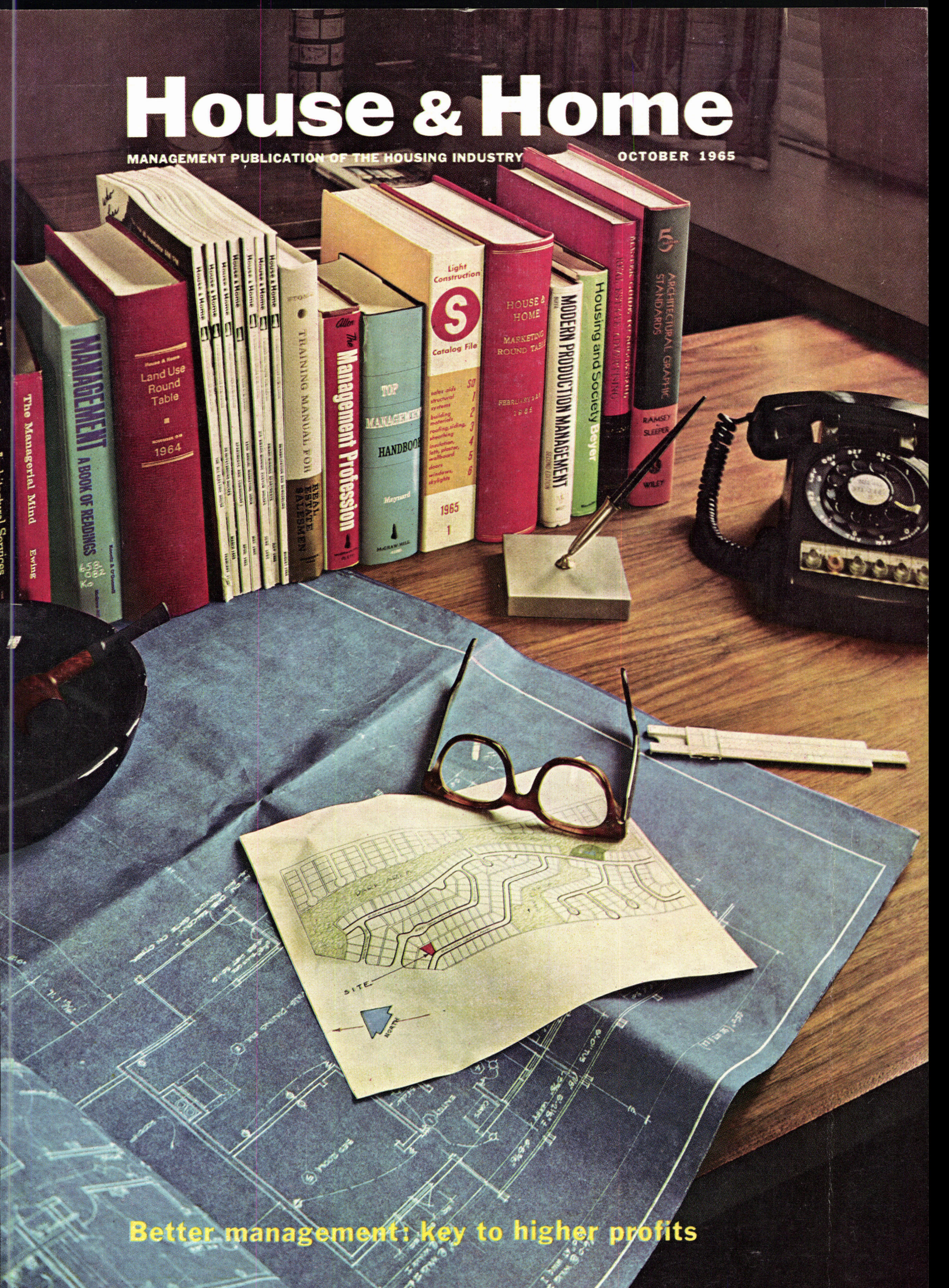
House & Home

MANAGEMENT PUBLICATION OF THE HOUSING INDUSTRY

OCTOBER 1965



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ASSISTANT TO PUBLISHER
Blake Hughes

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ADVERTISING SALES MANAGER
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House & Home

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WASHINGTON INSIDE

Better math for housing

The Budget Bureau is looking into what it would cost to improve the government's oft-criticized housing statistics. Critics consider almost all of them suspect. Example: a zero mistakenly added to reports on a Baltimore apartment project confused the entire East Coast's figures for months. There are also demands for better details from smaller-than-regional areas such as counties.

Boost for copper prices

The Viet Nam war is pinching copper supplies. Most major producers have increased prices 5% on copper water tube and threadless pipe and 7½% on drain, waste and vent tubing.

FHA makes it truly "no-down"

Congressional ire has prompted FHA to ease its requirement for $200 down on homes purchased under the new veterans program. The agency says tax, property insurance and mortgage insurance payments can be credited against the $200. Result: veterans can buy homes worth $15,000 or less with virtually no equity.

FHA speedup

Commissioner Phil Brownstein's drive to give faster FHA service to builders is having spectacular success. In one recent week FHA made 98% of its conversions from conditional to firm commitments in three days. And 98% of the applications for new commitments were processed in five days or less.

Approval stamp for dry lumber?

Lumber users will soon get a second chance to vote on dry lumber standards. The American Lumber Standards Committee has approved a new plan for linking lumber size to its moisture content, and has sent the proposal to the Commerce Dept. for holding a referendum. An earlier plan was rejected.

THE STATE CAPITALS

Renewal bulldozed

Salt Lake City voted 6 to 1 to kill a proposal for an urban renewal agency after opponents aroused fears of "the federal bulldozer." The phrase was made famous by Prof. Martin Anderson's book of the same name. Newspapers and civic leaders urged approval, but to no avail.

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James B. Mahan

NONCOMMITTAL PRESIDENT gives ceremonial pen to HHFA Administrator Robert C. Weaver after elevating agency to cabinet status. LBJ deferred naming a housing secretary.

Housing cabinet post becomes official; FHA name stays but status changes

President Johnson last month signed the bill elevating housing to cabinet status but delayed naming his first Secretary of Housing and Urban Development. The Housing Dept. is the first addition to the cabinet since Health, Education and Welfare twelve years ago.

The President told visitors he had not yet picked his man for the new post. And although HHFA Administrator Robert Weaver is regarded as the leading candidate, the delay touched off newspaper speculation that ranged over a dozen names. But housing men say the President is waiting for a consensus to develop behind one man.

Too, the guessing game threatened to overshadow the sweeping changes for housing due when the law becomes effective Nov. 8* and the Housing Dept. replaces the Housing and Home Finance Agency (HHFA).

The law gives private builders the key role in building new housing to improve living in urban areas. At the behest of the Senate, Congress instructed the new department "to encourage the maximum contributions that may be made by vigorous private homebuilding and mortgage lending industries" *(see editorial, p. 63).*

The admonition allayed some Republican fears that the new department would become a pipeline for stepped-up federal subsidies to housing, and the final version passed Congress with GOP support.

Still an FHA. Private housing men, led by the Mortgage Bankers Assn., won a semantic victory by specifically preserving the name of the Federal Housing Administration in the new department, a change Sen. John Sparkman, head of the Senate's housing subcommittee, insisted upon. FHA will be headed by a commissioner who will be one of four assistant secretaries.

But all independent FHA powers are transferred to the new secretary and FHA loses its freedom to disregard policy directives from HHFA. "We have retained the name for whatever publicity value and whatever goodwill value with respect to the housing industry that it may have," explained Administration backers. "But the possibility of conflict or obstruction has been reduced to a minimum."

The mortgage bankers are highly pleased. "It is better to have the name spelled out than simply to have the government say, as it was saying, 'Oh, we'll have an FHA all right'," says President Cliff Cameron of the Mortgage Banker's Assn. MBA's legislative aide, Graham Northup, adds:

"The effect will be to say to the new secretary that Congress wants the FHA operation to stay substantially as it is. We think writing the name into the law will enhance the commissioner's ability to base decisions on economic soundness and resist pressure from the secretary."

Dropped names. Except for FHA, housing and mortgage men are likely to find few familiar agencies in the new department. Such names as the Urban Renewal Administration and Public Housing Administration will vanish.

A second exception: the Federal National Mortgage Assn., the secondary market where builders can sell FHA and VA mortgages when private credit is tight. It transfers intact to the new department.

The reason: FNMA is a quasi-public corporation with over 5,000 private stockholders. But Washington expects FNMA to be administered by the FHA commissioner.

*Sixty days after signing. President Johnson may, if he desires, activate the department earlier by executive order.

H&H staff

RUSH IS ON at NAHB directors' meeting as Staffer Opal Van Horn distributes 1965 Housing Act. Already deep in a copy is Executive Officer S. A. (Sonny) Dansyear, South Florida HBA.

FHA's buried-wire order in trouble with builders and FHA's staffers

FHA Commissioner Philip Brownstein is meeting resistance to his directive that developers put electric lines and other utilities underground in all new FHA-insured tracts (NEWS, Aug.).

Directors of the National Association of Home Builders, at their summer meeting in Denver, urged Brownstein to hold the order in abeyance until FHA explains what it means by saying wires are required only where "economically feasible." At the same time, builders reaffirmed support of President Johnson's drive to make America more beautiful by putting utility lines underground.

Severe costs. Builders fear they—and ultimately their buyers—will have to pay too big a bill for underground wires. "Last week the utility in Memphis wanted an extra $32,000 for underground wiring in a 43-lot subdivision," reported Builder Manny Delugach.

The builders urged utilities to bury their wires themselves and pay the costs out of their own pockets, adjusting charges for all power users to meet the cost. But they doubt that utilities will do this voluntarily. "I don't believe we can expect the utilities to absorb the costs for many years," said Builder W. B. Close of Chattanooga.

"I had the same opinion until six months ago, when our utility got jolted and found that with some of the new methods it could cut costs considerably," replied NAHB Vice President-Secretary Leon Weiner of Wilmington, Del.

And those new methods—particularly common trenching for electric and telephone lines—can reduce costs from $800 a lot to $150 a lot, reported Al Balch of Seattle. "Let's not do anything to oppose underground wiring," he pleaded.

But NAHB directors voted to seek a delay in the requirement until FHA spells out how high costs must be before buried wires become "economically unfeasible."

While local conditions such as soil characteristics and lot size affect costs, the biggest—and most variable—factor is the attitude of the utilities. In an effort to change these attitudes, northern California builders are already appealing to their Public Utilities Commission to force both the electric and telephone utilities to quit charging for buried wires.

Hidden resentment. The builders attitude appeared to be due in part to resistance by some of FHA's 76 district directors to the order.

"Our local FHA director told me he felt the FHA commissioner was shooting from the hip and had not consulted with the district directors," reported one Southern builder. "He told me that if something was not done to oppose it, the local FHA offices would be under pressure to make the Commissioner look good."

Although no other NAHB directors said openly that their go-slow attitude traced from FHA staffers' resentment, the Southerner's explanation gained some credence. FHA district directors are known to be increasingly irritated by those of Brownstein's actions that, they think, infringe on their prerogatives. An example:

Last year, after Brownstein ordered the directors to make public a series of local housing market studies that had been kept secret for 30 years, one director told newsmen: "I'm staying in office until he goes."

