Lessons from the biggest rental PUD of the
Also: New approach to low-cost urban rehab...Ideas for hillsid
Unveiling
January 18

NAHB Show Booth 2429

NEW Outdoor fixture Line

A Complete, new line of more than 40 outdoor fixtures. Designed with originality... styled to reflect today's most popular architectural trends. Georgian, Mediterranean, Early American, Contemporary... all ready now... all unveiling January 18. NAHB. Booth 2429.

LIGHTCRAFT OF CALIFORNIA

Madison and Red Bank Roads, Dept. HH 12, Cincinnati, Ohio 45227
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NEXT MONTH

Products preview for 1970: A look at the materials, appliances, fixtures and other features you'll be building into your houses or apartments next year, and some of the tools and equipment you'll build them in with... A portfolio of small apartment projects especially suited to urban lots.
Housing in '70: Spring rally and a big second-half spurt

Homebuilding will rise 7% in contract value, to $26.9 billion, and attain a starts rate of 1.7 million in 1970. F.W. Dodge economist George Christie tells why:

To homebuilders, 1969 looked like a rerun of 1966—housing's worst year in a long time.

Like 1966, this year's residential building got off to a solid start, held great promise, and then began to wither in the drought of another credit squeeze.

Yet even with these striking similarities, there are enough differences in today's residential market to change the outcome significantly. The most important and obvious result: 1969's tighter credit conditions are nonetheless supporting almost a quarter of a million more housing units than were built during the 1966 credit crunch. And that doesn't count nearly 200,000 more mobile homes.

There are good reasons for the difference. For one thing, the demand for housing is a great deal more urgent now than it was three years ago. In 1966, there was a moderate surplus of available housing left over from an earlier building boom. Today's vacancy rates show a severe shortage of all kinds of housing.

At the same time, this year's mortgage market is better insulated against a credit squeeze. Back in 1966, a very large share of the burden of monetary restraint was borne by the nation's savings institutions, which provide most of the mortgage money. The current round of money tightness has fallen more heavily on the commercial banks.

And the mortgage lenders had a good deal more outside help this year. Extra support has been provided by the Federal Home Loan Bank Board and the Federal National Mortgage Association (Fanny May is pumping some $10 billion into the mortgage market this year, four times the amount of its purchases of existing mortgages in 1966). This has enabled the savings institutions to increase their lending, even though net savings flow has been shrinking.

A question of subsidy. Finally, it should be remembered that not all of 1966's housing collapse was due to credit problems. The suspension that year of accelerated depreciation privileges on most buildings stopped apartment construction in its tracks. Nor did it recover until this subsidy was restored, even though credit had eased early in 1967. This year there's been no change in the depreciation rules affecting apartments.

These factors help explain why the housing market, so far in 1969, has been better able to survive even more severe credit restraint than that which led to its collapse in 1966. But credit restraint is a progressive thing, and even with this year's advantages, the home building market has declined steadily since spring. If tight money were pushed long and hard enough, output would eventually sink to 1966 levels. This is a fact, not a forecast.

While it is useful to know that today's conditions will support more housing than was possible in 1966, there's no avoiding the underlying question of how much monetary restraint there will be in 1970. This most important element of the housing outlook is also the least predictable.

The upturn. At some point in the near future there will be an easing of credit, and this raises two questions: When will it happen? How easy will money become? Since it's not likely that even the people who will make the decisions know the answers to these questions right now, the outlook takes on a very iffy character.

It was pointed out earlier that the Federal Reserve is looking for a clear sign—one that either says inflation is yielding or recession is threatening—before backing off from its tight money policy. With the

<table>
<thead>
<tr>
<th>National Estimates/1970</th>
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<tbody>
<tr>
<td><strong>Construction contract value</strong> (millions of dollars)</td>
</tr>
<tr>
<td>residential one- and two-family homes</td>
</tr>
<tr>
<td>buildings apartments</td>
</tr>
<tr>
<td>nonhousekeeping</td>
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<tr>
<td><strong>Total</strong></td>
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<table>
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<tr>
<th>Physical volume of floor area (millions of square feet)</th>
</tr>
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<tbody>
<tr>
<td>residential one- and two-family homes</td>
</tr>
<tr>
<td>buildings apartments</td>
</tr>
<tr>
<td>nonhousekeeping</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
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</tbody>
</table>

*8 months actual, 4 months estimated.*
economy on the verge of slowing, one or the other of these signs should make itself known early in 1970. Once it does, the beginning of cautious monetary ease (not a 1967-type surge) can be expected to overlap as early as next year's opening quarter. This change should be followed by a housing upturn. With gradual easing of credit throughout the year, housing should expand in each one of the year's successive quarters.

Despite a rising trend, the total of conventional housing starts in 1970 is apt to be something of a disappointment when measured against the nation's needs. Even if the rate hits 1.7 million by the fourth quarter, the low levels of the early months will hold the year's total to about 1.50 to 1.55 million units—at best only 100,000 more than 1969's restricted output. As in recent years, mobile homes will again fill the gap at the low-income end of the housing market, with an output in the 400,000-450,000 unit range.

The 1970 outlook. A 7% gain in contract value next year, to $26.9 billion, will get the housing market heading upward again after 1969's weak second half.

South leads now; Northeast will make biggest gain in '70

The South was this year's number one region for home building. The area, which contains a little less than 30% of the nation's population, accounted for about 35% of both one and two-family and apartment construction values.

Several factors contributed to the region's gain, including above-average population growth and a higher rate of replacement of substandard housing. The big factor, however, was a surge of apartment building along Florida's Gold Coast, much of it as second homes for sun-seeking northerners. Equity financing arrangements and high rentals (or sales prices, in the case of the many condominiums) kept this boom moving in spite of a generally disappointing year for housing elsewhere.

Mortgage-starved homebuilding markets in the West and Northeast fell short of expectations, aggravating already serious housing shortages in these regions.

In the Midwest, gains in most building types failed to match the national averages, but 1969 was a record year for utilities construction.

The South. The region has increased its share of new apartment construction from 20% in 1965 to almost 35% this year. During this period its output of single-family housing has remained nearly constant, at about the 35% mark. The expected slowdown in business activity will put a damper on some of the second-home apartment building, since much of it has been financed by large institutional investors. Since vacancy rates are well above the critical level and supply has kept up with population growth, new single-family housing in the South will also lag the national gain next year.

<table>
<thead>
<tr>
<th>South</th>
<th>1969</th>
<th>1970</th>
<th>% Change</th>
</tr>
</thead>
</table>
| 1-2 family homes | $5,400 | $5,835 | +8%
| Apartments | $9,590 | $9,520 | -3%
| Other | $430 | $460 | +7%
| Total | $8,420 | $8,835 | +5%
| *8 months actual, 4 estimated. |

The West. Another year of tight money and economic uncertainty has again postponed the long-awaited boom in Western construction.

After reaching a peak in 1963, home-building declined sharply as business conditions sagged and migration to the region fell off significantly. A resumption of migration, though not as strong as in the early sixties, and the beginning of a housing shortage in many areas bodes well for the future. Lack of mortgage funds will impede the start of this upturn, however, and improvement in 1970 will be limited to matching the national average.

<table>
<thead>
<tr>
<th>West</th>
<th>1969</th>
<th>1970</th>
<th>% Change</th>
</tr>
</thead>
</table>
| 1-2 family homes | $3,630 | $3,610 | +7%
| Apartments | $1,530 | $1,705 | +11%
| Other | $330 | $305 | -8%
| Total | $5,220 | $5,620 | +8%
| *8 months actual, 4 estimated. |

The Northeast. The Northeast stands to gain the most from a reversal of credit conditions, as far as housing is concerned. Both homeowner and rental vacancy rates in the region are less than two-thirds the level of those in the rest of the nation and are well below normally accepted minimum levels. The result has been a severe housing shortage in many cities which would be worse if not for the region's declining rate of growth in recent years. Any significant easing of credit should see a substantial turn-around in home building activity in the Northeast.

<table>
<thead>
<tr>
<th>Northeast</th>
<th>1969</th>
<th>1970</th>
<th>% Change</th>
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</thead>
</table>
| 1-2 family homes | $3,400 | $3,780 | +11%
| Apartments | $1,610 | $1,870 | +16%
| Other | $95 | $480 | +5%
| Total | $5,315 | $6,130 | +11%
| *8 months actual, 4 estimated. |

The Midwest. Despite the slowdown in population growth in the mid-1960s, the Midwest, until recently, has expanded its share of the nation's residential construction. Nevertheless, vacancy rates have remained below the national average, with this year's decline in housing activity due largely to restrictive credit conditions. Next year's national improvement in housing will be shared by the Midwest, which will just about match the gain for the country.

<table>
<thead>
<tr>
<th>Midwest</th>
<th>1969</th>
<th>1970</th>
<th>% Change</th>
</tr>
</thead>
</table>
| 1-2 family homes | $3,840 | $3,950 | +3%
| Apartments | $1,770 | $2,030 | +15%
| Other | $285 | $335 | +18%
| Total | $5,995 | $6,315 | +7%
| *8 months actual, 4 estimated. |

Demand for Shelter: 1969-70

(Thousands of units)

<table>
<thead>
<tr>
<th>Type</th>
<th>1969</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- &amp; 2-family units</td>
<td>820</td>
<td>850</td>
</tr>
<tr>
<td>Apartment units</td>
<td>630</td>
<td>675</td>
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<tr>
<td>Total conventional housing</td>
<td>1,450</td>
<td>1,525</td>
</tr>
<tr>
<td>Mobile homes</td>
<td>400</td>
<td>425</td>
</tr>
<tr>
<td>Total shelter units</td>
<td>1,850</td>
<td>1,950</td>
</tr>
</tbody>
</table>

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It all Adds Up to a Pretty
when you go North, young man

To Canada of course. New ideas, outstanding design, competitive prices, prompt delivery — these are but a few advantages. Canada's modern, rapidly growing building products industry can help you build profitable homes with the look of quality.

So you owe it to yourself to investigate. We're just across the border. Ordering and reordering is as simple as picking up the telephone — and easy access means low transportation costs. Why not check the full story out with any of the 12 Canadian trade offices listed below?

Of course if you're going to the National Association of Home Builders' Convention in Houston in January, take a good look for yourself at seven of Canada's leading companies. Their reps will be delighted to see you.

BUILDING PRODUCTS OF CANADA LIMITED, Montreal, Quebec
floor coverings, drainline systems
CRESTWOOD KITCHENS LTD., Richmond, British Columbia
kitchen, bathroom cabinets
CULTIQUE MARBLE PRODUCTS LTD., Rexdale, Ontario
bathroom vanity tops
GREGG CABINETS LTD., Chambly, Quebec
kitchen cabinets
NEWMAN MILLWORK LTD. OF CANADA, St. Boniface, Manitoba
solid wood wall panels
P. H. PLASTICS INC., Levis, Quebec
windows and window hardware
UNIVERSAL SECTIONS LIMITED, Scarborough, Ontario
polystyrene, concrete-filled building blocks

See them all at the Canadian Exhibit
The National Association of Home Builders' Convention
Stand 2224, The Astro Hall, Houston, Texas, January 18 to 22, 1970
Weyerhaeuser enters housing and Aetna moves in deeper

Weyerhaeuser is setting up a group of shelter companies much on the pattern of its big timber-products rival, Boise Cascade (News, Sept. '68).

The first step was the acquisition of Par-West Financial, a Los Angeles mortgage banker and homebuilder. Weyerhaeuser is paying $36-million in stock and will sign over additional shares if earnings meet expectations.

President George H. Weyerhaeuser explains that the acquisition represented his company's first outright move into homebuilding. (The lumber giant has already taken a second with the stock purchase of Quaint, Corp., privately held land developer and builder based in Bellevue, Wash.)

Par-West expects net income of $2.4 million on revenue of $30 million this year. The company operates Pacific Western Mortgage Co., which services $625 million in loans, and Par-West Construction Co. The principals of Par-West are George, Hoyt and Douglas Pardee, all sons of the late George M. Pardee, who founded the company in 1921.

Pardee Construction has built over 9,000 homes in California and Nevada in the last 48 years. It will erect 6,000 more in San Diego subdivisions and in San Jose, Calif., and Las Vegas, Nev., in the next five years.

Industrialized housing. A different kind of group, strictly for industrialized housing, is being organized by Kaufman & Broad. The big tract builder has just bought Biltmore Mobile Homes of Chino, Calif., as the first step.

Biltmore, privately owned, reported sales of $2,4-million in 1968. Kaufman & Broad has 35 housing developments under way in Los Angeles, San Francisco, Detroit, Chicago, New York-New Jersey and Paris. Its stock rose from 38 to 50 on excellent summer and fall earnings.

Aetna's purchase. Aetna Life and Casualty has agreed in principle to buy Urban Investment and Development Co., a Chicago developer and builder. The Hartford insurer will pay $58 million in stock.

Nixon tells experts: Find what ails housing

President Nixon has directed his top economic advisers to "find answers" to the recurring problems plaguing the housing and home financing markets.

According to Housing Secretary George M. Romney, the President is so concerned about housing's problems that he opened a recent meeting of the Council of Economic Advisers with a statement to the effect that the CEA should focus its attention on the housing area of the economy.

