastering, carpentry, and we even have our own brick plant which makes bricks to our design. . . . We take advantage of the seasons, too, in our buying of materials . . . we buy distress merchandise, pipe, cable, switches, or whatever and put it into warehouses until we need it . . . we dovetail and coordinate occupancy dates. . . . Put it all together and it spells mother."

Size and money power

Sam's secret is delivered at a rapid-fire clip, with much pacing and gesticulating. If it is not very revealing, that is because he somehow overlooks, with uncharacteristic modesty, the real source of his success—his organization's

great size, and its money power.

Sam Lefrak's formula translates into something like this: He has, in the first place, enjoyed the good fortune of an expanding market for housing in Brooklyn, and in Queens, which is today New York's only major borough showing any growth. (With 1.8 million people, Queens is larger than either Detroit or Houston). Therefore, though he sometimes buys marginal land, Lefrak holds it until the market looks right for development. After all, he is under no pressure to build immediately.

His buying of "distress merchandise" is another key point. Vigilant young men from the Lefrak Organization stand ready to snap up wholesale lots of all sorts of materials at bargain prices. They know when a subcontractor is stuck with some material, or when a wholesaler has a bulging warehouse, and they take full advantage of the situation. Lefrak denies that he buys inferior materials, but when you buy "distress merchandise," you obviously can't be too choosy.

Squeezing subcontractors

Lefrak's size and affluence are tremendous factors in themselves. He uses them as a lever on subcontractors, suppliers, and manufacturers. For instance, Lefrak was unhappy with the price Consolidated Edison quoted to deliver power to Lefrak City, which has all-electric kitchens. He threatened to generate his own power, and, with typical Lefrak flair, to do it with a nuclear reactor. He reputedly spent thousands of dollars researching the possibilities of a reactor before scrapping the idea. In any case, in the midst of this research, Con Edison came up with a better deal.

The size and pace of Lefrak's operation enable him to squeeze subcontractors in every conceivable way, but they can hardly complain: after all, a project like Lefrak City alone can keep a sub-

contractor working for several years; and, even though his unit costs might be depressed to a minimum, he can make a tidy profit over the life of the job. Subcontractors say, with a sigh, that life is often tough working for Lefrak, but it's a lot better than not working at all.

Subcontractors do not play nearly so large a role in the building of a Lefrak job as they do in most large projects. Lefrak does most of his own building, except for mechanical services. (On Lefrak City, he also subbed out the brickwork.) As Executive Vice President Arthur Klein says, "This way we squeeze out the middleman's profit."

"A ferocious negotiator"

Even the biggest money lenders find Lefrak a formidable partner. Insurance giants such as Prudential, Metropolitan, and John Hancock are bankrolling Lefrak City, each lender writing a \$15 million mortgage on a single section comprising four apartment towers. Negotiations for the fourth section are now underway, and Klein says that in the process of these talks, the money market has already softened sufficiently to cut three-eighths of a point off the price of mortgage money. "And three-eighths of a point on \$15 million is not chicken feed," as Klein points out. (In fact, it is a tidy \$56,250—all saved by just sitting tight for a bit.)

Size and the power of money, then, underly the Lefrak formula. These in turn are used to impress suppliers and subcontractors—"Lefrak is a ferocious negotiator," as one former associate puts it. Lefrak says he uses the formula to pass savings on to the tenant, and this is proved by the many "amenities" available at Lefrak City. Certainly, there is no housing in Manhattan which compares with Lefrak's prices. And he has established a reputation as a fastidious landlord, at least in his

nonrent-controlled apartments, who treats his tenants "as if they were guests in my house."

The power of the Lefrak Organization did not derive entirely from the endeavors of Sam Lefrak. When he became president of the organization in 1948, it was already a substantial enterprise, built up with years of hard work by his father, Harry Lefrak, now 78, and no longer active.

Building near the subway

Harry Lefrak arrived in the U.S. in 1905, twenty years old, with an arm of iron and some knowledge of how to throw a house together. Times were not so propitious for immigrants, and Harry Lefrak patrolled lower Manhattan working at odd jobs (he even shoveled snow for \$4 a day) and eventually picked up considerable work as a glazier in the industrial district. His trick was to remove glass from abandoned factory buildings to be reused in other locations.