Brownstein maintains that district directors should not have power to frustrate top policy decisions, a situation which in the past won FHA the reputation of a "Balkan empire" of independent directors.

Disagreement on carpets. The NAHB put a new twist in its push for carpeting. The builders asked their Research Institute to work with carpet manufacturers to set up quality standards and possible warranties for carpeting. NAHB plans to press FHA Commissioner Brownstein to include carpeting as a new and technically suitable material under Sec. 216 of the 1965 Housing Act, thereby letting builders install it as part of the new-house package. Past requests have foundered on a lack of standards, say builders.

Brownstein, in an appearance before the directors, indicated that the current carpet proposal, like others in the last decade, may have tough sledding. "Carpeting seems to be a further liberalization of mortgage terms, and this seems imprudent in the face of continued high foreclosures," he said.

But former NAHB President Alan Brockbank of Salt Lake City, long a carpeting advocate, contended that lack of carpeting is a leading cause of foreclosures in his city. And Brockbank says he finds a remarkable coincidence between divorces and lack of carpeting in foreclosures. He theorizes that family quarrels break out over this major cost item in furnishing and throw loans into foreclosure.

Tax relief. NAHB also decided to seek a law clarifying the tax status of builders who deal in real estate. Directors set up a special political action committee to assure long-term capital gains tax treatment for builders who sell tracts held for two years. In the absence of a clear-cut law from Congress, tax courts have split on whether income from such land sales should be taxed at capital gains or ordinary income rates.

Registered builder. Stiffer rules for the Registered Builder program were postponed until December. The program, started in April 1964, gave local associations too much leeway on standards, a committee reported. To tighten the rules, the panel proposed that all Registered Builder programs require 1) a financial responsibility test, 2) an agreement to abide by decisions of an impartial committee in disputes with homebuyers and 3) loss of Registered Builder status for failure to abide by mediation decisions.

Under the proposal, NAHB would license local associations and builders to use a new and trademarked emblem (*see cut*).

—KENNETH D. CAMPBELL

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Builders back the new land loans —if they can live with the rules

NAHB directors, who earlier had disagreed on whether FHA should insure land development loans, showed at Denver they will back the controversial plan Congress wrote into the 1965 Housing Act.

No vote was taken, but a standing-room-only crowd snapped up copies of the act and showed by their questions that their greatest interest lay in the land-loan section.

A committee under Ernest Fritsche of Columbus, Ohio, fly-specked a draft of regulations under which loan applications will be processed. FHA asked builders for their comments before final rules are issued.

The law lets developers get loans of up to 50% of land acquisition cost plus 90% of development costs, or of 75% of improved project value.

Here are the points at issue:

1. !nterest rate. Brownstein proposes 5¼%, the same as all other FHA loans. Builders are not challenging this seriously, although a check of four major lenders turned up estimated discounts of two to four points. Former NAHB President Thomas Coogan, head of Housing Securities Inc. of New York, says lenders may accept the 5¼% rate with a 2½-point discount if they can also be assured of getting the permanent house mortgages at perhaps a 3-point discount. "It would make an attractive package," he says.

2. Insurance premium. FHA sources could not or would not confirm what Brownstein said. However, according to the only draft of the regulations written so far—and it's still tentative—the insurance premium would be 2% for the first three years and an extra 1% for the fourth, fifth, sixth and seventh years.

3. Subordination ban. FHA proposes to ban all subordination of insured land, eliminating second mortgages and other agreements common in land dealings by builders. Some directors said this alone made the section unworkable.

4. Two-year start-up limit. FHA wants developers to start improving insured land within two years. Builders fear zoning disputes changing markets would make this deadline unrealistic. Brownstein said FHA would not be rigid in this time limit.

5. Local inspections. Builders felt that if FHA inspections of development work were added to inspections by local street, sewer and zoning inspectors, work could be delayed.

Rude awakening for builders: it's a sleeper tax on bedrooms

The San Francisco-Eastbay city of Newark decided to cash in on a prosperous housing market with a tax of $50 for the first bedroom and $15 for each additional bedroom in new homes and apartments.

It worked like a charm. Newark (pop. 21,000) collected $6,295 in three months despite a protest by five homebuilders.

But now the Associated Home Builders of Greater Eastbay Inc. has sued to invalidate the ordinance because it affects only those bedrooms built since April. That violates the 14th Amendment's equal protection clause, say the builders, by discriminating between sleepers in old and new bedrooms.

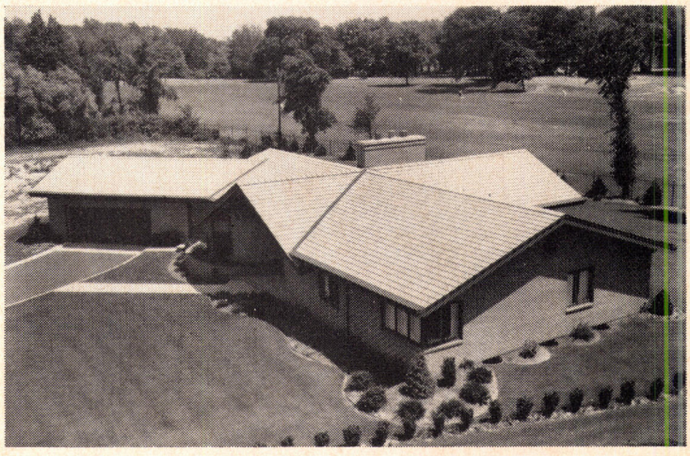
Plastic plumbing approved for Cleveland's buildings

Cleveland became the first major city to approve plastic piping for house drain waste and venting lines last month. The plastic cannot be used for water supply.

The approval has spurred a controversy with plumbers and conventional pipe manufacturers, who charge that the one-piece pipes are flammable. Cleveland's fire chief has called for tests.

Plastic manufacturers say the pipes are safe, and they estimate such easy-to-install plumbing can save $75 in a new house.

Is a Fire-Chex® roof as good as it looks?



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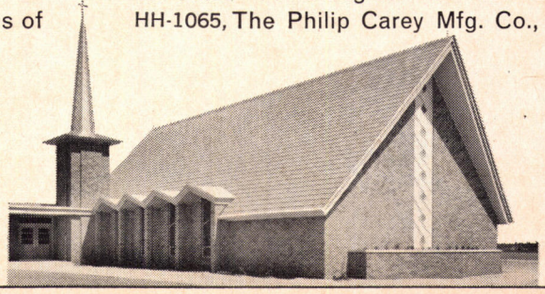

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Despite their widely scattered locations, builders Bob Rorabacher in Michigan, Mark Handler in New Jersey, Verne Eggers in Illinois and Charles Cheezem in Florida all enthusiastically agree that flameless electric heating is a major sales feature, recognized and asked for by prospects, in the homes they build.

Behind their switch to electric heat lies one simple fact: installing electric heating assures them a bigger—and faster—return on their investment.

Throughout America, more and more builders are recognizing the growth in national acceptance of flameless electric heating, and are taking advantage of its great profit potential. Already, over two million homes are heated electrically, and new electrically heated homes are being built at the rate of over 800 a day.

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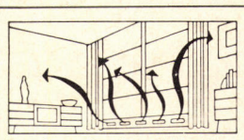
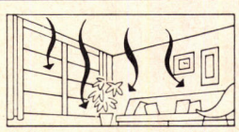
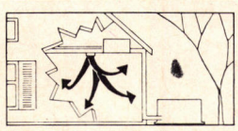


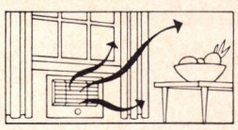
Baseboard units take up little space, permit room-by-room temperature control. Two types are available: radiant or hot water.



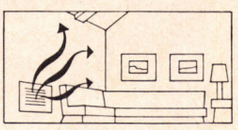
Ceiling cable is invisible. Wires less than ⅛" thick are concealed within ceilings. Each room's temperature is individually controlled.



Heat pump heats home in winter, cools it in summer. One thermostat setting maintains any desired year-round temperature.

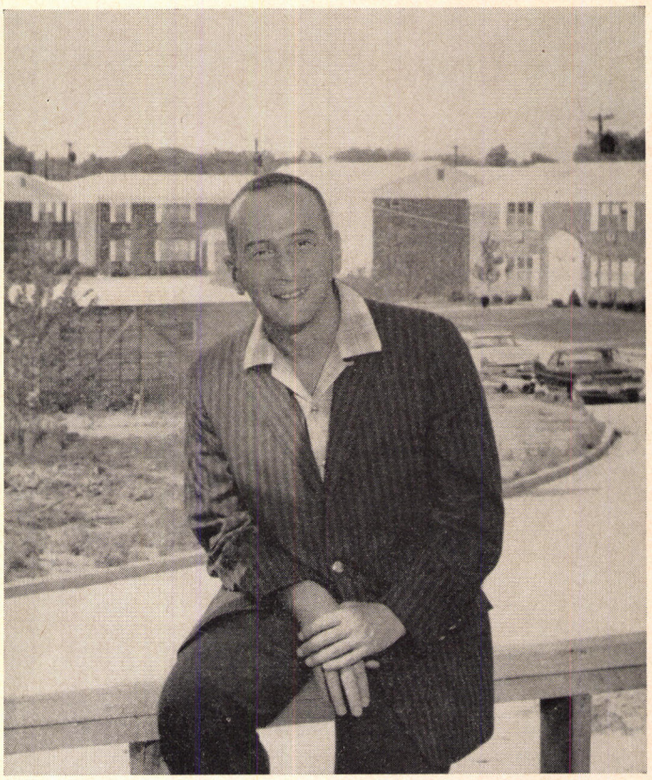


Wall panel heaters, with heating coils behind decorative grilles, provide radiant heat with natural or fan-forced convection.



Central systems are available for either hot water or warm air heating in which flameless electric units supply the heat.

"GREATER SALES APPEAL is what has me sold on electric heat," reports Bob Rorabacher of Whitmore Lake, Michigan. "I find that prospects really go for modern features like these compact, space-saving baseboard units and separate temperature controls for each room."



"CUSTOMER SATISFACTION is the big extra I get by using electric heat in all of my new apartments," says Mark Handler of Eatontown, New Jersey. "In fact, my tenants are such big boosters of electric heat, they're actually the best salesmen I have."

"FAST, EASY INSTALLATION means I get my homes up faster by specifying electric heating," says Charles Cheezem of St. Petersburg, Florida. "Because my electrical subcontractor can handle all of the heating work at the same time as the wiring, I save myself days in scheduling alone."

"LOWER CONSTRUCTION COST with electric heat puts me in a stronger competitive position by allowing me to build in extra value and features for the same money in these garden apartments," reports Verne Eggers of Macomb, Illinois. "Even with extra care in insulation, my installation costs are down 40%."

Circle 34 on Reader Service Card

Zoning: builder's public appeals fail to gain support for his new town...

Conservationist groups are turning Developer Thomas Frouge's proposed dream city into a nightmare.