According to the Mortgage Bankers Assn., said President Nixon told the CEA: "Housing should not have to go through these rough cycles whenever there is a shift in monetary policy."

While there is little doubt that Mr. Nixon is concerned about the current housing problem, there remains much skepticism as to whether he really can do much about it.

The Administration is on record as stating that money will remain tight until inflation is ended. This, in itself, means rough siding for housing.

Also, President Nixon's November 3 speech on Viet Nam, in which he said flatly, "There will be no precipitate pullout of troops," is a clear indication that there will be less federal money for all domestic programs until the war is over.

With the nation spending $20 billion a year in Viet Nam, the Congress has shown scant willingness to spend much money for housing—or any other—programs at home.

President Nixon, in charging the CEA with finding answers to the housing problem, is, according to Washington cynics, asking for the impossible.

—A.M.

units in 1970 (News, June). It expects to earn $755,000 on sales of $12.4 million this year.

Other dealing. California's Rancho Bernardo Inc., the land development subsidiary of Avco Corp. (airframes), agreed to change its name to Avco Community Developers and acquire Laguna Nigel Corp., another California developer, for stock.

Signal Properties, realty subsidiary of the Signal Companies of Los Angeles, agreed to swap stock for Shattuck and McHone Enterprises, which had sales of $22 million in 1968 in tract houses, apartments and mobile homes.

Mortgaging. The Chase Manhattan Corp., holding company for the Chase Manhattan Bank in New York City, announced that it would acquire Dovenmuehle Inc., the Chicago mortgage banking house (servicing: $355 million).

Pittsbug National Corp., holding company for the Pittsbug National Bank, disclosed meanwhile that it was delaying its tender offer for the class A stock of the Kissell Co., the Springfield, Ohio, mortgage banking concern.

On your mark! Get set! Go into the housing industry

Not since the opening of the Cherokee Strip to settlement has there been such a stampede into land and housing. Traditional mushy-shoe builders and land developers are open-mouthed in astonishment at some of their more colorful new bedfellows.

Item: Breaking loose from the confined girdle and bra business, Exquisite Form Industries bought two North Carolina mobile home manufacturers, North Carolina Mobile Homes of Fayetteville and Columbia Homes of Whiteville. Both sales were for an unannounced amount of Exquisite Form stock.

Item: Conglomerate Lear Siegler Inc., primarily known for supplying the aerospace and automotive fields, made a two-point landing in housing. It will develop and operate mobile home parks at San Jose (400 sites) and Salinas (150 sites). Lear Siegler's takeoff was the $20 million purchase of Trousdale Construction Co. of Los Angeles (News, Sept.).

Item: Grolier Inc., the encyclopedia publisher, is planning to create more doors for its sales force to knock on by developing subdivisions in Vermont, Connecticut and Texas for prefabricated and sectional houses and mobile homes.

Item: Stockbroker E.F. Hutton & Co. of New York City is adding the good earth to its portfolio with formation of E.F. Hutton Real Estate Corp. The subsidiary plans to build apartments, hotels and office buildings.
A tongue lashing, given to the board of governors of the Mortgage Bankers Association of America in full hearing of the MBA membership and the housing press, may have done more to advance a piece of controversial legislation than any smoke-filled room full of lobbyists could have done.

The attack came from the Federal National Mortgage Association's president, Raymond H. Lapin. The reason: The MBA board had declined to endorse Lapin's proposal that Fannie Mae deal in conventional loans.

The result: The MBA shifted to a stance that clearly paves the way for full endorsement after some points are clarified.

Fanny May is today limited to activity in the FHA-VA home mortgage market. Legislation has been introduced in both houses of Congress, however, to extend that authority for the nation's central mortgage bank.

Already, the powerful National Association of Real Estate Boards and the National Association of Mortgage Brokers have given their support. The two savings and loan leagues, the National League and the U.S. League, may support the Fannie Mae broadening provided that similar authority is extended to the Federal Home Loan Bank Board. The only trade group in serious doubt had been the MBA.

Appeal over board's head. Fanny May's fears about the MBA position were borne out as the group met for its annual convention in New York. In a weekend meeting, the MBA's board of governors took the position that it would not support the legislation on conventional loans for Fannie Mae.

While MBA officers made the distinction that the board did not come right out and oppose the legislation, those officers were aware that naysayers, as far as the Congress is concerned, means just about the same thing as opposition.

What the board—and MBA officers—had not counted on, however, was that Lapin, due to speak in the convention on Tuesday after the board action, would bring his case to the entire membership. Something the board failed to do. In other words, while the board took the action on the conventional loan legislation, some MBA members at large could claim they knew nothing about it.

With the convention hall filled with rank-and-file mortgage bankers Tuesday morning, Lapin—who had torn up his original speech after the board's action—drove home his point.

Surprised ... saddened. "I was surprised and saddened by the action taken Sunday by your board to oppose pending legislation that would permit Fanny May to enter the conventional loan field," Lapin told the group, some of whom evidenced surprise at the board action.

He explained that the "time has arrived for Fannie Mae to look to expand into the conventional loan field in our purchasing and secondary-market operations. It is a matter of record that housing leaders in Congress have expressed themselves clearly as being similarly disposed. As such, your board's negative response to this proposal was quite shocking to me—and the reasons given for such a response were equally perplexing."

The Fannie Mae president that his opponents—reportedly led by Dale Thompson, past president of MBA and chairman of City Bond and Mortgage Co., Kansas City, Mo.—"were dead wrong in opposing this broadening of Fannie Mae's authority—an authority that is clearly in the best interest of your industry and of housing, generally."

Up roar on the floor. Lapin's talk was interrupted several times by applause, and shouts of "You're right!" were heard.

No sooner had the Fanny May president finished than several MBA members converged on MBA board member Thompson, Martin West of Weaver Brothers, Baltimore, Md., shouted at the MBA's past president: "You had no right to take this action.

The board is out of touch with the membership," and added: "It's about time you took a position that reflects what the members want, rather than what the board wants."

With the convention split wide open after the Lapin speech, speculation centered on...

**HOMEBUILDERS' MORTGAGE MARKET QUOTATIONS**

Reported to HOUSE & HOME in week ending Nov. 15

<table>
<thead>
<tr>
<th>FHA Sec. 203b</th>
<th>Conventional Loan Interest Rates</th>
<th>Construction Loan Interest Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>Rate</td>
<td>Date</td>
</tr>
<tr>
<td>Atlanta</td>
<td>7.8%</td>
<td>9/30</td>
</tr>
<tr>
<td>Chicago</td>
<td>8.6%</td>
<td>9/30</td>
</tr>
<tr>
<td>Dallas</td>
<td>7.8%</td>
<td>9/30</td>
</tr>
<tr>
<td>Detroit</td>
<td>6.8%</td>
<td>9/30</td>
</tr>
<tr>
<td>Houston</td>
<td>8.0%</td>
<td>9/30</td>
</tr>
<tr>
<td>Miami</td>
<td>8.0%</td>
<td>9/30</td>
</tr>
<tr>
<td>Minneapolis</td>
<td>8.0%</td>
<td>9/30</td>
</tr>
<tr>
<td>New York</td>
<td>6.8%</td>
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</tr>
<tr>
<td>Philadelphia</td>
<td>6.8%</td>
<td>9/30</td>
</tr>
<tr>
<td>St. Louis</td>
<td>6.8%</td>
<td>9/30</td>
</tr>
<tr>
<td>Washington, D.C.</td>
<td>6.8%</td>
<td>9/30</td>
</tr>
</tbody>
</table>

*Immediate cover loans for delivery up to three months, future covers loans for delivery in three to twelve months.*

**Quotes are reported to be taken in metropolitan areas, discounts may run slightly higher in surrounding towns or rural zones.**

**Quotes are report to be taken in one rate locality.**

**3% down on first $50,000; 10% of next $50,000, 79% of balance.**

**Footnotes:** a—no activity, b—limited activity, c—Net yield to investor of 7.8% mortgage plus extra fees, w—for comparable VA loans available.


**NEWS continued on p. 16**
that's truly a part of the home.

look any way you want it to look. Imposing or unobtrusive. Dynamic or serene. Colorful or quiet. It just depends on how you want the house to look.

We also market electric operators to go with our doors. Fingertip garage door control provides unprecedented convenience to homeowners. Particularly when you consider that the garage door is the largest moving part of the house.

If you want a garage door that doesn't look like a garage door, see your nearby Overhead Door distributor. He's only minutes away if you live in America.
For the seventies—a new mortgage banking industry

Change has swept the mortgage business with a ruthless suddenness and severity, but with an undisputed finality.

A completely new industry is evolving. From the debris and distress of the credit crises of 1966 and 1968 is emerging a younger and faster and wiser profession.

It is more sophisticated and better informed, and it is tougher. It has to be.

It will use mortgage bonds and equity deals and a half dozen other newer devices to meet competition. It is unafraid of inflation or high rates, and it could scarcely worry less about the decline of the old FHA-VA private market. The new mortgage banker is no longer a mere FHA trader.

The pattern of change emerged in clear and often startling outline at the New York convention of the Mortgage Bankers Association. New voices and techniques were everywhere, and the message was brutally decisive: The old order passest.

A different drummer. President Lon V. Crow, Crow Jr., read a nostalgic valedictory for the old as he stepped gracefully from office after one of mortgage's most disruptive years. But Crow, whose scholarly mien and gentle manner often mask an inner firmness and decision, issued a clear warning:

"The distortion is leading to a new kind of order and the changes are now too deep seated to be no more than another passing phase.

"We are coming into an era of professional outlook. We are in transition from first-generation mortgage banking, with the old entrepreneurs moving out and new management rising."

It was the MBA's new president who ventured a precise description of the new mortgage banker. Robert H. Pease, senior vice president of the prestige mortgage house of Draper & Kramer in Chicago, drew this picture of the specialist who will deal with the inflationary complexities of the 1970s:

"He will be a combination real estate man, partner in realty dealing, investment underwriter and mortgage banker.

"He will run a completely integrated corporation that will operate in realty, bonds and mortgages simultaneously."

From the wreckage... The new departures developed from the ruins of a mortgage market that had been unable to deal with seemingly permanent inflation. Yesterday's mortgage bankers had built fortunes in this same market in quieter times, buying FHA-VA mortgages from builders and selling to investors.

But the market was saddled with an artificially low interest rate and an archaic discount system that rendered it a ready victim to high rates. The crisis of 1966 had exposed the system's frailties and the crisis of 1968 had left it in virtual collapse. At the time the MBA met, the voracious

Federal National Mortgage Assn. had taken over the old private FHA-VA market. The quasi-governmental agency was gobbling up 75% of the FHA-VA loans originated annually—originations ran $10.3 billion in 1968—and was making money available through its loan-buying auction at the staggering rate of $10 billion a year.

The private market was trading almost no paper, for it had lost its investors. Whether they had fled into more profitable investment or whether Fanny May's artificially high prices and easy money had driven them away, they were long gone.

Savings banks had virtually abandoned home mortgage and commercial banks had become mortgage sellers instead of buyers. Even the savings and loans, which make the nation's conventional loans ($21 billion in 1968), had suffered enormous deposit losses and were lending only because of ready credit from the government's Home Loan Bank System.

Insurance companies had long since deserted single-family mortgaging.

President Crow summed up for the MBA:

"Mergers and sales, broken and tarnished alliances with strangers, shifts from homes to apartments, equity financing—these are some of the changes."

...New approaches. The new mortgage men have fresh answers. They are determined to win back their investors and re-establish their market.

They talk of mortgage-backed securities and of genuine bonds that will soon be sold with mortgages as collateral. Both are treated as instruments to lure banks back and even to attract the general public.

But the compelling interest is equity.

Equity-participation methods swept wide and handsomely into mortgaging last year to provide big lenders with a hedge against inflation (Piece-of-the-Action Fever, NEWS, Dec. '68). The techniques have been refined and improved as a device to entice pension funds and insurance companies into apartment and commercial mortgaging and keep them there.

Equity was easily the most controversial topic in private discussions at the MBA gathering. The latest vehicle was described for the meeting by John G. Heimann, former adviser to the Secretary of Housing. Presidential Realty, a public building company in White Plains, N.Y., has financed an office and an apartment building with mortgages convertible into Presidential common stock. The interest rates are 30% below the going rates on straight debt.

Heimann predicted that the convertible was probably the best instrument yet devised to attract pension funds into mortgages.

He also warned that the new equity methods were here to stay:

"When credit stringency ends, we will see more equity participations, not less."

Impact on builder. Equity financing has not yet reached into single-family house mortgaging, but the time is not long. President Irving Rose of Detroit's Advance Mortgage Corp., told the convention it will be prevalent within 10 years.

Inflation is not temporary, Rose warned: It is a permanent condition of American life, and the piece-of-the-action mortgage is probably builder's only recourse in an inflationary economy.

Several experts thought Rose's estimate was too cautious. They said homebuilders would be submitting to equity deals in the early 1970s if inflation continues. And reporters recalled that Heimann, speaking in Boston two days before the MBA meeting, had pointed out that savings and loans are already taking a share of the builder's equity. Their method, often called mortgage manufacturing, entails complete financing of land purchase and construction.

Tomorrow. Rose, usually a highly prudent man in prediction, described nothing but prosperity for the emerging mortgage industry. He said mortgage bankers would originate $40 billion a year in all kinds of mortgage loans by 1978. They raised only $16.4 billion in 1968, and two-thirds of that was in FHA-VA paper.