Harry's big chance came in 1916, when a gas explosion rocked midtown Manhattan, blasting out thousands of windows. Lefrak was there, with a crew of men, and he made his first big killing. This enabled him to get into the building business in Brooklyn where, with a knowing eye for the immigrant housing market, he built walk-up row houses to rent for considerably less than comparable housing in Manhattan—thus establishing one tenet of the Lefrak formula. During the building boom of the 1920s, Harry Lefrak got rich, building whole blocks in Brooklyn. He also was a firm believer in plowing profits back into the business. Harry laid down the guide lines for other Lefrak policies, too: he always tried to buy land near the subway, even though it might be years before he would actually build on it. When he did build, he stressed two things: the size of the apartments and the rent. He wanted his apartments

to look a little bigger than his competitors' jobs, and he usually rented them for a few dollars less. The quality of Lefrak's work, in the bargain, was probably not significantly lower than the competition's.

Samuel was the fourth and youngest child (Sam has three older sisters) and after public school he was dispatched to the University of Maryland to study dentistry. "Somehow dentistry lost its appeal," he says today, "and I began to wonder if I wanted to spend the rest of my life staring into people's mouths. I wanted to build things, to leave my mark in the world. I wanted people to know some day that Sam Lefrak had lived here." (Actually, Sam lives in a villa in Woodmere, L.I.) Anyway, he proceeded to go into engineering.

Lefrak on his way

Upon graduation, Sam immediately bought himself a piece of his father's business, and by 1948 was the president. Three years later, Sam made his own big break: he went to State Supreme Court in Manhattan and outbid some 400 others for 20 mortgages and 29 pieces of real estate being auctioned off by New York City. Lefrak dauntlessly bid \$5 million for the properties, after the competition quit at \$4.9 million. He put up the required \$50,000 on the spot (just about all the cash he had at the time) and then began to scrape up the remaining \$450,000 required to satisfy the 10 per cent down payment demanded by law. Lefrak split the properties into three chunks—prime, "choice," and marginal. The prime properties he used as collateral to get the needed \$450,000 for his down payment. The choice properties he decided to develop himself, where it seemed feasible, and to borrow against such development as part of his purchase price for the land. He was forced to borrow at high

rates, and to liquidate some of the land parcels below their assessed value, but in the end he was left with ten prime properties returning sturdy incomes.

From the time of this auction, Sam Lefrak was on his way. He began building on a large scale, and building his organization at the same time. He also began to build an image of Sam Lefrak as an idea man. He came up with a proposal to keep the Brooklyn Dodgers in Flatbush, offered to buy Ellis Island from the U.S. government, and proposed a \$14 million apartment project over the Manhattan approaches to the George Washington Bridge. (This project has since been built by another developer, after Lefrak abandoned the notion.) More recently, he has proposed that New York City buy the Seattle Fair's monorail and put it alongside the L. I. Expressway.

Lefrak also blazed the trail for New York's Mitchell-Lama housing, which permits low-interest state-guaranteed loans and tax abatement. He built the first Mitchell-Lama project on a site he had owned in the Sheepshead Bay section of Brooklyn, and advertised it for \$350 down and \$21 monthly per room carrying charges. Some 4,000 people stampeded the project for the 520 apartments, many waiting in line all night.

A foe of public housing

Despite the success of this project, Lefrak shies away from government-assisted programs. His only concession so far has been that he intends to develop a small parcel, involving rehabilitation, of Manhattan's large West Side Renewal project, for which plans have not yet been fully determined. Lefrak is even a little skeptical of the project, although he is on the record as saying that "the Title I program is a step in the right direction."

Like most builders, Sam is a

determined foe of public housing (too often it suffers, says the creator of Lefrak City, from "a deadly drabness of design"), but unlike most builders, he is a firm believer in rent controls and "state and city financing" to erect low-rent developments (see page 85). Also unlike many builders, Lefrak avoids the FHA because he can actually borrow more cheaply from conventional sources.

Merchandising Lefrak City

Lefrak City is the most ambitious deal Sam Lefrak has ever tackled. Getting the land alone took 15 years, by his reckoning, since the first time the trustee of the Astor estate was approached about selling the 40-acre site. The trustee for the estate wanted to lease the land, as it was in the habit of doing with other properties, but Lefrak insisted on owning it outright. Meanwhile, other builders shunned building on the site because it was so swampy. (There is still a creek running through the site, and the water table is only 10 feet below grade.) When Lefrak finally got the chance to buy it for \$7 million he jumped at it, despite the soil conditions. (Most of the buildings are being built on wooden pilings.)

Buying the Lefrak City site was a typical Lefrak deal. It was marginal land, despite the convenience of the subway and the expressway. Sam bought it cheap (around \$4 per square foot) and is building cheap (for \$1.50 per cubic foot or about \$13.50 per square foot). Despite its swampiness, the property is strategically located, and Lefrak himself will see that it gets all the shopping and commercial facilities it needs. Nearby he intends to build four more office buildings to complement his 14-story Lefrak Tower. A convincing pitch to prospective office tenants: office help, of which Lefrak City and environs have plenty, works in Queens for