Since November 1964, when he opened a scale-model exhibit of Marincello to San Francisco Bay residents, Frouge has gone backward—if anywhere.

He imagined a city with 51 high-rise apartments hidden behind sparsely wooded hills in Marin County—the conservationists' backyard.

The conservationists imagined a slick New Yorker, with backing from the impersonal Gulf Oil Co., crowding the skyline with concrete towers and congesting Golden Gate Bridge traffic.

In June, after months of bitter debate, county officials required Frouge to reduce his high-rise, commercial and industrial areas by 40%. Population estimates fell from 31,000 to 20,000. His promise of $2.7 million a year in local taxes by 1985 had to be revised.

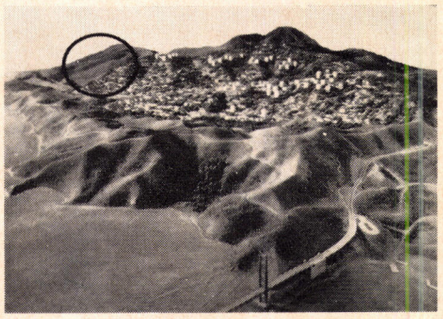
More to come. The conservationists—who among other things have kept the state from building a freeway along the shore and succeeded in having 26% of Marin County set aside as parkland—are not finished. They demand even lower density, which is likely to make development prohibitive.

Ironically, Frouge has suffered the setbacks even though he used public relations techniques that were successful for other builders (*see story below*).

He made early bids for good publicity, which included serving dinners to visitors to his Marincello exhibit. But damaging public furor followed the release of a brochure prepared by the tiny Committee to Save the Golden Gate. It included a doctored photograph mislocating Marincello on federal land reserved for a park, where it would have cluttered the city's unobstructed view of the majestic Golden Gate area (*see photo*).

Before the brochure was withdrawn, *The New York Times* and an under secretary of the Interior had decried Marincello.

Foes began frequenting Frouge's exhibit. He offered to speak with conservationists, but there were no meetings.



MARINCELLO, shown above, would nestle behind a ridge screening it from San Franciscans' view. A doctored photo circulated by foes misplaced it in circle, where it would have dominated city's view of the Golden Gate area.

The battle goes on. Frouge has surrounded himself with local consultants, including a top conservationist and former Marin County supervisor, Vera Schultz.

She says, "Tom Frouge is the real conservationist around here. Marincello will be built on 8% of the land, and it will bring tax relief to a county where even persons making $25,000 a year can't afford to live in some sections."

Frouge, who has found that even his oversized cufflinks are being criticized by foes, says, "We are far from beaten."

. . . but three other builders show how to win public backing

"The people would have run us out of town on a rail if we hadn't allowed the new town," said Doris S. Thompson, vice chairman of the Howard County (Md.) Planning Commission.

The statement is a tribute to Builder James W. Rouse and his Community Research and Development Inc. Rouse obtained new zoning through a public campaign that any politician would have admired.

"When Mr. Rouse finished," added Mrs. Thompson, a local newspaper publisher, "98% of the people were on his side. Only three persons raised minor objections at the last hearing."

Between November 1964 and February 1965 Rouse overcame countywide sentiment for retaining the rural character of Howard (pop. 47,000) and won acceptance for Columbia, a new town that will accommodate 110,000 persons by 1980. Howard is 20 minutes from Baltimore, 30 minutes from Washington, D.C.

Traditionally, zoning changes are sought—and fought—in tediously long sessions with city planners. But Rouse and other trend-setting builders are gaining success with information campaigns that seek public support even before blueprints are submitted to the planners.

J. William Brosius of Brosius Homes Inc. used a low-key approach to convince semi-rural Frederick County, Md., that cluster zoning gives landowners freedom.

George and Reed Byers of Byers Construction Co., Kansas City, Mo., got commercial and multi-family zoning on 80 acres in a luxurious residential area of Wichita, Kan., which included existing $200,000 homes and a country club. The Byers met with civic groups and used a "let-us-reason-together" approach to foes.

There is no strict formula for zoning success. For example, Rouse hired a local attorney; Byers didn't. Rouse used an exhibit; Byers didn't. And Brosius did little more than confer with his old friends in Frederick County.

But there is an eight-point pattern which top builders recognize as an effective guide. Here it is:

1. Favorable publicity. Rouse issued a 16-page newspaper supplement four months before plans were submitted to the county planning commission describing Columbia as a model town which could provide $6 million a year in county taxes. The supplement, which represented three years of research by 100 consultants, reached 87% of the county's families.

2. Hire local consultants. "An out-of-town builder starts with two strikes against him," says George Byers. His company gained partial acceptance by hiring locally respected land planners.

Rouse hired a local lawyer.

3. Put plans on display. At least 5,000 persons toured the Columbia exhibit, which was open daily for months. It had several photographs of nearby undesirable developments. Graphs showed how growth in Baltimore and Washington made a similar boom in Howard inevitable, and how Columbia would provide tax relief.

4. Go to the people. Rouse and his aides addressed about 500 local meetings. "We spoke to women's clubs, church groups . . . any one at all," said one aide. Mrs. Thompson's newspaper conducted a public forum, and Rouse answered every question submitted.

Byers said, "Basic resistance to zoning comes from a feeling of not being considered—not being 'in on it'."

5. Stress population and planning. Rouse convinced Howard that his balanced city was the logical way to meet growth.

Byers convinced planners that the apartments, $45,000 to $80,000 homes, and the commercial area of his Woodlawn East would complement the surrounding high-priced neighborhood.

6. Accept compromises. Scott Ditch, a Rouse aide, said, "Once you show that you are willing to change, people are satisfied, even if the change is minor."

Byers altered his plot plans slightly to win wide public support though the city planners were willing to accept his subdivision as presented. Result: early objectors supported his plans at later hearings.

7. Take part in community life. Rouse sent a land manager to help 2,000 persons living on his 13,690-acre tract improve their farms. Park areas were cleared. Later, Rouse had an exhibit at the county fair, and he provided a bus tour of his developments in Washington, D.C.

8. Present your own case. Rouse brought a team of consultants to hearings. But he also spoke himself—without prepared notes.

Byers believes so deeply in the personal touch that he declined to hire a local attorney. "I like to do my own talking."

—FRANK LALLI

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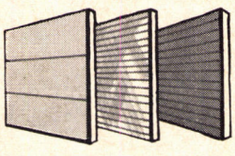

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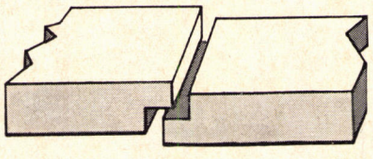

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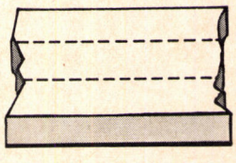

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Circle 35 on Reader Service Card

Johnson's pledges to labor pose problems for builders

The President's commitment to change basic labor laws promises significant long-term effects for the entire homebuilding industry.

Three measures have been under debate in Congress:

- An amendment to the national minimum wage law to raise the rate to $1.75 an hour and extend coverage to construction workers not previously affected.
- Repeal of the Taft-Hartley Act's section 14b, which authorizes right-to-work statutes. The repealer was expected to clear the Senate this month.
- A site picketing law, permitting secondary boycotting at a construction site by non-aggrieved trade unions.

Union and builders. The new legislation takes on particular significance in view of the ever wider involvement of trade unions in homebuilding and the broadening legal interpretations of their "interstate" activities.

The most far-reaching measure is the extension of minimum-wage provisions to all construction. At present, only those builders grossing more than $350,000 are covered (presuming the builder does some business in interstate commerce, which virtually all of that size do).

But, under the proposal voted out of the labor committee headed by Rep. Adam Clayton Powell (D., N.Y.), this gross would be reduced to zero. At press time, there was only a slim chance that the bill would be passed by the House, and so be ready for Senate action next year.

Powell's bill also would raise the national minimum to $1.75 over the next three years (or a longer period for employees not previously covered by the minimum wage law). Although the actual dollar amount is not expected to have much direct effect on homebuilding — except perhaps for apprentices' pay — any substantial shift in the national minimum wage will cause serious repercussions in any labor-management negotiations.

Wage escalation. The building trades have established a gap between the minimum wage and the prevailing construction wage; they can be expected to fight to preserve it. One of the most dramatic illustrations of the gap occurred recently in California's San Mateo County, where sheet-metal workers reportedly will get $6.77 an hour by 1967. The national minimum wage is $1.25.

The expanding role of labor in the homebuilding market will gain new impetus from the repeal of section 14b. In effect, this takes jurisdiction over "union shops" from the states and restricts it to the federal level, where labor is stronger.

Nineteen states had prohibited "union shops," which bar nonunion laborers. Many were Southern states, where labor is weak. With repeal of 14b, labor would be able to organize actively in all states.

Labor has its problems. The ironic twist for unions is that in most of these states, the civil rights question is more aggravated. It is certain to become an issue in organizing new union shops, too.

Already the National Association for the Advancement of Colored People has filed complaints against several AFL-CIO affiliates in the construction trades.

Rep. Powell is involved in the site picketing bill as well as in the minimum wage controversy. At press time he had bottled up the legislation, attempting to force labor to support more drastic changes in rights laws affecting union membership.

Joe Miller, Minneapolis builder and chairman of NAHB Labor Committee, has testified that passage of the site picketing bill "will cancel many years of progress that the industry has made toward better labor-management relations.

"It could also be the direct and immediate cause of increased cost to homebuyers, resulting from resistance to the use of new and economical methods and materials in homebuilding under the guise of legitimate labor activities."

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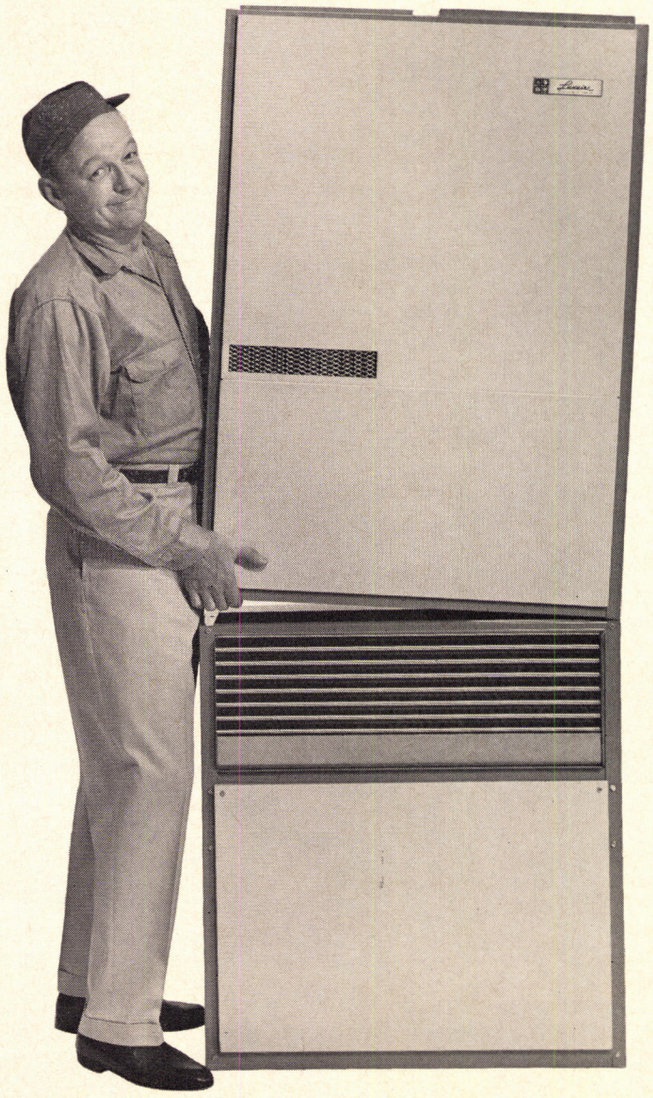

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Everything's in that cabinet. You have no refrigeration lines to worry about, no internal wiring to fool with.