The Rose picture delighted a convention and an industry in the throes of change. His confidence was highly infectious, and his bright prediction seemed to light the way into a vast unknown. Thanks to his research, the new industry got a look at its own future. It liked what it saw, and that was perhaps the best guaranty that it would see to it that the wish came true.

* The convention drew 4,000 persons. The MBA has 3,300 members, 804 of them mortgage bankers servicing $70 billion in loans, or more than 17% of the total mortgage debt outstanding.

** Rose's company publishes the authoritative quarterly summary, U.S. Housing Markets.

NEWS continued on p. 20
Elegance for the bath... **Crystal Glo**

A reflection of good taste... the simplicity of good design... the fresh concept of crystal combined with either luxurious chrome or the dignity of gold. This is what has become the standard of excellence with "Crystal Glo" by Harcraft.

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Why not take advantage of the growing preference for Total Electric Living? Your electric light and power company will welcome the opportunity to work with you.

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CARADCO C100' Double Hung Wood Windows

C100's attract builders whose homes attract buyers. They're drawn by convenience factors: removable sash you can store during construction and paint easily; tough, stainless steel track/weatherstrip that resists damage and self-adjusts; snap-on, mar-proof vinyl grilles.

They like quality features: leak-proof, permanent vinyl glazing for insulating glass; complete weatherstripping. They want cost savers: factory priming; stops applied; built-in lifts.

The CARADCO C100' has it all—a most attractive window.
The mortgage trusts take a hard look at themselves and...

They are not wild about what they see.
The self-examination came at the annual convention of the National Association of Real Estate Investment Trusts in Denver in mid-October. The meeting drew 340 persons, many of them Wall Street analysts who follow the REITs.

Both equity and mortgage trusts were in prominent attendance, but the mortgage mavricks attracted attention because of their feverish activity in the stock markets. That was the rub.

Nineteen new mortgage trusts had raised $418.8 million through public issues up to the time of the meeting. Investors had almost universally rushed to buy, and share values had enjoyed an almost unprecedented run-up in mid-May.

Then came the debate. An index prepared by the Wall Street investment house of Paine, Webber, Jackson and Curtis showed that the mortgage trusts plummeted from a scale value of 442 to a point below 250, or 43%, before stabilizing at about 272 just before the meeting (see chart above right).

Too much too soon? But another 30 trusts have registered offerings running to $900 million. Wall Street has begun to hear whispers about a shakeout, and some Midwestern regulatory agencies have now declared a moratorium on such stocks.

So some mortgage trusts have scaled down their issues or arranged for alternative financing. Lomas & Nettleton Mort-

gage Investors of Dallas cut back from $70 million to $22.5 million, and Transamerica Corporation's Mortgage Trust of America opted for a $60-million rights offering to Transamerica stockholders in stead of a public issue.

Vice President Fred Joseph of the Wall Street investment house of E.F. Hutton, himself a trustee of North American Mortgage Investors,7 told the convention that probably no more than 20% of the pending offerings should actually come on

* North American is managed by Sonnenblick-Goldman Corp., the New York City mortgage brokerage. The trust's shares have traded between 19 and 42, and their late October price was 24. Earnings will be about $1.35 per share for 1969, probably $1.75-$2.52 in 1970.

stream. He also questioned why the trusts were asking the market for such large sums, usually $20-million-plus, when new ventures in other industries usually settle for $5 million or less.

Inflation. The convention's most provocative speaker, as is often the case, turned out to be James C. Downs Jr., chairman of Real Estate Research Corp. of Chicago. Downs told the convention it could expect virtually permanent inflation. (For a similar view, see remarks of President Irving Rose of Detroit's Advance Mortgage Corp., page 16).

"We are going to have to abandon the stable-dollar concept," Rose warned. "Faith in the long-term worth of the dollar has been permanently damaged."

He predicted an inflationary rate of at least 3% annually, and he forecast a renewed real estate boom "when the Nixon administration abandons its war on inflation next spring." Downs termed the present pause in building and reality sales activity a "boom arrest."

"When the patient's heart is stimulated and beats again, he's as good as ever," said Downs. "That's what we have to sell reality."

Donald H. Graham Jr. of Honolulu's Dillingham Corp. seconded Downs on an inflation rate of 3% and reminded his audience:

"That means prices will be doubling every 25 years.

-Frank Pitman

McGraw-Hill World News, Denver

Housekeeping stock index up a bit despite loss in mobile homes

House & Home's composite index of 25 housing stocks crept from 403.20 to 406.75 in the month ended Nov. 3 despite a big drop in the mobile home section. Mortgage companies made the big gains.

Here's the composite index:

<table>
<thead>
<tr>
<th>HOUSE &amp; HOME VALUE INDEX</th>
<th>OP 25 BUILDING STOCKS</th>
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<tbody>
<tr>
<td>100</td>
<td>140</td>
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How the top five did in each category:

<table>
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<tr>
<th>Builders</th>
<th>Land devel.</th>
<th>Mortgage c.</th>
<th>Mobile homes</th>
<th>S&amp;Ls</th>
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<tbody>
<tr>
<td>507.14</td>
<td>489.85</td>
<td>503.05</td>
<td>805.19</td>
<td>186.81</td>
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The stocks mostly outside the strategy of January 1965—1969.

<table>
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<tr>
<th>HOUSE &amp; HOME'S Nov. 98 Chg. Close Month</th>
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<tr>
<td>Nov. 3</td>
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the most exciting they will be offer-
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Golden Yellow is one of the newest Gerber colors. Warm. Contemporary. Really appealing. For many luxury-loving women, this is their color, in smartly designed fixtures that have all the other luxury features they want. (Like sculptured styling in beautifully matched fixtures; tubs with a wide, flat safety bottom, and quiet-flushing closets.)

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DECEMBER 1969

Circle 71 on Reader Service card
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The new Roper Gas Range helps sell your houses—for all they’re worth.

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*Based on average U. S. Gas Utility rates.
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Potlatch precision factory applied Colorific finishes and prime coats are now available on our tremendous range of modern laminated and solid wood products...Lock-Deck® decking and laminated posts and beams, Redi-rabbetted fascia, paneling, siding and trim...in a wide choice of species and patterns, all kiln dried to give freedom from warping, twisting or checking. In conventional construction, primed or stained siding saves time and money. In post and beam construction, our prefinished laminated decking gives you a strong structural system and a handsome finished interior in one easy application. Check the advantages of Potlatch Colorific wood products, from the forests where innovations grow.
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DECEMBER 1969 Circle 75 on Reader Service card
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Johns-Manville
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Today Bostitch can put you in the truss business for under $2,000.

Heart of Bostitch Clinch-Nail Truss System is the special two-ply truss plate and companion clinch point nail. Each nail is power driven completely through joint and automatically clinched on opposite side. Two-ply construction of Bostitch clinch pad truss plate insures precisely controlled clinching action.

The new Bostitch Clinch-Nail Truss System makes it all possible. With Bostitch you combine the proven strength and durability of nail-on truss plates with the speed and low cost of a simple compact air gun system.

That means simplified scheduling—up to 120 trusses a day, when and as you need them.

Low-cost trusses—requires only three men to do the entire job, including the cutting of webs and assembly.

Highest quality trusses—each nail goes completely through both sides of joint and locks wood between two steel plates.

Versatility—makes almost any size and style truss. Just add tables to expand pitch and span to any lengths.

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Two Bostitch N2 Truss Nailers — tremendous driving power at low air pressure. And these nailers can do other nailing jobs when not in use for trusses.

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DECEMBER 1969

Circle 80 on Reader Service card
Four new models for a market that’s moving up in taste and price

The four models, shown here and on page 44, are offered in Bravo!, Wm. Lyon Homes’ new project in San Jose, Calif. They represent the builder’s move away from the straightforward design typical of the San Jose market and towards more sophisticated—and expensive—homes. Each house was designed for a specific segment of the market and, according to the builder, each is selling pretty much to the segment for which it was built.

All homes have such features as sloped ceilings, masonry fireplaces, oak hardwood floors, private courtyards and complete yard enclosures. One wall of each house rests on the lot line, leaving the other three sides of the house surrounded by a wide expanse of enclosed yard area.

Living areas range from 1,376 sq. ft. to 2,137 sq. ft. with prices from $25,950 to $32,450. Models have been open for 21 weeks, and 29 have been sold. Each model is available in three different exteriors. Total houses in the development: 63.

FOUR-BEDROOM model (below) offers 1,576 sq. ft. for $26,950, and was designed for the second-time buyer with a larger family. Informal living-entertaining areas are stressed.

THREE-BEDROOM model (above) offers 1,376 sq. ft. for $25,950 and is geared to young, first-time buyers or older couples with one child left at home. Note privacy of master bedroom.
Smart builders are selling houses in the shower.

Show a prospective buyer a bathroom with Temptrol '76 installed, and you'll clean up in the bargain.

Temptrol '76. The non-scald, pressure-actuated shower valve that maintains the hot-to-cold ratio to keep temperature constant right through the shower, no matter who operates what in the rest of the water system.

And while Temptrol '76 looks like it was meant for the filthy rich, it costs about the same as most ordinary shower valves.

Temptrol '76.

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With 20 practical, workable solutions—real answers to real problems. They're actual case histories from the experience of some of the country's most successful builders and architects.

Plywood building systems are the common denominator. Because providing sound construction at the lowest possible cost per square foot is what plywood is all about.

The examples range from urban core high-rise to self-help Indian housing. They'll give you ideas and facts to help you get started.

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WHAT THE LEADERS ARE BUILDING  
starts on p. 38

FOUR-BEDROOM, three-bath model (below) offers 1,801 sq. ft. on two floors for $30,450, and is aimed at the young executive with a small family. Stress is on both the formal living-dining areas for entertaining and indoor-outdoor activities.

FIVE-BEDROOM, two-story model (above) offers 2,137 sq. ft. for $32,450. It is designed for the older man with a large family who has reached his income potential. Accommodations are provided for formal entertaining in a dead-end living room and separate dining room.
Kwikset—America's largest-selling residential locksets. Being on top means we must always offer a product that is as good as the competition, at a competitive price. A product that is as good as the competition by making constant improvements in our line of locksets. That we do because we have a reputation to protect, in the same way every time you sell or install products, the name and reputation of your company is put on the line. If the locks you sell are of the lowest quality, your reputation will be well-protected. We guarantee the best committed to quality. Every time.
Now that PVC is fast growing in acceptance for drain/waste/vent systems in new construction as well as rehabilitation, the builder who hasn't looked into its advantages stands a chance of falling behind.

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Take performance. Piping made of Geon vinyl (PVC) has proved itself in types of service far more severe than DWV systems; for example, chemical handling and acid drainage systems.

Installation is easy and fast. Joints are solvent welded, no threading. Stronger, too. PVC pipe weighs only a fraction as much as conventional materials, hence is easier to handle.

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For more than 17 years, PVC pipe made of Geon vinyl has been working well. But pipe isn't all. There is more rigid Geon vinyl at work in different forms and compounds than any other kind. Whatever your need, ask us how PVC can help. Write B.F. Goodrich Chemical Company, Dept. H-18, 3135 Euclid Avenue, Cleveland, Ohio 44115.

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7" EXPOSURE
8 FEET LONG

ROUGH SAWN PANELS

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PUD

HAR: Your September article, "PUD is good for everybody," is so valuable that we plan to distribute copies to local government officials and planners throughout our commonwealth. (The Division of Recreation and Conservation, of which I am a member, promotes the acquisition and development of open space and recreation lands through financial and technical assistance to local governments.)

FRED W. MENGENTHALER, supervisor—land acquisition
Department of Community Affairs
Harrisburg, Pa.

HAR: Your excellent article is effective in explaining the PUD concept. Its timing is also quite appropriate in view of the increasing need for innovative development techniques. The availability of your article for public relations and education will prove a valuable asset to planning agencies.

St. Louis County has been utilizing the PUD technique for several years. Your article will lend objective support and reinforcement to the concept being developed.

Kenneth G. Lange, deputy director of planning
St. Louis County Dept. of Planning
Clayton, Mo.

Credit crunch

HAR: I was quite pleased to read your August editorial. I wish I could agree that help is on the way for the money crunch. But there are factors involved that the Federal Government fails to take into consideration.

The biggest competitor for money is the Federal Government. Their short term bonds and notes are selling with a yield of over 7%. Federal Agencies are selling as high as 8 or 8 1/4%. So why should the investor invest in a T-bill that can pay only 5 1/4%.

The help you explain is on the way is not of value in states such as ours. In Kentucky we are faced with a 7% legal interest rate on mortgage loans, and yet the lending rate for the long term FHHLB loan is at least 8 1/4%. How can you lend money at 7% maximum and pay 8 1/4% for it? And points is not the answer. There is a limit to the number of points a person should pay for a mortgage loan.

So the Government has set forth the following problem: They want the S&L's to do business with them. But when they do get our business, they charge us the highest rate they can get. Yet, they are trying to help us. Yet at every turn of rates, they are making it unfeasible for us to borrow.

Perhaps help is on the way, but if it is, it is to the large S&L's in states with a more forward-looking interest rate.

WILLIAM W. COX, executive vice president
First Federal S&L
Madisonville, Ky.

Landscaping

HAR: Compliments on your October issue and the great article "Landscaping: It's the key ingredient in today's better apartment projects." It is very inspiring to see such a renowned trade publication as yours continually stressing the importance of landscaping. Thank you for your work in promoting it.

BURTON S. SPERBER, president
Valley Crest Landscape
Van Nuys, Calif.

Giants in building

HAR: Your editorial is the first thing I have read in the past few years that really said what was needed about the changing housing industry, its problems and developments. You hit hard at the root of the real reason for this country's housing problem. If builders would concentrate on their local problems in an effective way instead of waiting for solutions, progress would result.

FRED DALE
Carolina Constructors & Realty Corp.
Raleigh, N.C.

Honor Award

HAR: I appreciate your selection of the Honor Award house at Easthampton, N.Y. (July) despite its stylized character. Too much of the woods character of homes, apartments and small commercial buildings has received the acclaim of critics—to the extent that architectural creativity is the rule of design, as opposed to a sympathetic realization that a civilized living attitude is still extant and must continue to be so.

The influence of no-talent on modern structures, furnishings, furniture and decoration is alarming. Even good taste seems to have gone by the board in favor of no taste—lack of a sense of design, flamboyancy and a vulgarity which is not America, but the bull-in-the-china-shop, or the beast let loose on us to dominate the lives of those who think we know better. Something should be done about it.

HUBERT R. ARNDT
Whitefish Bay, Wis.

Annual H&H indexes

Copies of House & Home's editorial indexes for 1965, 1966 and 1967 are still available. Each is an eight-page, cross-referenced listing of subjects covered that year by this magazine. To get copies (there's no charge) write to: Reader Service Dept., House & Home, 330 West 42nd St., New York, N.Y. 10036.

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Our urban plant

How we will grow to accommodate 50% more people in the next thirty years turns up some dire warning signals

In the last 50 years, seven of our largest metropolitan areas increased in size from 2,000 square miles to 9,000 square miles. Some experts predict that the urbanized area for those seven areas alone will spread out over 18,000 square miles by the year 2000.

A good many people, on seeing those figures, leap to the conclusion that therein lies catastrophe. One way out of the dilemma, they say, is to build anywhere from 100 to 300 new towns way out in the country to handle an increase in population from today’s 200 million people to the year 2000’s 300 million people.

Now, of course, a good many so-called new towns will be built. But they will be, more or less, gigantic bedroom subdivisions with some industry here and there—and all within the geographic metropolitan area. Very few towns are actually going to be built out in the boondocks—for some very simple reasons:

Capital-rich investors, like insurance companies, can wait some years for an adequate yearly return on their investments because they can reasonably predict a huge appreciation on their realty some years ahead. But waiting for an adequate yearly return on investment must be balanced against realty appreciation on a time scale.

The feasibility of a new town rests on how fast it and the surrounding urban plant can grow. The surrounding urban plant is primarily responsible for the appreciation of realty in the new town. All of which is to say that new towns are okay for capital-rich investors in metropolitan areas. But they won’t work, or they won’t pass an economic feasibility study, if they are planned for the boondocks. So new towns are not going to be out there.

What will happen, then, with all those 100 million more people by the year 2000? New urban development in the next thirty years will take place primarily where we have built up our metropolitan areas in the last thirty years.

Probably the strongest force at work—to keep growth within current met area limits—is transportation. Even in those cities where rapid transit could be substituted for “express” highways, the expected cut in commuting time probably would not be sufficient incentive for a metropolitan area to expand dramatically beyond its current geographic limits.

More and more unused and underused land within those geographic limits can and will be turned to better and denser land use. That will be the slow, arduous but necessary political process of persuading municipalities and their zoning boards that more viable urban areas are created by greater densities well-planned, rather than by lower densities nonplanned.

So to provide housing and the necessary urban plant for 100 million more people may not involve going even 10% further out from center city than the present limits of our metropolitan areas. (Within the political boundaries of New York City we could house—arithmetically only—the entire population of the U.S. at densities no greater than some of the most recent upper middle-income projects in Manhattan.)

Now, that’s not another “it’s all beer and skittles” projection. There’s some really bad news in that sort of metropolitan area growth, a growth pattern that follows most historical precedent. Over a long time span, a city explodes into a metropolitan area which, when it reaches certain limits, continues to grow by implosion, or filling in the blank spaces and creating pockets of intense concentration of one type of land use or another.

Growth by implosion, in time, can and does produce disaster areas, which can profitably be studied to prevent more of the same in the future. Because it has had more metropolitan area growth experience than any other, the New York met area offers a disaster example of awesome proportions.

Between March 1965 and March 1968, over 100,000 dwelling units were abandoned by their owners in New York City, which now has a rental vacancy rate of zero percent, for all practical purposes. Those dwelling units could have housed the entire population of Jersey City. Their abandonment was the greatest mass dislocation in U.S. history, according to Frank Kristof of New York’s Urban Development Corp. It all happened without a protest.

There are four basic reasons why it happened:

1) Rent control. During World War II, housing became a premium item (there was no new construction) and controls were slapped on rents, like everything else. After World War II, controls became a valuable political tool, at the expense of returning housing to the free market place. By the mid-1960s, rent control was clearly a contributory factor in the abandonment of housing. Controls helped make maintenance and repair impossible. They helped keep cash flow too low to amortize mortgages or pay property taxes, too. So the owners walked away. Of New York City’s 1.6 million controlled apartments, 500,000 are right now headed for abandonment, and most of the families in them cannot afford rents more than they are currently paying.

2) Property taxes. In New York, as elsewhere, property taxes work like a 20-25% sales tax on housing every year. They are expected to pay a big hunk of the city’s welfare and education costs and are indirectly held high by the fact that 34% of all of New York City’s realty is tax exempt. Few people today will question the fact that property taxes are the most inequitable and most poorly administered taxes in this country. Best taxes are income taxes which tax economic reality, not the myth that we are still all small farmers—the origin of the property tax.

3) Code Enforcement. In theory a good thing, code enforcement is not only meaningless when rents cannot cover the cost, it is as confiscatory as rent control and property taxes.

4) Zoning. In 1961, New York City adopted a zoning code which would limit the number of people that could live in the city to an ultimate 12 million, instead of a projected 60 million. In effect, the zoning increased the land requirement per dwelling unit one and one half to two times. With land costs what they are, and site assembly so difficult in the city, no builder in his right mind would start anything but the most luxurious apartment project.

Residential construction (unsubsidized) in New York City today has virtually halted, and the city is doomed to become a haven for only the very poor and the rich, unless the four basic areas above can be changed. Let other cities take heed. —Richard W. O’Neill
NUN’S ISLAND

A new standard for high-density communities

Two years ago, this 750-acre island was absolutely uninhabited. Today, its 2,000 apartments house a population that just passed the 3,000 mark. And by about 1982 it will have 50,000 people living in 15,000 apartments, plus 220 acres of industrial, business and shopping areas.

Those are the statistics, but they leave a great deal unsaid. Specifically, they give no hint that Nun’s Island may well prove to be the most important housing project of the decade, if not of the entire post-war era.

For the astonishing fact is that Nun’s Island’s 15,000 families will be living on just 400 of the project’s acres. That’s a density of nearly 40 units per acre—more than most existing urban communities. And despite that density, the families will live in an atmosphere of parklike openness that few detached-house communities—much less multifamily projects—can match.

There are many lessons the housing industry can learn from Nun’s Island, but two in particular stand out:

1. If apartment buildings aren’t limited to three stories, density is no excuse for a badly-planned project. Builders, developers and planners take note.

2. An unusually high density need not be a reason to reject a proposed apartment project. Municipal officials take note.

Everyone concerned with multifamily developing should study Nun’s Island. The next six pages offer that opportunity.

NUN’S ISLAND sits in the St. Lawrence River just five minutes from downtown Montreal, visible in the background. Shaded area is business and industrial zone which is crossed by freeway.
And any study of the project must start with the consideration of three highly unusual circumstances bearing on this fact:

1. The island is only five minutes from downtown Montreal via existing freeways.
2. The developer, Metropolitan Structures Inc. of Chicago, was able to get the land on a 99-year lease.
3. When Metropolitan took over, there was nothing on the island but the nunnery from which it gets its name and a few barns.

In addition to giving the project an enormous marketing advantage, these for-tuitous (to say the least) facts more or less determined the kind of housing that would be built. The location made it unthinkable to consider anything but urban densities, and the land lease made rental apartments the most logical form of housing (Canada currently has no condominium law).

The virginity of the land was the key to the excellence of the planning. It allowed Metropolitan to start from scratch and, within the limits of very flexible municipal zoning, plan and build as it saw fit. The result, as the drawings at right show, is not just acres of apartment houses but a real apartment PUD—open, uncluttered and well ordered.

The land plan of Nun’s Island—by Johnson, Johnson & Roy Inc., and particularly by Cy Paumin, who was with the firm at the time and still acts as a consultant—breaks the island into four basic zones. Shown in the schematic at the top of the page at right, they include:

The residential zone, a wooded area and a meadow area in roughly the center of the island. These areas total about 400 acres, and it is here that the apartments will be concentrated. There will be five more or less distinct communities of about 10,000 people each, two of them in the meadow zone (they have yet to be started) and three in the wooded zone (the first phases of construction are in this zone). Each community will have its own parks, schools and community centers (see page 62), and 150 acres are devoted to these facilities.

A major recreation zone will be located at the south-western end of the island (at left in the overall plan). It will comprise 200 acres in the future when landfill operations are complete; to date about 60 acres have been filled. On this land will be all sorts of playing fields plus a golf course.

A light industrial zone (already started) on the north side of the island and . . .

A business and commercial zone on the east end, which together covers 220 acres. The latter is shown in concept form on page 62.

Thus the entire island will ultimately have roughly 970 acres. If the 220 acres of industrial and commercial land is excluded, the density picture looks like this:

There will be 15,000 units on 400 acres of primary apartment land; the basic density is just under 38 units per acre—very high, even for city areas. It’s worth noting that 100 of those 400 acres are in roads and rights of way, which would seem to make net density even higher. But in fact, the roads are almost all boulevards with deep setbacks that add a vital feeling of spaciousness to the residential areas.

Taken from the community level, the density is somewhat lower. The 150 acres of park, school and community land is not contiguous to all apartments by any means. But no family is more than a few minute’s walk away from such open space, and the space is very much a part of community life. So it is both logical and fair to say the working density of Nun’s Island’s residential area is roughly 27 units per acre.

The plan immediately at right covers the first two phases of construction in the wooded area. It shows the basic scheme which makes Nun’s Island’s density not just livable but astonishingly pleasant—few streets, wide rights of way, and well-separated buildings grouped to form small and relatively intimate neighborhoods. (Each court has a variety of building types around it; details are on page 60.)

The two plans at far right represent the next two phases of construction at Nun’s Island. The community at the top of the page covers 16 acres, with more than four acres taken up by a man-made lake that turns one area into an island. There will be 450 units in the neighborhood. Consulting architect was Donald Lee Sickler (whose waterfront apartments in Memphis, Tenn. were shown in House & Home in July).

Sickler was also a consultant on the community shown at the bottom of the page. It will be built in the wooded part of the island, and there will be 1,300 units in a 38-acre area. Apartments will be a mixture of town-houses and eight-story highrise buildings.
MASTER-PLAN CONCEPT (above) breaks Nun's Island into four basic zones: residential (the wooded and meadow areas in the center), recreation (far left), light industrial (top) and business and commercial (right). First 2,000 apartments are built (and occupied) in the community shown by the plan at left. Next two neighborhoods to be built include a 450-acre lakefront area (plan, right) in the meadow section and a 1,300-unit area (plan, below) in the wooded section.
THE BUILDINGS
They include a wide variety of types, and the mix changes as the project grows

The problem, according to Richard Siegal, vice president of Metropolitan Structures and head of the Nun's Island project, is to find a balance between a number of different demands including:

Cost: The general rule is, the higher the rise, the greater the cost per square foot. But in the case of Nun's Island, this is complicated by the question of...

Land coverage: For any given density, the higher the rise, the less land is covered and the more open space becomes available. There is also the problem of...

Varying market needs: "It's safe to say, as the building gets higher the number of children per apartment gets smaller," says Siegal. "Most families with small children don't like to be higher than three stories. On the other hand, many people without children want to live as high as possible to take advantage of the views we have here. The most expensive units in our high rises are on the top floor."

And, finally, in an all-apartment project like Nun's Island, a key factor is...

Esthetics and scale. "A mixture of buildings is vital to keep the project from becoming monotonous," says Siegal. "And if we didn't have two-story townhouses in various areas, for example, the scale of the big buildings would be overwhelmingly large."

The attempt to find the best combinations among these parameters has produced a continuing evolution of building types and mixtures. So far, Nun's Island has included the following (all are pictured at right):

High rises. Designed by Mies Van Der Rohe, these are the most spectacular of the island's buildings. Fourteen stories high (12 floors over a two-story lobby), they are built next to the water to take best advantage of views of the St. Lawrence River and the Montreal skyline. Apartments include studios and one- and two-bedroom units with rents of from $130 to $315.

There are now three high rises on the island—two occupied and one under construction—and plans call for from 19 to 22 more, although the design will probably change. "We expect that, eventually, from 4,000 to 5,000 of our apartments will be in high rises," says Siegal.