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Then talk to your Luxaire wholesaler about those 9 square feet of floor space you're going to save.

A suite deal like this isn't hard to take.

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Circle 38 on Reader Service Card

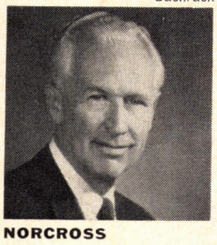
How smart builders are riding Washington's housing boom

Here's an old pro's report on the nation's hottest housing market. Carl Norcross, known throughout the homebuilding industry as HOUSE & HOME*'s executive editor from 1954 to 1963 and now a Washington, D.C., research consultant on new towns, sums up: "Each year the professionals eye the Washington boom statistics in amazement and say, 'It can't last another year.' But each year it does." Here Norcross tells why.*

"The demand for houses is so great that someone will buy whatever you build, whoever builds it."

So says Sales Manager Richard W. Miller of Dale City, Washington's newest new town. And he should know. His men sold 140 houses in four weeks and have waiting lists for three of their models.

Bachrach



NORCROSS

This year 15,000 houses and 30,000 apartments will be built in greater Washington, according to Economist Michael Sumichrast of NAHB. Nor is this volume a flash in the pan; the Washington market has been robust for years. It had an excellent 42,571 starts in 1964, yet for the first six months of 1965 starts ran 35% ahead of last year's pace. Apartments were up a phenomenal 47.8%, single-family houses up 8.5%. The figures come from James Pearson of the HBA of Metropolitan Washington.

Reasons behind the boom. The demand for houses is strong in all price ranges and in all directions from the Capitol. Here's why:

Population is rising. The rate exceeds that of any other large city.

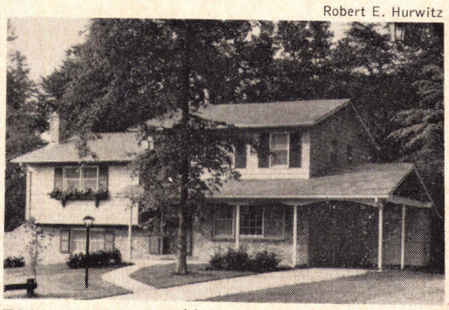
Jobs are on the increase. They are stable, without major strikes or layoffs. And when white-collar jobs increase, so do blue-collar service jobs.

Salaries are relatively high. Top-bracket civil service jobs are increasing, and both private industry and NASA hire well paid scientists and technicians. "We are amazed at the higher incomes here compared with Detroit, and at the number of well-educated, professional people buying our homes," says Sales Manager Joe Firestine of Fox Hills. Builder William J. Pulte brought his $35,000 colonial designs intact from swank Detroit suburbs to do Fox Hills.

Big builders. The biggest builder in any one subdivision is Bill Levitt, who is now selling 1,000 homes a year at Belair. He likes Washington so well he is expanding to two more locations: 197 acres near Laurel, Md., which he calls Montpelier, and more than 300 acres in Montgomery County, called Strathmore Bel Pre.

Close on Levitt's heels, and determined to become No. 1, is Cecil D. Hylton, a local builder who sold 1,134 houses last year in two Virginia areas. Now he adds Dale City, where his sales target is 750 for the first seven months.

Robert E. Hurwitz



TODAY'S SPLIT seldom looks like a split. Di Maio Bros.' five-level Carlyle has look of two-story. Architect: Hank York. Price: $26,490.

Albert Turner of Maryland Community Developers probably runs third and is already scheduling two major projects to follow his Calverton development.

An accurate rating of other builders is not possible. There are a dozen or more who build from 100 to 250 houses a year, and a big-builder list would include Crofton, Yeonas, Southern Engineering, Kettler Bros. and Tom Cary. It would also include Wills & Van Metre, Di Maio Bros., M. T. Broyhill, Metropolitan Investment, Richmar Construction, Hyman Bernstein, Wagman Construction, Regor Inc., Bo-Bud Construction, Ed Bennett and Ryan Homes. A number of the biggest dollar volume builders concentrate on multi-family, such as Merit Construction (builders of Georgetown South), Carl Freeman and Reston.

What sells best? It is significant that the two largest builders are the only ones pushing hard for the under-$20,000 market. Hylton's five fastest sellers at Dale City are all between $15,650 and $17,550. Levitt's five are between $16,990 and $19,990. Probably no other city has so many varied designs, and you can find fast sellers of every type. Split levels lead the parade in 30 subdivisions, followed closely by two-stories, then ramblers and split foyers.

Variety is wide. A Cape Cod at $16,990 still pulls best for Levitt. A small ranch without a basement at $15,650 is Hylton's fastest seller at Dale City. A split-foyer at $22,000 leads in sales at Ryan Homes, sells best in Potomac Woods at $31,500 and in Ed Bennett's contemporary Carderock Springs at about $40,000. Split levels sell best at Pilgrim Hills, Surrey Park, Robin Hood, Ancient Oak, Oak Spring, Blueberry Hill and at both Di Maio Brothers' Rock Creek Village and at their Paint Branch Estate.

Two-story colonials are most popular in price ranges over $30,000. The ranch is a fast seller in half a dozen projects but it almost always has a basement with a walk-out door. Crofton's two fastest sellers are a split foyer at about $29,000 and a ranch at $35,000.

Should you open in Washington? The market will continue to be good. But just as in other boom areas, more builders move in each year—probably one-third or more are now from out of town—and competition gets tougher every day.

Builders will soon be able to build more houses than people can buy. The new towns or big projects alone will soon be ready to put up all the single-family houses needed.

Levitt is in Washington for keeps. Crofton's sales get better each month. Reston, slow to start, will get a bigger piece of the Virginia market. Cortese's Leisure World, now open, is the most widely discussed new project the area ever had and was drawing 1,200 people a weekend even before it opened officially. It will undoubtedly take business away from other builders. Jim Rouse's already-famous Columbia will open next year. Disc's 2,200-acre Northampton will open soon and is the closest-in of any big job.

Kettler's new town, Montgomery Village, has zoning approval. Lake Montclair has a spectacular plan for 1,500 acres around a big residential lake.

All these builders, plus a solid core of professionals long established in Washington, will produce competition as rough as any in California.

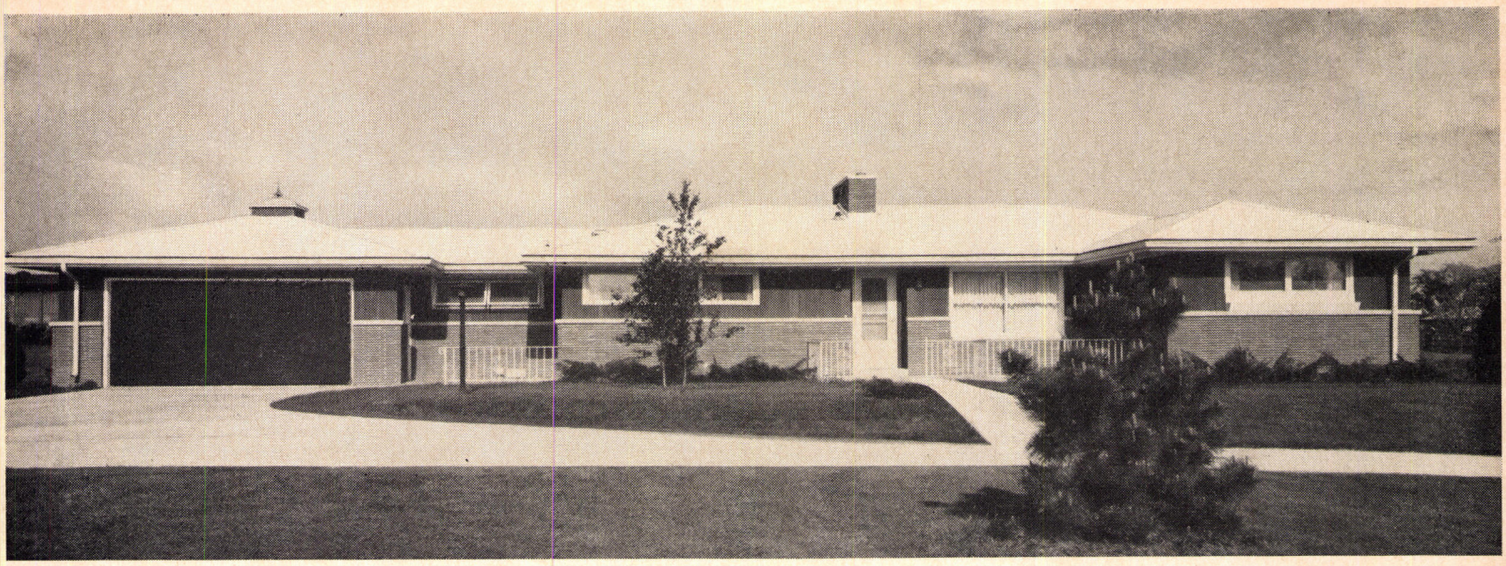
For newcomers—problems. *The big obstacle is finding labor and subcontractors.* The building boom is so strong that neither workmen nor subs need look for jobs. Three weeks after F. W. Dodge reported one 2,000-acre project would start, not a sub had inquired about it. And the shortage of good mechanics drives superintendents crazy. The answer? Many builders use pre-built components.

Close-in land is scarce. Washington is growing in an enormous circle. Real estate men can show you parcels of 100 to 1,500 acres for $1,500 to $3,500 an acre. But good land, close in and in a good location, has been picked by the local boys.

Another obstacle is zoning. Officials of the three close-in counties, Fairfax, Va., Prince Georges and Montgomery, Md., are throwing out rezoning requests wholesale, particularly for higher densities. The other counties are more relaxed but nothing can be taken for certain.

How to get in. The best advice for a builder who wants to ease into the market may be to do what Ryan Homes does: buy finished lots. Several big developers will soon be selling finished lots in good locations—Columbia, Northampton and Lake Montclair, to name three. Reston, Tantallon and Edward Carr now sell lots.

A builder going this route cannot make much profit on the lot, but he can build twice as many houses in a given period and without the headaches of zoning and land development. Nor does he need much capital. As with Greyhound bus riders, he can sit back and leave the driving to us.