Six-story mid rises. These formed a big part of the project's first two phases—there are eight buildings, each with 78 apartments and they offered the widest variety of apartment types: Studios (from $120), one-bedrooms (from $160), two-bedrooms (from $200) and three-bedrooms (from $230). But the six-story building is now phased out in favor of planned eight-story mid-rise buildings.

Four-story mid rises. These were built only in the first phase, and represented an unsuccessful experiment in construction technique. They had precast floors supported by conventional masonry walls, and the combination 1) proved more expensive than conventional construction, and 2) suffered from poor quality control.

"Besides," says Siegal, "we've decided it doesn't make economic sense to build four stories with one elevator when we can add another elevator and go up to eight stories at almost the same unit cost."

The four-story buildings include one-, two- and three-bedroom apartments at slightly lower rents than the six-story buildings.

Three-story garden apartments. These are of frame rather than concrete construction, and so are the lowest priced of all the apartments on the island. In the first phase they were built with no elevators and included only two- and three-bedroom units from $190 to $225. In the second phase, both elevators and one-bedroom units, at $150 to $170, were added, but the result was unacceptably higher cost.

"We wound up with something as expensive as a good mid-rise," says Siegal, "and it covered too much ground." For the foreseeable future, the only three-story frame buildings built will be in the lake community shown in the plan on the previous page. "If the price of money allows," says Siegal, "we plan no-elevator, on-grade buildings with rents of from $125 or less for studios to $195 or less for three-bedroom units—the lowest rents on the island."

Two-story townhouses. There are already 200 of these, and the next phase planned for the wooded area (see plan on previous page) will have 166 more. The townhouses have either three or four bedrooms and two to three baths, are all occupied by families with children and carry the highest rents on the island: $265 to $410 including underground parking.

"There is always a demand for units that have almost the privacy of a house," says Siegal, "and people will pay top rents for them."
HIGHRISE, one of three now completed or being built, was designed by Mies Van Der Rohe.

SCALE MODEL of early phase shows interest created by widely differing building types.

TOWNHOUSE, most expensive apartment on Nut's island, brings houselike scale to project.

SIX-STOREY BUILDING, now being replaced by eight-storey buildings, has wide variety of units.

FOUR-STOREY BUILDING was an experiment in precast construction, will not be repeated.

DECEMBER 1969
Geographically, Nun's Island is within five minutes of the center city. But from the point of view of the kind of life tenants will lead there, it could be miles out in the suburbs. The reason, in addition to the openness of the land planning, is that Metropolitan Structures is giving the project the kind of community facilities that single-family builders in American suburbs have stressed—with considerable marketing success—for the past few years. And because of the size of the project, Nun's Island offers some new wrinkles as well.

Starting at the small end of the scale, these are the elements that make Nun's Island a community rather than just a bunch of apartments:

**Neighborhood parks** are the basic centers of activity. They are formed by the groupings of the buildings, are generally rectangular in shape and cover roughly one acre. There are ten such parks in the project so far, and they are especially appreciated by mothers of small children.

"We've equipped these parks with sandboxes and some tot-lot equipment," says Zeke Ziner, Nun's Island's director of marketing, "and parents just turn their kids loose and keep an eye on them from a window."

**Major parks** will be built at a proportion of roughly one for each community of 10,000 people. The first is already in operation; it covers nearly 35 acres.

In addition to providing big chunks of open space, these parks also function as the center of their communities. In and around them will be these facilities:

**Schools.** A temporary school, made up of mobile-home sections, is currently handling about 150 pupils up through the sixth grade, and there will be space in the major parks for eight to ten permanent schools as they are needed.

**Recreation centers.** The first of five is now in operation. It includes a swimming pool, basketball courts, hockey rink, etc., and is the center of teenage summer activity. Immediately adjacent to it is the first of the . . .

**Community-center buildings.** There will be five of these, and they will be the social hubs of the areas they serve. The first one has been open about a year, and, says Ziner, "It's busy every day and every night of the year with everything from Yoga to bachelor parties."

The building has about 4,000 sq. ft. of area on two levels, a big lounge for large gatherings, a kitchen and a number of smaller rooms that can be used for bridge clubs, art classes, etc. And a community-sponsored nursery school is now running full blast in a downstairs room.

Metropolitan Structures owns the center, just as it owns the recreation area, and residents pay no fee for using either. Eventually, the company will turn the facilities over to the city.

**Neighborhood shopping centers.** One is planned for each of the major park areas, and the first one is now in operation. While it is a commercial venture, it is nevertheless an important and integral part of the community center. For example, there is a big tot-lot in the recreation area to take care of children while their mothers are shopping.

The shops are typical of small centers: convenience grocery, drug store, small restaurant etc. "We know that they're being supported by the present population of 3,000," says Ziner, "because they're starting to pay a percentage of business for their rental. And eventually they can count on a market of up to 6,000."

A key aspect of Nun's Island's community feeling is proximity. Neighborhoods were laid out so no building is more than a quarter of a mile—an easy walk—from a major park center. The result, says Ziner, is that everyone walks everywhere instead of driving.

"The plan is geared much more to safety than to the usual city scheme. Roads are wide with good visibility, and there are walkways under them in key spots. And there are no restrictions, as in the city, so people can walk, jog, bicycle, or—in winter—snowshoe or ski. It's a very sociable atmosphere."

Two other areas, although not integral parts of the residential community, will also exert some community influence:

The **business-commercial area**, while, in effect, part of the center city, will also act as a regional shopping center for residents of Nun's Island.

The **recreation park**, on the far end of the island will be a commercial venture open to off-islanders. But it will also give residents a complete recreational complex five minutes from their front door.
HIGH RISE has its own swimming pool. Two newest high rises share an indoor pool.

COMMUNITY BUILDING has play yard for children of shoppers. Rec area is visible at right.

And for the project that has everything . . .

. . . how about the only gas station ever designed by Mies Van Der Rohe? Esso, who built it, wanted a design that would do justice to the rest of Nun's Island. The only problem: The striking structure is so un-garage-like, the company later had to put up a big sign to flag down motorists.
Houses for hilly sites

It's become almost a cliché to say that high land prices are forcing more and more builders to use sites hitherto bypassed because they were too steep. But it's high time someone pointed out that these steep sites can be much more than leftovers whose chief value is their relatively low cost. The fact is that more often than not the hillside lot offers a more interesting and attractive house site than does the flat lot.

The houses shown at right and on the following six pages are all custom-built homes, but have obvious value to the merchant builder as well. They show dramatically that the added cost of building on a hill can be more than balanced out by the priceless asset of an exciting site that makes the most of a spectacular view.

**FRONT ELEVATION** shows steepness of site. Garage is behind stone wall at bottom level.

**REAR ELEVATION** is at very top of hill. Bridge wing at left holds the kitchen.
A four-level house designed for a steep uphill site

The slope was so steep—it reaches 100 per cent as it nears the top of the hill—that architect (and owner) Walter Kawecki set the house into the hill in a series of steps (section, right). The garage was located at the highest possible point on the slope where it became the lowest part of the 2600-sq.-ft. house. An entry terrace on the garage roof is on a level with the playroom and study. Bedrooms are on the next level, and the top level holds the living and dining rooms and kitchen.

Kawecki selected the site because of its view on the front side and its proximity to the woods on the rear. The hill's rocky terrain is echoed in the foundation. Builder: Francis J. Korfman. Location: Upper Montclair, N.J.
A downhill house supported by a minimal foundation

The rear half of the house is notched into the hill, while the front sits on concrete columns. The result is a house that appears almost to float off the hill, and the effect is further enhanced by several cantilevered balconies and a bridge to the entrance.

The upper level of the house contains the kitchen, dining room and living room plus the master bedroom and study. Downstairs are two bedrooms and a recreation room for children. The owners plan to add more deck area and a carport at the right of the entry bridge at a later date.

STREET ELEVATION includes entry bridge at right. Roof skylight is over bedroom and study.

LIVING ROOM overlooks wooded rear of downhill lot. Sliding glass doors open to balcony.
An uphill house that's designed to sit very high on its site

The site is steep at the bottom, but quite gentle at the top. By raising the house, the architect was able to put all living areas on just two levels, and still keep the upper level high enough to create a patio (photo, right) on the relatively flat top part of the site. The bottom level includes a carport and storage space, while the front entrance is in the middle level, 18 steps up from the road.

Construction is somewhat unusual. The house is planned within 14 concrete-block piers, with frame walls finished in cedar between the piers. Architect Thomas P. Reilly, of Crites & McConnell, designed the house for his own family in Cedar Rapids, Iowa. The builder was Paul Witter Construction Co.

FRONT ELEVATION has bottom level carport with house rising above it. Steps lead to entry.
REAR VIEW (above) shows gentle slope at the top of the site, and patio which extends out from the living room. Patio was made possible by raising house a full level above street (section, below) and putting carport underneath.
DOWNHILL SIDE of house has glass walls on both levels. Balcony has stairs to ground.
An almost-flat-site house for a shallow downhill slope

For all practical purposes, this is a simple two-story house—except that the living area is on the second floor with the bedrooms below. The lower level is cut slightly into the slope, leaving more than half of the rear wall above grade and keeping excavation work to a minimum. The two-car garage is at the front of the lot at street level; a covered bridge deck leads from there to the front door.

The house has two views to exploit—one of the skyline of Tulsa, Okla., and the other of a wooded ravine. Hence there are big areas of glass on the adjacent sides facing these vistas, and balconies as well. Architects were Bloom & VanFossen, and the builder was Premier Homes of Tulsa Inc.
Last January, the National Association of Home Builders moved its annual convention to Houston after more than two decades in Chicago. It was the most successful, most enthusiastic and best attended (51,000) convention in NAHB’s history. Next month the big show returns to Houston. How has the city changed since the first time around? How have convention procedures been improved? Have the few problems been solved? In short, what will NAHB and Houston do for an encore?

To find out, HOUSE & HOME sent Senior Editor Jim Gallagher to Houston to interview convention staffers and key civic leaders. Here is his report:

The biggest change is at the new front door, the recently opened International Airport. Replacing old Hobby Field, this Texas-size facility now handles all commercial flights, domestic and overseas. Gone are those horrible jams of passengers and baggage funneling into a too-small terminal, the long lines and the confusion. Now you will arrive at one of eight plane-handling ramps, then step into one of two huge terminal buildings (connected to each other and to the parking areas by an underground trolley-train). Each airline has its own ticketing counters and baggage areas. To greet convention visitors and answer questions, NAHB will have information centers in both terminals.

HOUSTON 1970:
Can NAHB make a great show greater?
One warning: The new airport is a lot farther from downtown than the old one, so a taxi ride to your hotel will come to $10 or $15. Group riding will help keep this cost within reason, but the limousine, at $3, is the cheapest way into town.

Hotel and motel facilities have been expanded. Last January's 51,000 attendance strained everything but the city's hospitality. This time, Convention Director Don Vaughn expects 55,000 visitors (including wives and children).

The city has added about 1,500 hotel and motel rooms, but a 79-day construction strike last summer delayed completion of another 1,800 rooms that were counted on.

Late registrants will still be in outlying motels, and there will be some unavoidable fragmenting of large groups. Many visitors will be in Galveston, which has a lively and varied restaurant and nightlife world of its own. In fact, many builders who were quartered in the Gulf Coast city last time have specifically requested the same reservations.

With people so scattered, transportation will be a problem. Unless you're in one of the motels near the Astrohall (photo, above), you'll probably bus your way to the convention. NAHB will operate a 90-bus system with replanned routes and faster schedules to and from the Astrohall. You can still expect some jams at 9 A.M. and 5 P.M., but where do you live that this isn't so?

A private-car system, sponsored by the city's Jaycees, will be in operation again. Roughly 300 private vehicles will be on the streets to take builders where they want to go from 10 A.M. until midnight. There is no charge for this service, but the volunteer drivers will accept gratuities. Your transportation information leaflet will list the special phone number to call for a car.

Houston's 600 cabs will be out in force, but there has been no increase in the number of cabs since NAHB's last show. If you taxi to an outlying restaurant or club in the evening, try to get the driver to come back and pick you up at a specific time. Many cabbies knock off during the late evening, and you certainly wouldn't want to stay over for breakfast.

Even if the convention attendance tops 55,000, everyone will be well fed. But, again, reservations are an absolute must at all the better eateries, and if you just walk off the street, be prepared for a long wait. NAHB is trying to ease the noon crush by increasing the number of Astrohall places where you can get a light lunch or a snack—a sandwich and coffee, for example, or a hotdog and beer. During the day, the prime culinary aim of most exhibit-viewers and meeting-goers is "something fast and simple."

Liquor laws are still unchanged in Texas. Mixed drinks and hard liquor are sold only in private clubs. But every restaurant has its own adjoining club, and your waiter or the manager will be happy to explain rules for joining. Wear your convention badge, and you'll find that Houstonians will go all out to make you welcome. For less formal imbibing, there are hundreds of liquor stores, and Houston prices are reasonable (except when you order that 4 A.M. bottle from the bell captain).

Exhibits will cover even more acres than last time. In fact, space sold for the 1970 product show topped the 1969 total within 30 days after NAHB started taking reservations. And significantly more space has been taken by foreign manufacturers. If you wonder how more displays could be squeezed in, it was done by reploting the entire Astrohall layout of booths.