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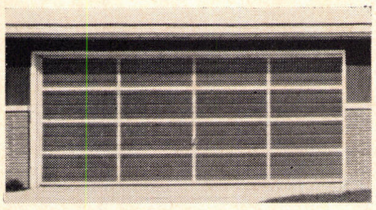

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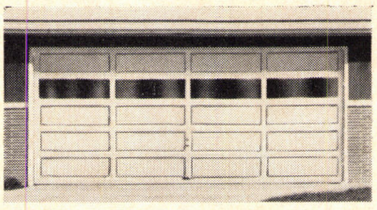

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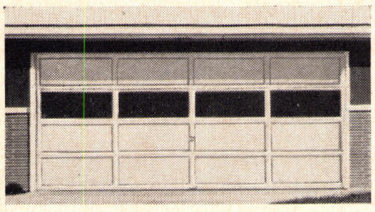

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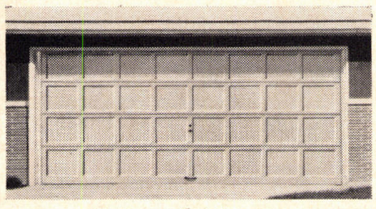

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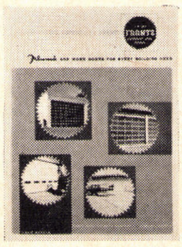

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Circle 39 on Reader Service Card

Western slump darkens nation's housing picture

Residential building has taken a sharp dip in the midst of the nation's business boom.

"July's reversal of the recent improvement in housing activity was mainly a regional weakness," says Economist George A. Christie of McGraw-Hill's F. W. Dodge Co. "A worsening of the generally soft Western housing market served to offset what otherwise was a strong month for residential building in the rest of the country."

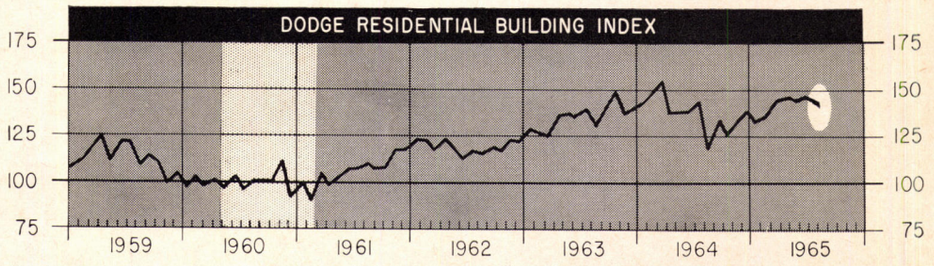
July's private nonfarm starts dropped to an annual rate of 1,433,000, lowest since January and 3% below July of 1964. Only 879,200 units were started in the first seven months, off 5% from 1964.

Residential contract awards dipped 2% to $1.95 million, the first year-to-year decline since March, and awards for the seven months trailed 1964 by 1%. July permits for future construction were down 3%. The Dodge housing index put July contracts at 138, off from 144 in June and 145 in July 1964 (*see graph*).

Hopes remain high. Experts still expect housing's second half to be better than its first, but they now emphasize that the outcome depends on the West's performance. That region's starts (including farm) plummeted to an annual rate of 234,000 in July, off 19% from June and 35% from July of 1964. The Northeast was down 16% from June to July but the South was off only 1% and the North Central states up 1%.

Mighty Midwest. A survey by Advance Mortgage Corp. of Detroit found the Midwest to be one of the strongest housing areas. New housing permits in ten metropolitan areas of six states rose 14% in the second quarter, while permits in the rest of the country fell 7%.

A prediction of an even better market in the Midwest—and the nation—came from President Otto Preisler of Home Federal S&L in Chicago. He said fears that Viet Nam will eventually lead to higher realty and mortgage prices will touch off a burst of sales and building this fall.



Based on contract value, 1957-59=100 (seasonally adjusted). Lighter shaded areas represent general business recessions.

F. W. Dodge Co., a division of McGraw-Hill Inc.

KEY HOUSING INDICATORS

		DOLLARS (millions)	% change from '64
Dodge resid. contract	July	$1.952	− 2
	7 mon.	12,648	− 1
ENR adv. resid. plans	Aug.	766	+34
	8 mon.	5,986	+ 7
ENR adv. apart. plans	Aug.	388	+11
	8 mon.	3,128	NC
ENR adv. house plans	Aug.	135	+91
	8 mon.	1,221	+11

		UNITS (000)	% change from '64
Starts, priv. nonfarm	July	137.9	− 2
	7 mon	879.2	− 5
Starts, ann. rate	July	1,433	− 3
Permits, ann. rate	July	1,230	− 3
New houses sold	June	57	+ 8
	6 mon.	295	+⅓%
New houses for sale	June	227	−12

Sources: F. W. Dodge Co., division of McGraw-Hill; **Engineering News-Record;** Census Bureau; HHFA.

S&L and mortgage company stocks rise sharply

The two groups of housing stocks, grounded for months, became some of Wall Street's highest flyers last month.

Both classes far outran even a strong 3.45% advance by blue-chip Dow-Jones industrial stocks; S&Ls leaped 11%, and mortgage companies nearly matched that with a 9% advance in trading.

Investors jumped their bids for shares of savings and loan holding companies, mostly based in California, in hopes that the Viet Nam buildup would absorb an oversupply of housing there. Hawthorne Financial was the darling of investors, jumping 54% from 7¼ to 11 bid. The industry giant, First Charter Financial, added 3¾ points to 25¾ and second-ranked Great Western advanced 2¼ to 13½.

Continental Mortgage Investors of Boston led the mortgage sector advance, jumping 6⅝ to 32. CMI, a real estate trust specializing in mortgages, was listed on the New York Stock Exchange in June.

With these two strong showings, HOUSE & HOME's average of 79 housing stocks jumped 6.7%. The averages:

	July 12	Aug. 9	Sept. 7
Building	4.55	4.53	4.47
Prefabrication	6.10	5.98	6.25
S&Ls	10.96	11.36	12.65
Mortgage banking	11.81	11.76	12.78
Land development	5.38	5.34	5.38
AVERAGE	7.66	7.75	8.27

HOUSING'S STOCK PRICES

COMPANY	Sept.7 Bid/ Close	Chng. From Prev. Mo.
BUILDING		
• Adler-Built Inc.	15¢	− 5¢
• Capital Bld. Ind.	70-74¢	− 5¢
Cons Bldg. (Can.)	4	− ⅛
• Dev. Corp. Amer.	4	+ ¼
Dover Const.	3⅛	....
Edwards Eng.	4⅞	− ⅜
Edwards Inds.	1⅛	+ ⅛
Eichler Homes[h]	3⅜	....
First Nat. Rlty.[b]	1⅜	− ¼
• Frouge	5⅛	+1⅛
General Bldrs.[b]	2¼	+ ⅜
Hawaiian Pac.	6½	− ¾
Kavanagh-Smith	2⅞	− ⅛
Kaufman & Bd.[b]	12⅞	−1⅛
Levitt[b]	7⅞	− ⅝
Lou Lesser Ent.[b]	5⅛	+ ¾
Lusk	¾	− ¼
Pres. Real. A.[b]	10[d]	+ ¾
• Sproul Homes	4[d]	....
U.S. Home & Dev.	⅝	− 1/16
Del. E. Webb[c]	4¾	+ ½
PREFABRICATION		
Admiral Homes	2½	− ⅛
Albee Homes	2⅛[d]	− ¼
• Continental Homes	k	....
Gt. Lakes Homes	2	− ⅛
Inland Homes[b]	7¼	− ¼
Madway Mainline	11	+ ½
Modern Homes	2¼	− ⅛
Natl. Homes A.g.	3¼	+ ⅛
• Scholz Homes	2	+ ⅛
• Seaboard Homes	⅛	....
Steel Crest Homes	6¾	+ ¾
Swift Homes	2½	....
• Western Shell	¼	....
Jim Walter[c]	22⅞	+2¼
• Wright Homes	80-95¢	....
S&Ls		
American Fin.	17⅝	+ ⅝
Brentwood[b]	8⅛	+1⅝
Calif. Fin.[c]	5¼	+ ¾
• Columbia	6	....
Empire Fin.	11	....
Equitable S&L	18⅝	− ⅜
Far West Fin.[c]	13⅜	+1⅝
Fin. Fed.[c]	27¾	+3½
First Char. Fin.[c]	25¾	+3¾
First Fin. West	7⅜	+ ⅝
First Lincoln Fin.	15	+ ¾
First Surety	5⅛	+ ⅝
First West Fin.[c]	8¼	+ ⅛
Gibraltar Fin.[c]	22	+1⅞
Great West. Fin.[c]	13½	+2¼
Hawthorne Fin.	11	+3¾
Lytton Fin.[c]	13½	+ ⅞
Midwestern Fin.[b]	3⅝	+ ¼
San Diego Imp.[c]	8¾	+1⅝
Trans-Cst. Inv.	5⅞	+ ⅛
Trans Wrld. Fin.[c]	11½	+1¾
Union Fin.	7	+ ⅝
United Fin. Cal.[c]	11⅛	+1½
Wesco Fin.[c]	19⅝	+1⅜
MORTGAGE BANKING		
Advance	7⅝	− ⅛
• Amer. Mort. Ins.	19¼	− ⅛
Associated Mtg.	8⅝[d]	+ ⅛
• Atlas Cred.[c]	8¾	+1⅛
Charter	1	− ¾
Colwell	14½	+1½
Cont. Mtg. Inv.[c]	32	+6⅝
• Cont. Mtg. Ins.	8⅛	− ⅜
• FNMA	88¼	+ ½
First Mtg. Inv.	18⅛	+1⅛
• Kissell Mtg.[b]	5	....
Lomas & Net. Finp.	3⅛	− ⅜
MGIC	25¼	+ ⅞
• Mortg. Assoc.	5⅞	+ ¼
• Southeast Mtg. Inv.	10¾	+ ¼
United Imp. & Inv.[b]	4¾	+ ⅛
LAND DEVELOPMENT		
All-State Prop.[b]	1/16	− ⅛
• American Land	1⅜	....
Am. Rlty. & Pet.[b]	2½	− ⅛
Arvida	6⅞	+ ⅝
Atlantic Imp.	20	+1¼
Canaveral Intl.[b]	1⅝	....
Christiana O.[b]	4½	+ ¼
Coral Ridge Prop.	3	+ ⅛
Cousins Props.	12	+ ¾
Crawford	2⅞	....
Deltona Corp.[b]	11¾	− ¼
• Disc Inc.	2⅞[d]	− ⅛
Fla. Palm-Aire	2¼	+ ¼
Forest City Ent.[b]	4¾	...
Garden Land	4¾	+ ⅛
Gen. Devel[b]	4½	....
Gulf American[b]	7½	+ ¼
Holly Corp.[b]	¾	....
Horizon Land	1⅝[d]	+ ⅛
Laguna Nig. A.[h]	9⅛	...
• Laguna Nig. B.[h]	4⅛	+ ⅛
Lake Arrowhead	6¾	− ⅝
• Macco Rlty.	13⅜	+2⅞
• Major Rlty.	35¢	....
• McCulloch Oil[b]	8	− ⅛
So. Rlty. & Util.[b]	1½	+ ¼
Sunset Int. Pet.[b]	6⅛	+ ⅛

a—stock newly added to table. b—closing price ASE. c—closing price NYSE. d—not traded on date quoted. g—closing price MSE. h—closing price PCSE. k—not available. p—formerly Wallace Investments. •—not included in averages.