One innovation should make information gathering easier for both builders and exhibitors. Each preregistered guest will be issued a plastic NAHB-70 card (below) bearing his name, company and home address. When he requests follow-up material or a sales call, the exhibitor will simply insert the card in an imprinting machine. Result: no need to scribble names and addresses on odd pieces of paper or to collect business cards. The NAHB-70 card will also serve as an identification card, but it is not an automatic credit card.

Another time-saver for harried exhibitor viewers will be HOUSE & HOME's Products '70, a guide to products that the manufacturers themselves have singled out as particularly significant. This four-color brochure (see p. 36), arranged for systematic visits to booths, will be available free at dozens of locations throughout the exhibit area.

Closed-circuit TV will bring important meetings and convention highlights right into your hotel room. Just dial UHF channel 39. Three broadcasts are planned daily—one in the morning before the meetings begin at 9:30, another when people are back in their rooms preparing to go out to dinner, and a late-night review of the day's highlights.

NAHB hopes to film the occasional standing-room-only sessions that won't accommodate everyone who wants to get in. Then the delayed broadcast will bring the most important information.

This year it will be easier to find out where others are staying. A computerized readout of all registrants will be available at Astrohall. All names will be tabulated alphabetically, along with hotels and room numbers (if available).

With people scattered over most of Harris and Galveston counties, the new system is expected to help delegates keep in touch with one another. Another new idea is the listing of all hospitality suites sponsored by manufacturers or by local HBAs.

So many wives attended last year that many more attractions for them have been planned. Fashion shows will be staged by both Neiman-Marcus and Sakowitz, and there will be two forums on contemporary women's problems. The ladies, who never need too much encouragement to go shopping, will be even more eager than usual because both Foley's and Neiman-Marcus have opened breathtaking stores in the Gal-leria, a huge new shopping and commercial center at Post Oak Rd. and Interstate 610.

Last January both NAHB and Houston wondered how the giant show would go. This January they have the confidence that comes with success.
urban rehab

Small builders team up to renovate slums

Memphis homebuilders saw possibilities in the FHA 221 h program for rehabilitating run-down frame houses and selling them to low-income families. The local HBA created a nonprofit corporation to sponsor the program, hired an expert to run it right, talked leading builders into doing the work, and in two years has upgraded more than 300 houses. To see how they do it, turn the page.

Homebuilders tackle the low-income market:

rent supplements

A big builder builds rent-aided apartments

Henderson Properties Inc. of Oklahoma City thinks the boom market of the next decade will be in federally-subsidized housing, and they see the nonprofit-sponsor portions of FHA 221 d3 and 236 as the most promising part of that market. They're finishing their first two projects right now, and the key lessons they've learned are covered in detail starting on page 80.
How two different approaches work
Homebuilders show how to do rehab at a profit using run-down slum housing as their raw material

And the rehabbing is entirely a homebuilder effort with no public or private subsidy, except for the below-market interest rate 221 h mortgages. The nonprofit Home Builders Rehabilitation of Memphis Inc. was set up and originally financed by the local HBA. It has a builder board of directors, the program director is an HBRM member, all the construction is done by builder members and the materials are provided at standard prices by local suppliers.

In less than two years, HBRM has renovated and sold some 300 houses to low-income Memphis families. Some of the buyers earn as little as $3,000 per year, and none can exceed the very stringent income limitations of the 221 program, which start at a $3,900 ceiling for a couple. Currently, another 200 houses are at various stages in the pipeline between purchase of the dilapidated houses and delivery of the completed units.

J.B. Bell, executive director for the Memphis HBA, is confident that the program can be expanded greatly—not only in Memphis—but in many cities and towns with similar conditions.

Says Bell: “We have some 30,000 houses in Memphis alone that would lend themselves to rehabilitation. Our one-story shotgun houses (opposite) and side-by-side duplexes (below) are typical of housing in every city in the South. The need for low-income housing is almost insatiable, our builders are eager to do the work and our suppliers are well aware of this untapped market for their products. All we need is the funding of FHA’s ownership subsidy program (235 j) and we could double or triple our volume.”

And the city fathers would like to see the program expanded, since every hundred renovated houses puts an additional $1 million on the tax rolls.

City building code enforcement and insurance cancellations help ensure a constant supply of run-down houses at fair prices. The first demands that landlords make heavy cash investments in needed repairs and the second tends to make these rickety structures bad risks. In either case, owners are more receptive to cash offers for their properties, which are largely unoccupied when acquired.

When HBRM learns that city inspectors are covering certain blocks, they concentrate their “We’ll buy your house for cash” handbills in that neighborhood. Most of the houses have been bought for $2,000-$3,000, but HBRM has paid as much as $4,000 for very desirable properties. Says Frank Romeo Jr., a realty and modernization ex-

**How to turn two inadequate units into one livable one**

The two-family, side-by-side duplex (photo and plan, above right) is the most common rental unit in Memphis’ older Negro neighborhoods. Typically, each one-bedroom side rents for $30-$45 a month, but most of the HBRM purchases have been of unoccupied and deteriorated houses. The three-bedroom plan fits the needs of many large families presently shoe-horned into half-units. The center hallway traffic pattern is poor, but is the only solution in the long narrow house. Most rundown houses cost about $3,000, but when rehabilitated, sell for about $13,500. There are many requests for garages or carports, but the narrow lots and the tight cost ceilings have made them impossible up to now.

LOW-INCOME HOUSING continued
pert hired to run the program:

"No matter how good the houses are, we can't pay too much for them because we get squeezed between that cost and the maximum sales price. In some cases, we're better off with a dilapidated house at $2,000 than with a better one at $4,000."

Romeo sometimes looks at as many as 15 houses in a day, makes offers on three or four and buys one or two if he's lucky. He avoids houses with ground level foundations (too often full of termites and difficult to work under) and all two-story houses (costs of renovation can't be held within market limitations).

After purchase, the houses are grouped into packages of eight. and plans are drawn for their renovation. The package is then processed through FHA and HUD for a commitment, Says Romeo:

"By keeping each group to eight units, we avoid the Davis-Bacon requirement to pay prevailing wages, and still offer the builder enough volume to make a profit. If he runs into some unexpected, expensive problem on one house, we hope the other seven will let him even out. One big problem is not being able to go back for a larger commitment when we find something can't be done within the original figures. And we can't make up on one package what we lose on another."

Since all eight mortgages must be closed as a single unit, delays can cost. One major contribution to the program's success has been the cooperation of the local FHA office under Director James Kerwin. By slashing all red tape, standard processing time for the eight-house packages is five working days, with perhaps another week for the GNMA office in Atlanta to give the mortgage commitment.

To speed construction time, a new approach offers to share the savings with the builder if he can beat the agreed-upon completion date, and to exact a penalty clause (the cost of interest on the construction loan) if he exceeds it.

One way that HBRM offsets the cost of holding all eight units until the last one is completed and sold, is to rent the units to the buyers after they are completed but before title is closed. The buyer then switches from rent to his regular monthly mortgage payment. The small income from this source has helped pay the cost of construction loans and has enabled HBRM to make up its original start-up costs (which were underwritten by the HUD).

So far, seven builders have taken part in the renovations (one has done 75) and others have asked to be included in the fu-
ture. Packages are not bid, but contracted, and Romeo sits down with both the builder and FHA to be sure all are in accord on what has to be done, what it will cost and how long it will take.

Reconstruction is total, and little but the structural framing is saved. Walls are stripped of plaster, all wiring and plumbing is ripped out, windows and doors are removed, chimneys are taken down and porches are stripped away. All sheds, outbuildings and fences are torn down and burned.

To begin the renovation, brick and block foundation piers are rebuilt, reinforced or replaced and floor joists are brought up to level. An 8" x 10" concrete footing is dug and poured for the brick veneer walls which are laid from grade to eaves. Open eaves are boxed in and concrete front and rear porches are built and roofed. New shingles are put over the old if the roof framing is sound, or over new sheathing if necessary. Old windows and door openings are sheathed over wherever their locations are awkward, and new window openings are cut as required.

On the inside, floors are leveled and new hardwood or resilient tile surfaces are laid. Wiring is brought up to city code and light fixtures are put in each room and at front and rear doors. To provide for a future window air conditioner, one 220v outlet is brought to a front window. Full baths are installed, plus a kitchen sink and a 30-gal. hot water heater. No appliances are included; Romeo has not been able to get them within his cost limitations. But most renting families in the area own their own stoves and refrigerators.

A new warm air heating system is installed either in the attic or in a ceiling plenum in the central hallway. All new gypsum board walls and ceilings, kitchen cabinets (6½ lineal ft. of both base and wall units), closets and painting complete the work, which is all to FHA 221h standards.

The tight budget permits little to be done to the site other than removal of all debris, leveling and sodding the front yard and trimming of any existing shrubbery or trees. Garages or carports would be very popular, but a combination of the tight costs and small lots have made them impossible.

Construction costs far exceed the original cost of the properties. Romeo submitted the following actual breakdown of the costs of renovating a typical double house (which cost $3,500 to acquire) into a three-bedroom single house:

Demolition, $312; foundation work, $264; rough carpentry, $757; finish materials and

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This handsome house resulted from joining a pair of rundown 12' houses (like the ones above, right) that happened to be only 4½' apart (cost: $2,000 each). By bridging the gap, bringing floors to the same level and framing a common roof, the two were converted into a single house 30' 6" wide, with larger than usual rooms and plenty of closet space (vital because of the lack of basements or attics). The finished four-bedroom house sold for $13,500, and would probably bring $15,750 on the market today, just a year later. The house is so marketable that WHRM is exploring low-cost ways of jacking up and moving such houses where they are slightly too far apart for this utilization.
labor, $3,278; all subcontractors, supervision and job overhead, $2,455. Total construction cost: $7,066. A profit of $1,000 for the builder and $2,000 for all fees, title, surveys, financing, plans, processing etc., brings the selling price of the house to $13,566.

Wherever possible, local black workmen are used, especially those in the demolition, carpentry and masonry trades. Even wiring and plumbing, which must be done by licensed contractors, often is done by black tradesmen. Romeo estimates that upwards of 80% of all work is done by blacks. But the jobs are not used as make-work schemes, and the tight schedules demand that only efficient workmen be hired.

Vandalism and theft have not been problems, probably because the community realizes that this housing is being built for families who otherwise could never qualify for new houses. Also, the immediate move-in when the house is completed eliminates the temptation of a finished, but unoccupied, house.

The one big, unsolved problem of the program is adequate capital. As a nonprofit corporation, HBRM is not allowed to build up reserves, which leaves the parent HBA exposed to possible losses with no opportunity to reap offsetting profits. Says Romeo:

"If some foundation or philanthropic institution would provide us with $100,000 capital, we could do the long range planning we should do and could double our program almost overnight. We could approach even the largest property owners and we might even be able to improve our materials buying methods."

For any organization or city that would like to copy the Memphis effort, Romeo has the following advice: "Whoever runs the program must be experienced in the buying and selling of old houses. In addition, you must have expertise in the following areas: 1) appraisal of run-down property, 2) cost estimating to determine feasibility, 3) packaging and processing of loans through city and government agencies, and 4) construction skill in rehabilitation work.

"These don't have to be wrapped up in one man, but all of these abilities must be in the organization."

All of the rehabilitated houses so far have been financed under the Sec. 221 h below-market mortgages, but HBRM has only a handful of these commitments left. They are now switching the program to the new 235 j mortgages, which will permit the interest rate paid by the homebuying family to fall as low as 1%, depending on annual family income.

Ten contiguous units give the Memphis homebuilders the opportunity to upgrade an entire neighborhood

The ten houses (site plan, right) were bought from one landlord for $40,000. This is higher than HBRM usually pays, but all were in reasonable condition. Also, all were rented, so the price was higher than for a vacant building.

But because these ten, plus ten previously rehabbed houses imme-
diately adjoining this group, changed the entire character of the block, FHA gave a valuation of $15,000 for each three-bedroom unit. Paved streets, curbs and gutters and nearness to schools are other factors that affected both the original cost as well as the final valuation and selling price.
With an eye to the future, a big builder starts building rent-supplement apartments for nonprofit sponsors

In the process, Henderson Properties of Oklahoma City is tackling two FHA programs—221d3 and 236—that hardly strike the average builder as a route to riches. They limit the builder's profit and overhead to 10%; they are ridden with red tape; and they are booby-trapped with sticky human-relations problems.

The obvious question: Why bother?

Henderson's answer: Government housing subsidies are due for vast expansion in the not-too-distant future. And that expansion will create a large and lucrative market for builders who have learned the ins and outs of the federal programs.

"The private sector has shown that it can't—or won't—provide the housing so sorely needed by low-income families," says company President Travis Henderson. "That leaves the government. When the Viet Nam situation changes, I think we can expect a much greater emphasis on federally subsidized housing."

Board Chairman Mike Henderson hangs a figure on his brother's statement: "Fifty percent of all housing built in the next five years will be government sponsored in one way or another. That's too much of a market to pass up."

The youthful Henderson brothers—Travis is 29 and Mike 31—are co-owners of a company whose volume soared from $1.5 million in 1964 to $12.2 million in 1968. Much of this growth stems from their ability to anticipate changes in the housing picture.

Item: Their decision, made in 1964 and implemented in tight-money 1966, to switch from building houses for sale to building apartments for their own investment.

"Too many little guys were building houses for wages," says Mike. "In Oklahoma City alone we had more than 500 competitors." Since then, the Hendersons have built more than 3,000 apartment units—mostly for their own portfolio, but also for other investors.

Item: Their decision, made in 1968 and implemented this year, to sell off a large chunk of their apartment holdings.

"The apartment market is still very healthy," says Mike, "but so many investors have gotten into it that we no longer see great opportunities for risk profits."

Now the Hendersons are gearing up for what they see as a boom in government-subsidized housing. Specifically, Henderson Properties is completing two rent-supplement projects for nonprofit sponsors—76 units in Enid, Okla. (pop. 40,000) and 74 units in Frederick, Okla. (pop. 5,800).
The sponsors, who will own and manage the projects, are Negro church groups (they could also be unions, civic clubs, fraternal orders or other nonprofit organizations). Tenants' incomes are in the $3,000 to $5,000 bracket. And rentals, before rent subsidies are paid to tenants, range from a low of $121 for one bedroom in Frederick to a high of $172.50 for three bedrooms in Enid.

In effect, the Enid and Frederick projects are prototypes—jobs from which the Henderson brothers are drawing lessons for future work in the same field. And, in fact, some of the future work is already lined up: The company has firm commitments for three more projects and is negotiating for four others.

What have the Hendersons learned about building housing for nonprofit sponsors?

Lesson No. 1: This is a big and almost uncharted market. No actual figures are available, but the Hendersons get about five requests a week, of which they investigate no more than one.

What's more, much of the market appears to be in small towns—a fact that pleases the Hendersons because there's less political red tape than in urban centers. The seven projects now committed or being negotiated are in Oklahoma and Arkansas towns with an average population of 25,000.

Lesson No. 2: Check the sponsor thoroughly before you take on a project.

"We look at a sponsoring group pretty much as a bank looks at us when we go in for a construction loan," says Travis Henderson. "Is this a stable organization? Is it highly motivated and not simply seeking prestige? How strong is its financial support? Is the leader—usually the church pastor on our projects—articulate, realistic and not too idealistic? We're not looking for someone who wants to build a monument to himself."

Sponsor and builder are usually brought together by an independent housing consultant, whose involvement is required by FHA. His first step is to decide whether a potential sponsor qualifies. More often than not, that's the end of it: Consultant Hunter Young Jr., who has handled the Henderson projects, says he rejects five out of every six applicants.

If a group qualifies, it sets up an eight-member board of directors to manage the venture, and the board in turn names a spokesman to deal with architects, builders, lenders and the FHA. Meanwhile, the consultant, whose fee is paid by the sponsor, recommends an architect and lines up possible builders.

Lesson No. 3: Approach the sponsor much as you would approach a private investor, but keep two differences in mind:

- Price is not a competitive factor—it's set by FHA.
- You're dealing with amateurs who know little about housing and finance.

"At first," says Travis Henderson, "these people tend to be suspicious of us—partly because they lack business experience, partly because we're builders and partly, let's face it, because they're black and we're white."

"So right off the bat we level with them—make it clear that, although we want to do good, we're in this business for profit. Then we give them a complete rundown on our company—our financial position, our previous experience and so forth."

Much of this information is packaged in a booklet that's rearranged for each sponsor. And much of the booklet is made up of pictures.

"We try to keep the words to a minimum," says Jim Henderson (no kin), director of the company's federal projects division.

Does this approach pay off? Apparently so. Henderson Properties has never failed to get a job it wanted. However, it has turned down some after initial involvement with the sponsors.

Lesson No. 4: Estimate your costs with more-than-normal care.

"If you've never done federal work before, you could be unpleasantly surprised," says Travis Henderson. "For a number of reasons, costs are higher than on conventional apartment jobs."

Some of the reasons:
- Wages must conform to Department of Labor rates, which usually top local rates.
- The builder can't make minor construc-

continued
tion changes without considerable delay and paperwork.
- Construction is generally overspecified—thicker drywall than necessary, for example, and more nails in the drywall.
- Project architects, unlike those who do commercial apartments, are not used to designing out costs. Says Travis: "We could save a lot by having our own design staff do these jobs."

Lesson No. 5: Although you may see yourself functioning simply as a general contractor, expect to do a lot more than a G.C. ever has to.

On the Frederick project, for example, Henderson Properties optioned the site, took out a construction loan and helped the co-sponsors—two churches—get FHA approval and permanent financing.

Lesson No. 6: Cultivate the FHA and local lenders. Here's where a builder's solid reputation lets him help the sponsor surmount a key hurdle—getting permanent financing.

The Frederick project is a case in point. FHA insisted on two sponsors because neither group had the resources to go it alone. Then FHA had qualms about how well the two groups would work with each other and with the builder. At that point, the Hendersons stepped into the picture and convinced the agency that friction between the groups would not be a problem.

Smooth relations with FHA also pay off on another count. At the sponsor's request, the agency can postpone periodic construction payments. That has never happened to the Hendersons.

And if FHA is dissatisfied with any aspect of the work, it can delay the final 10% payment until one year after the job is finished. The Hendersons have no record on that one, but they're not worried about it.

"Obviously, you can't be on FHA's blacklist if you want to take on one of these projects," says Travis. "But just being acceptable isn't enough. FHA has to have a high opinion of your company."

Lesson No. 7: Don't take on a sponsored project unless your company is financially strong. You'll need a performance bond, and that, Travis notes, is not so easy to get.

"Bonding companies are leery of these federal programs because they don't understand them. And they looked at each of our projects as if they'd never checked us before."

This, Travis points out, is one reason why much of the rent-subsidy building is done by big companies, which have bonding capabilities.

Lesson No. 8: Be prepared to expedite reams of paperwork.

"The red tape involved in these programs would sink a neophyte," says Travis. "You have to process all these FHA forms to get your construction draws. And until you get your construction draws, you can't pay your subcontractors and suppliers."

So the Hendersons stress speedy handling of paperwork—so much so, in fact, that they now plan to process all forms normally processed by the architect and sponsor.

"Then we'll take the completed forms to them for checking and signing," says Travis.

Lesson No. 9: Hire unskilled local workers. Open hiring (no racial bias) is required on all federally subsidized projects, but Henderson Properties has gone far beyond the rather loose government guidelines.

On the Enid and Frederick projects, it made a special effort to hire and train men who had never learned a trade and never held a meaningful job. As a result, local people—mostly Negros—make up 90% of the company's rough-carpentry, general-labor payrolls and about 50% of the subcontractors' crews.

"All this may sound idealistic and impractical," says Travis Henderson, "but it isn't. For one thing, it helps solve the problem of finding labor in a small town. For another, it creates good will by bringing money into the town. And, most important, it's a fine way to keep the sponsors involved after the early excitement and enthusiasm have died down."

Many of the workers are members of the sponsoring churches because the sponsors help the company recruit.

"In a small town they know who can be motivated and taught to do the job," says Travis. "The Frederick pastors are literally employment agencies. They not only find the workers, but keep after them once they're hired."

For its part, Henderson Properties recruits by advertising in local papers and setting up an employment stand at the job site before construction starts. Unskilled new men are started on simple jobs like hauling lumber and moving dirt, then gradually upgraded to more demanding tasks.

Every two weeks each man is rated by his supervisor on his attendance, work quality and ability and willingness to learn. The company enters every worker's performance record in a card file to be consulted for future hiring or recommendations to other builders. And when a man finishes his work on a project, he is given a "to whom it may concern" reference letter.

How has all this affected labor turnover on the two projects?

"We've kept about 50% of our men for the length of their jobs," says Travis, "and that's a slightly lower turnover than on our usual projects."

Lesson No. 10: Pick an untypical job superintendent.

"The typical super is a cold, forceful, hard-driving guy," says Travis. "What you need on these projects is a very human boss—a man who is patient with the workers' personality problems, tactful with the sponsors and aware of the need for good public relations. Also, he should be a seasoned man; this is no place to try out a new super."

Lesson No. 11: For the long pull—and that's what interests the Hendersons—the key to success is standardization.

"It doesn't make economic sense to build a one-of-a-kind, custom market project for each nonprofit sponsor," says Travis Henderson. "What's needed is a standard package that could be repeated time and time again for different sponsors. And we think the best way to come up with such a package is to develop a continuing relationship with one architect and one housing consultant. That's our goal."
Here's all you need to nail anything from a roof truss to a complete house.

Model CN-137 drives nails 6d thru 16d sinkers

THE POWERFUL CN-137 drives coated round-head nails from 6d commons to 16d sinkers—regular, screw and ring shanks...23 different nails. A time and money saver for in-plant and on-site home construction, including truss work, framing, wall components, sub-flooring, roof-decks, millwork—any other construction where such nails are used.

THE NEW IN-123 drives coated round-head nails from 1 1/4" to 1 1/8", including ring shank nails. Holds a coil of 300 nails. Here is another great costcutter for the nailing of wall sheathing, plywood fill-ins, cabinets, and other assemblies requiring these shorter, tight-holding nails.

BOTH NAILERS drive nails more than 5 times faster than a hammer. Both are very portable, easy to take to the job. Both drive nails with a single impact. The driving blade strikes each nail dead center to assure straight, precise driving. Both tools are built for hard, professional use; they are exceptionally rugged. Both load quickly and easily, and protect users with a built-in safety mechanism that prevents accidental firing.

IN BRIEF: If you assemble trusses, wall components, sash and millwork, or build the complete house, you will find costcutting benefits accruing from the use of Duo-Fast Automatic Nailers. Why not investigate today?

SEND FOR FREE STAPLE & NAIL GUIDE and full information about these remarkable tools.

DUO-FAST FASTENER CORP., DEPT. HH
3702 River Road, Franklin Park, Illinois 60131

DECEMBER 1969
Circle 98 on Reader Service card
Plumbing and piping

**Overflow guard** for laundry connections keeps water from leaky faucets or hoses from spilling on floor. Water goes directly down drain pipe. Five styles, 40 models, with or without electrical outlets. Guy Gray Mfg., Paducah, Ky. Circle 223 on Reader Service card.

**Frostproof faucet** has an elongated stem so water is turned off inside building where it stays warm. Eliminates seasonal draining and cost of inside stop valves, assures year-round supply. Non-slip handle. Mansfield Sanitary, Perrysville, Ohio. Circle 225 on Reader Service card.

**Three-point hitch** connects and aligns toilet tank to bowl. Two forward bolts align tank left to right. Rear bolt levels tank front to back. Rubber gasket between tank and bowl seals connection, provides cushion. Mansfield Sanitary, Perrysville, Ohio. Circle 224 on Reader Service card.

**Pipe insulation** can be cut to proper length, wrapped around hot water or steam pipe and snapped closed in minutes. Washable gray or white plastic jacket needs no maintenance. Insulation is 1"-thick fiberglass. Accessible Products, Scottsdale, Ariz. Circle 226 on Reader Service card.

**Round gas vent top** is aluminum and comes in diameters of from 3" to 24". Smaller sizes have an integral bird screen. A skirt diverts gas discharge from terminal end of pipe, deflects rain from vent and flashing. Wallace-Murray, Belmont, Calif. Circle 227 on Reader Service card.

**Plastic sewer and drain fittings** are now available in ABS, will soon be out in PVC. The 17-unit line of molded 6" fittings includes bends, tees, wyes and couplings in many combinations. Olin Evanite Plastics, Carrollton, Ohio. Circle 221 on Reader Service card.

**Packaged water system** is ready to install. It includes a submersible pump, 60' of 3-wire 14-gauge cable, pressure switch, rubber splicing tape, plastic tape, control box and 12-gal. pressure tank. Red Jacket, Davenport, Iowa. Circle 222 on Reader Service card.
Carrier makes its round one bigger

so you can air condition jobs up to 5 tons easier.

The IN condensing unit to have outside. That's the Carrier round one, with a new 5-ton capacity for large homes and small commercial buildings.

Handles easier, because it's over 100 lbs. lighter than ordinary units. Installs easier, because Carrier Compatible Fittings let one man do the job faster than two.

The Carrier round has a lot going for you with your customers, too. Like it exhausts the heat and sound straight up and away from everything. Its patented Time Guard circuit makes for longer life, greater breakdown protection. What's more, this is the design that's actually become a status symbol with hundreds of homeowners.

Suit any architectural style. Meet all cooling needs up to 60,000 Btuh. Put the Carrier round one on any 5-ton job. (We have smaller sizes for smaller homes.) See your Carrier Distributor, U.S. or Canada. Forget the squares.
Grid Pattern Permaply doesn't need any taking care of. It's a resin-fiber surfaced plywood. So it's tough. Almost nothing wears it down. Not weather, not water, not kids' play shoes. The embossed grid pattern even makes it skid-resistant. And because its high density exterior is overlaid with a surface of cellulose fiber impregnated with phenolic resin, Grid Pattern Permaply has both the rigidity and strength of plywood and high resistance to wear and tear.

It comes in an attractive natural buff color that requires no painting or finishing unless, of course, you want to. It comes in standard panels of 48" x 96" and is available in special sizes to 60" x 120".
Coatings and adhesives

Panel and drywall adhesive comes in a larger—29 fl. oz.—cartridge that requires fewer on-the-job changes, cuts installation time. Waterproof. Won't bleed or stain. Adheres to wood, masonry, plaster, metal. DAP, Dayton, Ohio. Circle 208 on Reader Service card.