Sources: New York Hanseatic Corp., Gairdner & Co., National Assn. of Securities Dealers, American Stock Exchange, New York Stock Exchange, Midwest Stock Exchange, Pacific Coast Stock Exchange. Listings include only companies which derive a major part of their income from housing activity and are actively traded.

SHORT-TERM BUSINESS LOAN RATES

Percent interest and (net change) in year

LOAN SIZE (000)	New York City	7 other Northern & Eastern cities	11 Southern & Western cities
$1-10	5.62 (−.02)	5.88 (+.05)	6.00 (+.07)
$10-100	5.39 (+.03)	5.58 (+.03)	5.71 (+.10)
$100-200	5.07 (+.02)	5.32 (+.05)	5.42 (+.08)
$200 & over	4.62 (−.01)	4.85 (−.04)	5.06 (−.01)

Source: Federal Reserve Board, June, 1965.

NEWS continued on p. 24

Helps presell your prospects: this full-color, full-page advertising of a recreation room that features Kentile® Vinyl Asbestos Holland Tile—in *Life, Look, The Saturday Evening Post, American Home, House Beautiful,* and other national magazines.

KENTILE
VINYL FLOORS

Kentile's newest vinyl floor is Holland Tile! Clean, clear styling with a neat but random ceramic look to brighten any room. Easy to keep clean. Grease-proof. Comfortable underfoot. Texture helps conceal spiked-heel dents. Check the economy of Holland Tile—and Kentile quality eliminates costly call-backs. Ask your Flooring Man about Holland Tile.

If Catherine de Medici were here today...

She'd want Moe Light in her dining room

A Moe Light chandelier adds a touch of royalty to any type of decor . . . gives modern day queens something special to remember about your homes. For more ways to give your homes extra appeal with lighting, write to Moe Light, Thomas Industries Inc., 207 E. Broadway, Louisville, Ky.

MOE LIGHT

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Canada now giving its homebuilders their most fluid mortgage market

The Canadian government has taken four major steps to provide more and easier mortgage money, and it is ready to take another.

- Commons has upped the maximum government-insured loan from $15,600 to $18,000 per unit and has eliminated bedroom count as a criterion in establishing the maximum. The limit has been $14,900 on a house with three bedrooms or less and $15,600 on a house with four or more.
- New legislation has raised the conventional loan ceiling from 66⅔% to an all-time high of 75%. This permits easier refinancing on existing housing, and it will help custom builders who operate above the National Housing Act maximum.
- The government's Central Mortgage & Housing Corp. has increased the limits of its loan portfolio from $6 billion to $8.5 billion. The move paves the way for more direct lending, especially in urban renewal and the wildly successful winter incentive building program, now entering its third year. CMHA is the Canadian equivalent of Washington's Federal Housing Administration.
- CMHC has also eliminated a pre-sale requirement for direct loans to merchant builders. Until December 31 it will lend directly for speculation housing.

More to come. Commons is studying a Bank Act amendment that would let the country's eight chartered banks and their 5,500 branches back into government-insured mortgaging. They are presently limited to lending at 6% or lower, but the NHA rate is 6¼%. The change will mean easier borrowing for builders everywhere.

All this legislation should make a good market even better. Canadian builders had their best year ever in 1964: 165,650 starts, divided 50-50 between apartments and single-family houses. Starts ran 6% ahead of the 1964 pace for the first five months this year, and forecasters say this is only a beginning. A new study for the Economic Council of Canada predicts an annual rate of 190,000 starts by 1970, again split evenly between singles and multiples.

Builders ask more. Canada's builders are happy about the changes, but they feel the loan ceiling could go still higher than $18,000. Under the previous system, a house with a $21,000 lending value and a maximum loan of $15,600 required a $5,400 down payment (95% of the first $13,000 of lending value plus 70% of the remainder). The new $18,000 loan limit reduces the down payment on the same house to $3,000. The loan ceiling on apartment mortgages remains at $12,000 per unit.

The builders also want mortgage interest charges and municipal taxes deductible from income taxes, as in the U.S.

FHA curbs 35-year mortgage; risks large, benefits small

FHA has virtually eliminated its 35-year mortgages. It ordered field offices to stick to 30-year terms after a review showed that most 35-year mortgagors could qualify for 30-year loans.

Local offices can still approve 35-year terms for borderline cases.

"The incidence of foreclosure in 35-year mortgages is higher," FHA said. A study of loans which were made from 1959 to 1961 and which ended in default in 1963, showed 4.11% were for 35 years and only 2.29% were for 30 years.

Builders pay higher discount as mortgage yields increase

Rising bond yields have built a fire under mortgages. The average yield on the FHA's 203b has risen .06% to 5.12-5.18% in New York, the second hop in two months.

Builders feel this one where it hurts. The discounts they pay go up half a point in Chicago, Houston and California (*see chart*).

"Bonds and conditions in the secondary market are the causes," says Vice President Christian M. Gebhardt of the Colwell Co. in Los Angeles. Many of HOUSE & HOME's 17 other observers agree.

President Ray Lapin of Bankers Mortgage Co. of California agreed that rising yields were forcing mortgage bankers to demand higher discounts. "The range has certainly gone to 5.12-5.18 in New York," he said.

SECONDARY MARKET FHA & VA 5¼%

Money center	Sec. 203b & VA houses Yield to Investor	Trend	Sec. 207 Apts. Yield to Investor	Trend
Boston	5.03-5.17	Steady	a	a
Chicago	5.06-5.12	Steady	5.12-5.16	Static
New York	5.12-5.18	Up .06	5.12	Static
San Fran.	5.12	Up .06	a	a

a—No activity

CONVENTIONAL LOANS RESALE MARKET

Packages of conventional loans, privately insured by MGIC, available for purchase by S&Ls. Loans are in metropolitan areas, originated by mortgage bankers and commercial bankers and listed with Mortgage Guaranty Insurance Co., 600 Marine Plaza, Milwaukee. Address inquiries c/o Jack Dittmann. Typical offerings reported the week ending Sept. 3.

Loans available (millions)	Location	Net % Yield to investors[a]
$10.0	California	5.75
2.0	California	5.875
2.5	Georgia	5.50
10.0	Hawaii	5.75
5.0	Michigan	5.50
3.5	Michigan	5.75
2.0	N. Carolina	5.50
1.0	S. Carolina	5.50
1.0	Wisconsin	5.50

a—Net after insurance fees and servicing.

NEW YORK WHOLESALE MARKET

FHA, VA 5¼s

Immediates: 96½-97¼ Futures: 96½-97¼

FHA, VA 5¼ spot loans (On homes of varying age and condition)

Immediates: 96½-97¼

Note: Prices are net based on a servicing fee of ½%. Majority of loans being sold today include concessions made by servicing agencies which would be reflected in higher prices. Prices cover out-of-state loans, reported the week ending Sep. 3 by Thomas P. Coogan, president, Housing Securities Inc., New York City.

HOMEBUILDER's MORTGAGE MARKET QUOTATIONS

Reported to HOUSE & HOME in week ending September 3.

City	FHA 5¼s (Sec. 203b) Discount paid by builder FNMA Scary. Mkt.[xy]	Min. Down* 30-year Immed.[w]	Trend	FHA 207 Apts. Firm Commitment	Conventional Loan Rates Comm. banks, Ins. 60s. 75%	Savings banks, S&Ls 80%	Savings banks, S&Ls Over 80%	Construction Loan Rates Interest+fees All lenders
Atlanta	2¾	1½-2½	Up ½%	a	5½-5¾	5¾-6	6-6¼	6+1
Boston	1¾	par+1-par	Weaker	par+1-par[b]	5¼-5½	5¼-5½	5½[b]	5¼-6
Chicago	2¼	½-2	Up ½	a	5¼-5½	5½	5¾-6	5½-6+1-1½
Cleveland	2¼	1-1½	Steady	a	5½-5¾	5½-5¾	6-6½	6+1
Dallas	2¾	1½-2½	Steady	par[a]	5½-5¾	5¾-6	6-6¼	6+1
Denver	2¾	½-2	Steady	a	5¼-5½[z]	5¾	6-6½	6+1-2
Detroit	2¾	par-1	Steady	1-1½	5¾-5½	5½-6	5¾-6	6+½
Honolulu	2¾	1½-2½	Steady	a	5¾-6½	6¼-7	6¾-7¼	6½-7+1-3
Houston	2¾	2-2½	Up ½	a	5½-6	6	6¼-6½	6+1
Los Angeles	2¾	1½	Up ½	par+1-par+½	5½-6	5¾-6.6	6¼-6¾	6-6.6+1-2
Miami	2¾	1¾-2	Steady	½-1	5½-6	5¾	6	6+½-1
Newark	1¾	1	Steady	par-½	5½	5¾	5¾-6	6+1
New York	1¾	par	Steady	par+1-par	5½	5¾	6	5¾-6+½-1
Okla. City	2¾	1-2½	Steady	a	5½-5¾	5½-5¾	6-6¼	6-6½+1-1½
Philadelphia	1¾	par	Steady	par-1	5½-5¾	5¾-6	6	5-6+1
San Fran.	2¾	1½-2	Up ½	par-1	5½-5¾	6-6.6	6¼-6.6	5½-6½+1½-2
St. Louis	2¾	1-2½	Steady	par-1	5½-6	5¾-6	6-6¼	5¾-6½+1-2
Wash., D.C.	2¼	1-2	Steady	par	5½	5¾	6[b]	5½-5¾+½-1

* Immediate covers loans for delivery up to three months, future covers loans for delivery in three to twelve months.
• Quotations refer to prices in metropolitan areas, discounts may run slightly higher in surrounding towns or rural zones.
• Quotations refer to houses of typical average local quality.
* 3% down on first $15,000; 10% of next $5,000; 25% of balance.

Footnotes: a—no activity. b—limited activity. w—for comparable VA loans also x—FNMA pays ½ point more for loans with 10%. y—discounts quoted are net after seller pays ½% marketing fee and ¼% adjustment for stock purchase. Seller must pay 1% of mortgage for stock calculated in $120 units, of which $20 is contribution to FNMA capital and $100 is for a share trading at about $84. z—applies to 66% loans.

Sources: Atlanta, Robert Tharpe, pres., Tharpe & Brooks Inc.; Boston, Robert Morgan, pres., Boston 5¢ Savings Bank; Chicago, Harry N. Gottlieb, vice pres., Draper & Kramer Inc.; Cleveland, David F. O'Neill, vice pres., Jay F. Zook Inc.; Dallas, M. J. Greene, pres., Southern Trust & Mortgage Co.; Denver, Clair A. Bacon, exec. vice pres., Mortgage Investments Co.; Detroit, Sherwin Vine, vice pres., Citizens Mortgage Co.; Honolulu, H. Howard Stephenson, vice pres., Bank of Hawaii; Houston, Everett Mattson, vice pres., T. J. Bettes Co.; Los Angeles, Christian M. Gebhardt, vice pres., Colwell Co.; Miami, Lon Worth Crow Jr., pres., Lon Worth Crow Co.; Newark, William W. Curran, vice pres., Franklin Capital Corp.; New York, John Halperin, J. Halperin & Co.; Oklahoma City, M. F. Haight, 1st vice pres., American Mortgage & Investment Co.; Philadelphia, Robert S. Irving, vice-pres., First Pennsylvania Banking & Trust Co., St. Louis, Charles A. Keller, vice pres., Mercantile Mortgage Co.; San Francisco, Ray Lapin, pres., Bankers Mortgage Co. of California and Charles E. McCarthy, vice pres., Bank of America; Washington, James C. Latta, sr. vice pres., Frederick W. Berens Inc.

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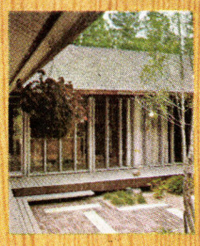

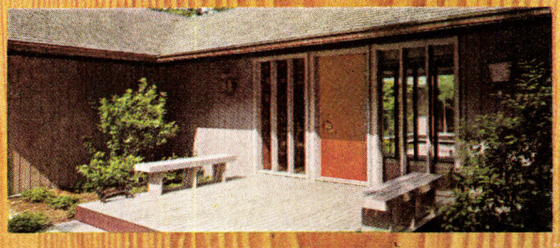

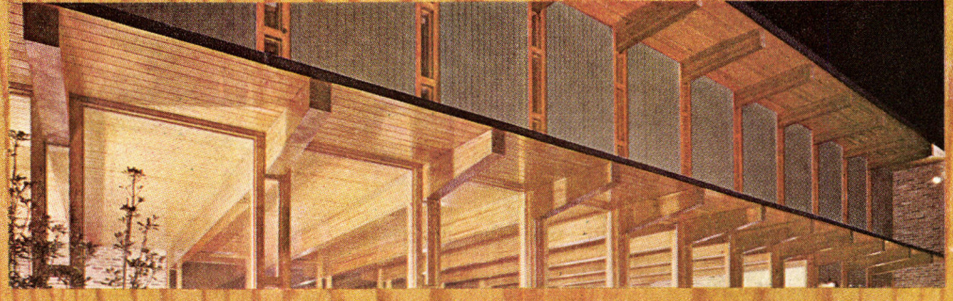

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Just plug into any 15 AMP., 115 V circuit and go!
Does the work of 2 H.P.

This revolutionary new portable unit weighs only 135-pounds and is complete, ready to spray with no extras to buy. It is equipped with the Patented H-Gun for quality atomization. Using a siphon pump operating from the original container, the LEKTROSPRAY will spray 400 square feet in less than ten minutes even with heavy viscosity latex and enamel.

The LEKTROSPRAY operates on heated air using the energy normally lost by ordinary compressor systems. RESULT: A powerful, compact industrially rated unit that is a "paint shop on wheels." Simple to operate and trouble-free with no hydraulic recirculation required.

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Sets new standards for quality finishing

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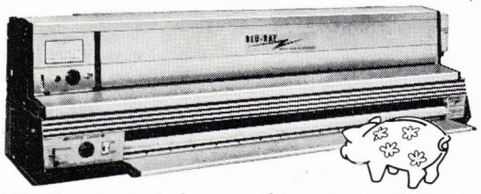
This 27" piggyback diazo machine will print 94% of your work for only $417.*

(It's the lowest priced unit sold!)



And that $417 price tag includes everything you need to produce perfect prints for 1¢ per square foot materials cost. No accessories needed. Now or ever.

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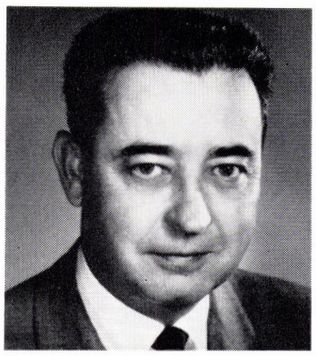
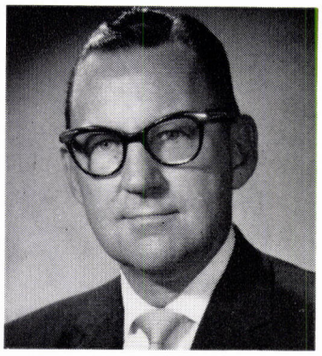


U.S. LEAGUE's DUNCAN
Urges better design



NATIONAL LEAGUE's GREEP
Asks builders' support

New presidents for S&L leagues and a cautious word for builders

C. A. Duncan Jr. will take over the presidency of the U.S. Savings & Loan League at its Dallas convention November 7 to 11. An advocate of conservative management in a year when the league's 5,000 associations are contenting themselves with "controlled expansion" if not retrenchment, Duncan has these sober words for builders:

"There is still plenty of money —for good loans. But controlled expansion means better management, and the builder may have to design better than he has sometimes done."

Duncan also predicts that S&Ls will continue to back away from free-and-easy apartment lending. "Just not interested," he says.

Duncan, at 48 the president of the $377-million Farm & Home Savings Assn. in Nevada, Mo., replaces **John W. Stadtler,** 48, president of Washington's $190-million National Permanent S&L, who led the league through a year of emphasis on management improvements under the slogan, "Growthmanship is passé." Duncan's vice president will be **Otto L. Preisler,** 61, president of Chicago's Home Federal S&L (assets: $350 million).

Another S&L leader with even more direct words for builders is **Harry P. Greep,** 51, newly elected president of the National League of Insured Savings Associations. "Tightening of money could be a very real thing," he says. "We're overbuilt in metropolitan areas. There is a big vacancy factor, and there is little relief in sight for the builders through 1966. They would do well to get behind our campaign to get authority from Congress to finance furniture and fixtures in a mortgage—finance the home instead of just the house—because it would help sell houses."

Greep, president of the $127-million Atlantic Federal S&L in Fort Lauderdale, Fla., takes over the 450-member National League from **George E. Leonard,** 53, at the annual meeting in Los Angeles October 27. Leonard heads First Federal S&L of Phoenix (assets: $177 million). The new league vice president is **Rex G. Baker** Jr., president of the $79-million Southwestern Savings Assn. of Houston.

General Development's chief quits

Harry R. Gonzalez has stepped out without explanation after only five months as president of General Development Corp., the $175-million land developer based in Miami.

Gonzalez is the third president to go since Chairman **Charles H. Kellstadt** reorganized General Development in 1963 (NEWS, Oct. '63). The others: **H. A. (Bill) Yoars,** now in New York City as vice chairman of Associated Mortgage Companies Inc. of Washington, and **James L. Rankin,** who resigned to become president of Helme Products, a food company in New York.

Gonzalez, 49, was first vice president in charge of residential and industrial properties for the Jacksonville mortgage banking house of Stockton, Whatley, Davin & Co. when he took the General Development post in March.

Gonzalez quit as General Development was posting figures for a strong first half: $15.9 million sales and 15¢-a-share earnings, up from $12 million and 12¢ in the first half of 1964. The company had earned $1.6 million on $29.7 million sales in calendar 1964 to reverse losses of $6 million in the previous year. It is building on three large Florida tracts: Port Charlotte, Port St. Lucie and Port Malabar.

NEWS continued on p. 28

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*Lifetime Guarantee. The Ruberoid Co. will furnish new material to replace Luran Airtred vinyl flooring that becomes worn out in normal use in your home under these conditions: 1. Any area of vinyl wear surface is worn through to the backing during your lifetime and during the time you, the original purchaser, continue to occupy the home in which the flooring is originally installed. 2. The flooring is installed and maintained according to Ruberoid recommendations. On board floors it is necessary to install over underlayment plywood unless boards are less than 3 in. wide, in which case lining felt may be used. 3. Ruberoid's liability does not extend to freight or cost of installation. 4. Claim must be accompanied by the original bill of sale to claimant and approved by The Sandura Co., Division of The Ruberoid Co. prior to replacement.

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Kemper's Provincial Kitchen in a warm fruitwood finish

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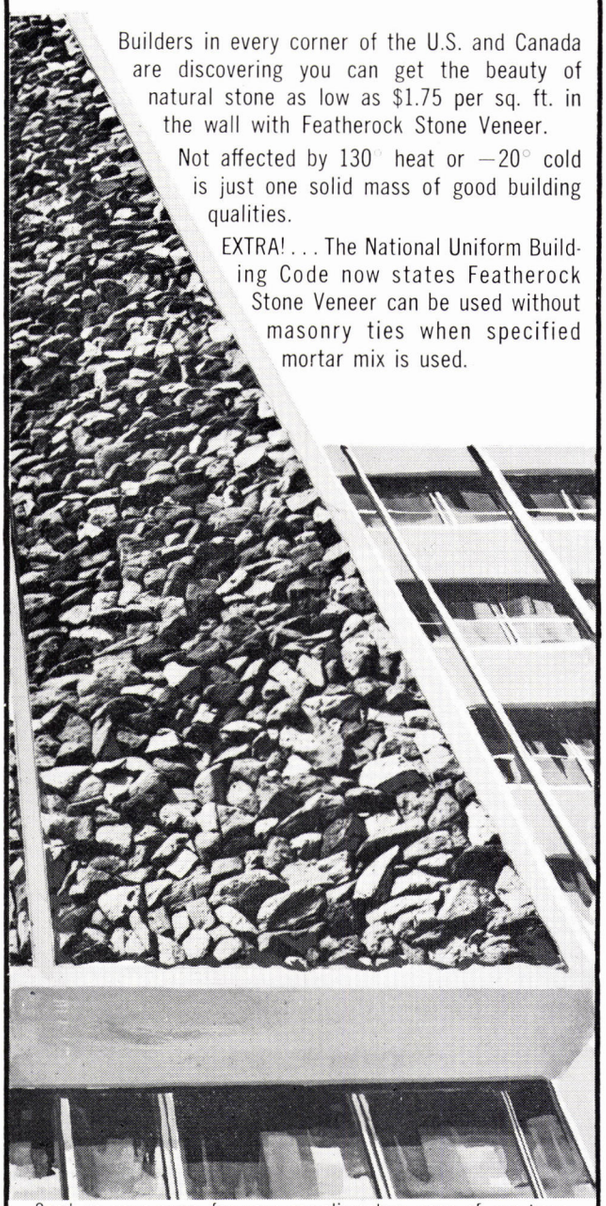

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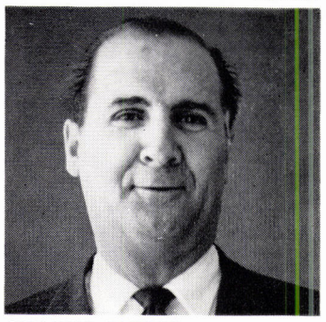
Omaha builder poised to start up NAHB's presidential ladder

H&H staff

For the third time in four years, NAHB appears ready to put an uncontested candidate on the path to its presidency. The summer meeting of NAHB directors passed with Builder **Don Decker** of Omaha the only announced candidate for vice president and treasurer. The winner of this post at the December convention normally succeeds in four years to the presidency of the 43,000-member builder trade association.