Fire-retardant paint, shown here being tested by blowtorch, foams up under heat, forms barrier of tiny cells on surface. Coated panel (center) shows only scorching. Uncased panel (right) burned through. Valspar, Rockford, Ill. Circle 209 on Reader Service card.

Roof coating can be rolled, brushed or sprayed on clean, dry concrete, aluminum, plywood or asphalt. Each of recommended two or three coats dries in 12 hours, forms a durable bond, a flexible skin. Flexco of Florida, Ft. Pierce, Fla. Circle 210 on Reader Service card.

Why the BLU-RAY 842 Table-Top Whiteprinter saves your time and money...

If a speed of twelve feet per minute will handle your needs up to 200 “D” size prints per hour — 42” throat, the 842 can save you a lot of time and money.

Just plug in the 842 anywhere. It's handy and makes copies from translucent originals at 1½ c per sq. ft. — all day long! This is a rugged performer, its dependability is backed by BLU-RAY's exclusive 3-year warranty.

And the 842 is always on GO... no waiting for warm-up, messy liquids, or special wiring needed.

Fastest selling compact whiteprinter on the market, the 842 can be your time and money saving, too!

Send for brochure and demonstration by one of our 600 dealers coast to coast.

ATTACH LABEL HERE

Please give five weeks notice before change of address becomes effective. Attach mailing label here and print your new address below. If you have any question about your subscription, include address label with your letter.

Circle 102 on Reader Service card

DECEMBER 1969

New products continued on p. 106
Command Performance

See Why Before You Buy a WHITEPRINTER

Compare the specifications, prices and performance of the whiteprinters that give you results comparable to others costing considerably more. Diazit Whiteprinters start at $274. F.O.B., Youngsville, N.C.

Free demonstration at your convenience. Circle reader service card or contact

DIAZIT COMPANY, INC.
Phone 919/556-5188
Route U.S. 1, Youngsville, N.C. 27596

Contemporary file cabinets have recessed handles that eliminate bumps or snags. Label holders are larger and slanted for easy reading.

Two, three, four or five letter- or legal-size drawers. Columbia Office Furniture, Hatfield, Pa. Circle 218 on Reader Service card

Blueprint machine table adjusts in 1" increments so the user can select the most convenient operating height. It has walnut woodgrain finished top, chrome metal legs that fold flat. Size: 30"x60". Rotolite, Stirling, N.J. Circle 219 on Reader Service card

Paper cutter can repeat hairline trims without time-consuming re-measuring. Five table models—14", 21", 27", 31" and 45"—can cut up to 50 sheets at a time. Operation keeps both hands away from blade. Michael Lith Sales, New York City. Circle 220 on Reader Service card

New literature starts on p. 109

Office equipment

Move them up to the elegance of "Thai-Teak" Floors

Without Moving Them Out of Their Price Range!

Thai-Teak (Botanical name, Tectona Grandis; imported from Thailand) is lustrous and luxurious . . . easy to maintain with just an occasional waxing . . . withstands the hardest wear . . . resists termites, rot, decay . . . is available at a cost that compares with medium-priced carpet and vinyl . . . and comes in 85 different patterns.

See our insert in Sweet's Light Construction Catalog. For complete details, attach coupon below to your firm's letterhead.

SHOWN: Bangkok Rose Pat- tent is offered by Home & Edmond Adv. Agency re- stored by Thai Design Co.

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AUTOMATIC ASSEMBLY METHOD

BANGKOK INDUSTRIES, INC.
15-45 W. Passyunk Ave., Phila., Pa. 19145

Please send details on Thai-Teak Custom Flooring.

Please have your representative call on me.

NAME
ADDRESS

New products starts on p. 88
In kitchen cabinets what usually wears out first?
The finish!

But Aristokraft® cabinets have tough, low-maintenance finish that protects and enhances fine furniture woods for long-lasting beauty. Put lemon juice, vinegar, alcohol on the finish for 24 hours. Wipe clean with no stain, mark or break in surface. Test twice as long as Certified Cabinet standards. So tough you can wash it with lacquer thinner. Another extra value to make selling easier for you.
Another Senco Breakthrough for the Construction Industry!

First 16d nailer light enough for true, single handed operation

Although one-third lighter than the nearest competitive model, the powerful new SN-III Senco-Nailer easily drives up to a 16d Senco-Nail in heavy framing operations, roof decking, subflooring, sheathing.

The SN-III weighs only 7½ lbs. It's perfectly balanced for one-handed, virtually fatigue free operation on the site. No auxiliary handles or clumsy counter-balances needed. Exclusive Senco-Matic™ firing is adjustable up to 4 nails per sec. with one trigger squeeze. Tilted 30° magazine gives maximum maneuverability for toenailing studs, nailing in corners, and other “tight squeeze” situations.

The SN-III nailer drives a full, 3½” 16d Senco-Nail™ engineered specifically for power nailing. Because it's power driven, bending is not a factor. Thus, the Senco-Nail can be more slender than the ordinary common nail — for minimized wood splitting and sure holding power. Exclusive factory Sencote™ increases grip many times over plain fasteners.

For more information on this significant new breakthrough, and how it can cut your construction time and cost, write Senco Products, Inc., Cincinnati, Ohio 45244, Dept. 109.

Senco...where the Big Ideas in fastening come from
Wood windows and doors

Two updated, consolidated and otherwise streamlined standards booklets may prove to be the basis of the U.S. Dept. of Commerce's eventural standards for all wood windows and hardwood flush doors. The window material—pulled together from eight previously published booklets on sashes, screens, casements etc.—has a new and easier-to-use format. In 11 pages it covers awning windows, casements, double-hung and single-hung units, plus horizontal sliding windows. The door data now includes hardboard and plastic faced products, plus labeled fire doors, X-ray and acoustical doors. National Woodwork Mfrs. Assn., Chicago, III. Circle 307 on Reader Service card

PLYWOOD FINISHES. All types of finishes for softwood plywood are covered in a 24-page file book, recently updated. Included are suggestions on everything from care and storage of plywood to the maintenance of finishes. Exterior finishes described are priming, back priming, two- or three-coat priming, spray finishes, oil paints, alkyds and emulsions, clear finishes, penetrating and opaque stains. Interior finishes described are oil base and water base paints and gloss and semi-gloss enamels, natural finishes like color toning and light stain, plus special effects like stippling or spattering and joint treatments. Tips included on how to cover knots and seal edges. Charts cover all types of finishes, recommendations for their use, comments on their advantages and life expectancies. American Plywood Assn., Tacoma, Wash. Circle 307 on Reader Service card

WANT-AD BASICS. This large spiral-bound collection of clippings of actual builder advertisements in newspapers. Compiled by H.J. (Scott) Carr for Hotpoint, is divided into chapters on classified ads, large classified ads and display ads. Comments point out various types of headlines and subheadlines, what should be included in body copy, use of illustrations and border styles. Free to Hotpoint builders, of course, the book is also available to other builders and real estate management firms for $22.50. Send check and write directly to: R.B. Elsberry, News Bureau, General Electric Co., Suite 216, 2100 Gardner Lane, Louisville, Ky. 40205.

CONTRACT CARPETING. Four-color and black-and-white photographs illustrate a detailed booklet on today's contract carpeting. A brief history is included, along with a discussion of the physical advantages of carpeting public areas and the specific properties of the manufacturer's own olefin fiber. Charts compare other fibers—wool, nylon, acrylics and polyesters—to polypropylenes in resistance to wear and soil etc. Also included in information on the recommended areas for using the various types of fibers. A page or two covers the proper maintenance of olefin carpets. Enjoy Fibers, Odenton, Md. Circle 302 on Reader Service card

COLD WEATHER CONCRETING. A handy placard for bulletin boards lists the basic dos and don'ts of working with concrete during cold weather. Easy-to-use thermometer charts show just what temperature mixing water should be to get the right concrete temperature. Master Builders, Cleveland, Ohio. Circle 303 on Reader Service card

APARTMENT CONSTRUCTION. A new booklet put out by NAB'S Compendium of Multifamily Housing is by Lloyd Hanford Jr., and is titled: "The Economics of Apartment Construction." It covers logically all the steps in building an apartment project, from site selection and planning through establishing right schedules. It contains some basic dos and don'ts that should prove valuable to those about to go into the apartment business. A chapter is devoted to the relationship of business economics to apartment construction and includes information on market forecasts, business and real estate cycles, monetary trends, the role of appraisals and equity participation. Write directly to National Association of Home Builders, 1625 L Street N.W., Washington, D.C. 20036

New literature continued on p. 111
Bird’s exciting new architect® 70 shingle lets you offer homeowners the best of both worlds! The rich custom character of natural random wood shakes... plus the superior protection and durability of top quality asphalt. All in one bold, distinctive shingle that will delight your most discriminating customers.

It’s a heavier shingle, random-edged, for a richly sculptured shadow line... a handsome, deep texture. Comes in three new custom colors. Compliments traditional or modern styles, all types of building materials. Looks striking on broad expanses, small angular areas, mansard roofs, anywhere. And its self-aligning feature allows quick, easy installation. Saves on material and labor.

Who needs wood! Look for Bird architect® 70 at the NAHB Convention.

Visit Booth 1204 NAHB Convention, Houston
The improved-upon nail

As the cover line on this catalog states: "We haven't eliminated the nail—just improved upon it." Lively drawings show just how easy framing clips are to use for floor, roof, ceiling and walls; anchor clips for anchoring wood to masonry; joist clips sized for the new lumber standards, and truss clips. Each clip—and its special use—is explained. Also included are diagrams and stress charts. Panel Clip, Farmington, Mich. Circle 300 on Reader Service card

WOOD PANELING. A full line of furniture-finished paneling is shown in a true-color chart. Two dozen wood colors and grains shown. Information includes stock sizes and procedures for nail-on or adhesive application. St. Regis, Pensacola, Fla. Circle 306 on Reader Service card

PREFab STAIR Towers. Three brochures show how stair towers are prefabricated, pre-erected, stacked on site and used by workmen for platforms during construction of medium- or high-rise buildings. Pico Safe Stairs, Hyattsville, Md. Circle 301 on Reader Service card

Solar Control Films. Window films that reflect heat, glare and ultraviolet rays are discussed in illustrated brochures. Four-color photographs show how transparent or translucent polyester film can be cut to fit any window. Ease of maintenance is stressed, as is the daytime privacy obtained for houses, apartments, offices and other commercial buildings. 3M, St. Paul, Minn. Circle 309 on Reader Service card

STEEL DOOR FRAMES. A colorful brochure lists more than a dozen ways that prefabricated steel door frames can cut job-site costs. Drawings show the various ways door frames may be used, the range of door styles available and how they are applied to different types of walls. Shown in detail are 50 types of wall construction with the proper door profiles. Complete specifications included. Roberts Consolidated Industries, City of Industry, Calif. Circle 310 on Reader Service card

LIGHTING FIXTURES. Spanish, Mediterranean, colonial and contemporary chandeliers, wall brackets, pendant lights and ceiling fixtures are covered in a 12-page four-color catalog. A smaller catalog illustrates several chandeliers color keyed to decorating and with wallpaper-wrapped cylinders. Betterlite Mfg., Los Angeles. Circle 311 on Reader Service card

CERAMIC TILE. A four-color brochure illustrates more than two dozen ways to use ceramic tiles to decorate not only kitchens and bathrooms, but also entrance foyers, living rooms, family rooms and dining rooms or areas. Photos show actual installations with many good ideas. Sample charts show more than 100 possible combinations of plain or patterned titles and statuary inscriptions. Readers Service cards in about eight color families. American Olean, Lansdale, Pa. Circle 312 on Reader Service card


Insulating Glass. Drawings show how double-pane glass can be used for sliding, picture or double-hung windows to enhance the view while reducing noise from outside and cutting the costs of cleaning as well as heating and air conditioning. Complete specifications for standard styles and shapes of panes. Also information on special order shapes and triple-pane glass. The Pacific Coast Co., Cleveland, Ohio. Circle 314 on Reader Service card

Decorator Switchplates. New wood wall plates are shown in four finishes, in single- or double-gang toggle openings, single-gang outlets and double-gang combinations. Leviton, Brooklyn, N.Y. Circle 315 on Reader Service card

Patio Fountains. Submersible, recirculating pumps are described and illustrated in catalog that includes accessories for construction of patio fountains and waterfalls. Pumps have no oil to leak into water, are epoxy-sealed against water damage. Thomas Beckett Div., Hydrometals, Dallas, Texas. Circle 316 on Reader Service card

A misty mood is a woman's world... and her husband shares it. Who ever thought you'd sell a home that way. Indulging a woman's mood is something a man lives with...all his life. Harbor Island's Misty, the all new steam vapor unit, adds that touch of luxury that she'll want and he'll share. Misty's extremely compact stainless steel unit has no moving parts and is priced lower than any other make. Dramatic differences from Harbor Island that make the profit picture exciting. Write today for the Misty brochure.

Another pleasure product from Harbor Island Spa Enterprises, Inc. 701 Ocean Avenue, Long Branch, N. J. 07740 Area Code 201—222-5800
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