Builder **Don Dise,** the only other announced candidate, dropped out on doctor's orders. Among the disappointed: Decker himself. "We would have had a good fight," he says.

Since the late 1950s NAHB has moved its officers up through a four- and five-year series of posts designed to acquaint them with the organization workings. But the four-year grind strains the finances of most builders and has nearly bankrupted some. Hence only once in the past four years has the bottom spot been contested — in 1963 when **Leon Weiner** was elected over **Kimball Hill** of Chicago.



OMAHA'S DECKER
New man on the NAHB ladder

Decker, 53, has built more than 10,000 homes during an 18-year building career. But two years ago, when his accountant showed him he was making more money on land than on houses, he liquidated his building and component operation to become a full-time land developer.

Cahill to lead NAHB executive officers

Next year's president of NAHB's executive officers council is an actor who found his role in housing. He's **Lauren Cahill,** 46, executive vice president of the Denver Home Builders Assn.

Cahill attended Columbia Radio and Dramatics School in Chicago. Before World War II, when he was trying to break into acting, a friend asked him to sit in as a salesman for five houses he had built. "I sold three in two weeks," Cahill recalls. "So when I got out of the Army, I went into real estate and mortgage work in Denver. The homebuilders asked me to become executive officer in 1961."

Cahill has been the Denver Civic Theater's Actor of the Year five times.

A design giant falls; Corbusier dies at 77

A heart attack, suffered while swimming off the French Riviera, ended the prolific and rebellious career of one of architecture's acknowledged form-givers, Charles-Edouard Jeanneret (Le Corbusier). He was often ranked with Frank Lloyd Wright, Mies van der Rohe and Walter Gropius as one of the century's most original designers.

Much of today's design and city planning—often years ahead of its implementation — came from Le Corbusier: skyscrapers and high-rise apartments set in park-like plots, elevated city expressways, non-load-bearing exterior walls and reinforced concrete buildings embellished only by the rough marks of the forms. His philosophy that a house was 'a machine for living' contributed heavily to the smooth functionality of today's houses.

LENDERS: **Hector Hollister,** 51, former executive vice president of Frederick W. Berens Inc., Washington, and longtime mortgage correspondent for HOUSE & HOME, joins the W. R. Kelley Co. as president and full partner of Chairman **Robert J. Franey.** The Kelley Company has been in mortgage banking 41 years, recently dealing in commercial and apartment loans. Hollister will increase its activity in FHA mortgages. **Thomas G. Heffernan,** 52, is the new assistant director of the American Bankers Assn.'s mortgage finance committee. He had been acting sales manager for J. Maxwell Pringle & Co., old line New York mortgage banking house, and later was an assistant vice president of the Bank of North America, New York City.

PLANNERS: **Walter J. Monasch,** 42, is California's first director of housing and community development. He steps into the $18,000 post from the housing consultant's desk in the state's finance department. He will advise communities on federal programs. A nine-member board sets policy.

Circle 43 on Reader Service Card

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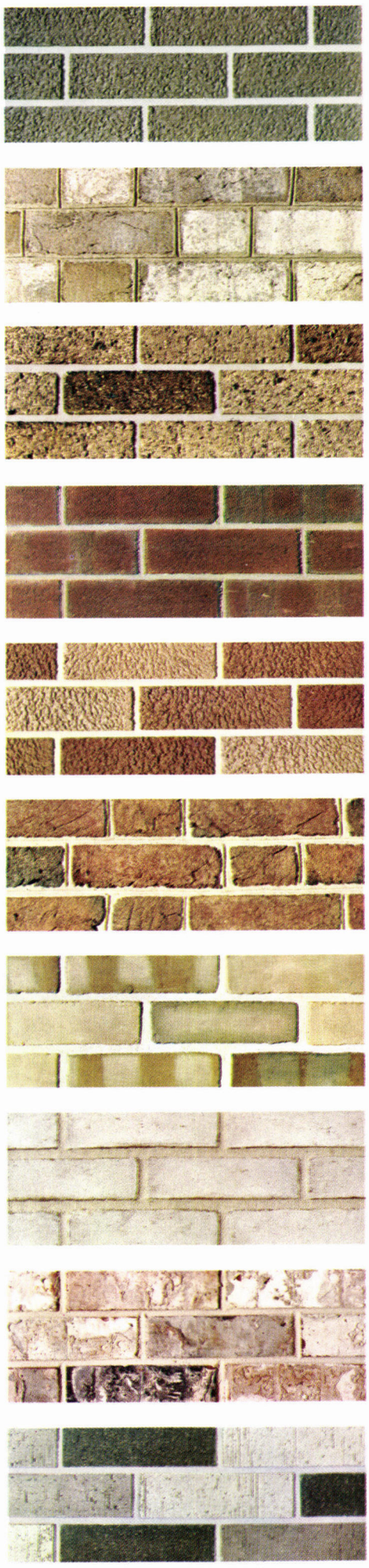

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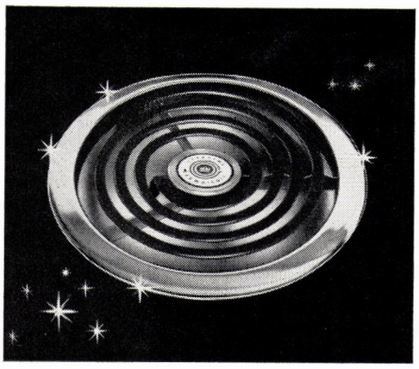

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HOUSE & HOME *presents locations, sponsors, architects and estimated costs of representative new projects costing over $500,000 as gathered by* ENGINEERING NEWS-RECORD *and F. W. Dodge Co., division of McGraw-Hill Inc. to alert builders, lenders and contractors to new business.*

ALABAMA—HUNTSVILLE: Garden apartments, $500,000. Architect: Donald E. Stoll, Nashville. MONTGOMERY: Apartment, $750,000. Sponsor: c/o Don Martin. Plans: Tiller Butner & McElhaney. TUSCALOOSA: Apartment, $600,000. Sponsor: Town & Campus. Plans: Barrett Daffin & Bishop, Tallahassee, Fla.

CALIFORNIA—EL CAJON: Houses, $2 million. Builder: Stephen G. Fletcher and R. D. Hamann. LOS GATOS: Residential development, $5 million. Sponsor: Brown & Kauffman, San Jose. SAN DIEGO: 92 houses, $1 million. Builder: Golfcrest Developers.

COLORADO—BOULDER: Dormitory, $500,000. Sponsor: O'Meara-Chandler Development Co., Houston, Tex. DENVER: Condominium apartment, $1.3 million. Architect: Edwin H. Warner. FORT COLLINS: Student housing, $6 million. Sponsor: College Housing Inc., Denver. Plans: Roland Wilson, Denver. PUEBLO: Apartment, $600,000. Sponsor: Broadway Christian Church Housing Corp. Plans: Ramsey & Reeves, Denver.

CONNECTICUT—MIDDLETOWN: Garden apartments, $1.25 million. Architect: Jack H. Schecter, Bridgeport. STONINGTON: Garden apartment, $6 million. Sponsor: Eastern States Homes Corp., Cheektowaga, N. Y. WEST HAVEN: Housing project, $2 million. Architect: Wechsler & Schimenti, New York City.

DISTRICT OF COLUMBIA—Apartment and garden apartments, $3.7 million. Sponsor: Charles E. Smith. Plans: Cohen-Haft & Assocs., Silver Spring, Md.; Garden apartment, $800,000. Sponsor: Martin & Dorothy Weil, Silver Spring, Md. Plans: Edmund Dreyfuss & Assocs.

DELAWARE—WILMINGTON: 219 houses, $2.5 million. Builder: Magness Construction; Apartment, $1 million. Sponsor: DuBarry Building Corp.

FLORIDA—MIAMI: 23 houses, $575,000. Builder: JRB Construction. Plans: Donald J. Reiff. TITUSVILLE: Townhouses, $1.2 million. Builder: Broyhill Building. Plans: William G. Taylor.

ILLINOIS—AURORA: Apartment, $1.2 million. Sponsor: Randwest Corp. Plans: Raimund Shlauta, Chicago. CHAMPAIGN: Dormitory, $2 million. Sponsor: Towne Inc., Milwaukee, Wis. Plans: Daverman Assocs., Grand Rapids, Mich. CHICAGO: Apartment, $1 million. Sponsor: Metropolitan Structures. Plans: I. Moses & Assocs. DEKALB: Dormitories, $2.5 million. Sponsor: Marvin Mandel, Milwaukee, Wis. Plans: Gustave, Braun. ELMWOOD PARK: Apartment and swimming pool, $1.5 million. Sponsor: Kenneth Johnston, Des Plaines. Plans: Charles E. Petrungaro, Chicago. NORTHBROOK: 150 houses, $4.5 million. Builder: Meister, Neiber of Chicago. Plans: Footlik, Rose Assocs., Morton Grove. OAK PARK: Condominium apartment, $1.5 million. Sponsor: Fred Allen & Jack Stone Assocs., Chicago. Plans: Altman & Saichek, Chicago.

INDIANA—INDIANAPOLIS: Apartments and row houses, $6 million. Sponsor: Falender Building Corp.; Apartments, $1.7 million. Sponsor: Sycamore Heights; Apartment, $1.35 million. Sponsor: Penn Towers. Plans: Kennedy Brown & Assocs. MICHIGAN CITY: Houses, $4.4 million. Architect: Ray Steurmer.

LOUISIANA—NEW ORLEANS: Apartment, $1.5 million. Sponsor: Cambridge Construction; 25 houses, $625,000. Builder: Guaranty Homes, Algiers. SLIDELL: Site development, $1 million. Sponsor: P. D. Pravata.

MARYLAND—ELLICOTT CITY: 100 houses, $3 million. Builder: Hopkins Building Corp. FREDERICK: Garden apartments, $1.15 million. Sponsor: S. Brodsky, Silver Spring. Plans: Cohen-Haft & Assocs., Silver Spring; Garden apartments, $500,000. Sponsor: C. Marion Hale, Kensington. Plans: Ward & Hall, Springfield, Va.; Townhouses, $10 million. Sponsor: Dr. Sol Levine, Washington, D. C. Plans: Charles F. Bowers. GREENBELT: Garden apartment, $5 million. Sponsor: MBG Assocs., Washington, D. C. OCEAN CITY: 40 townhouses, $800,000. Sponsor: Caliban Corp. Plans: Donald B. Ratcliffe, Baltimore. ROCKVILLE: Garden apartments, $675,000. Sponsor: Laz Development Corp., Washington, D. C. Plans: Cohen-Haft & Assocs., Silver Spring; 700 houses, $1.5 million. Builder: Levitt & Sons, Bowie. SUITLAND: Garden apartments, $2.5 million. Sponsor: Lofflin Rosansky & Waghelstein, Washington, D. C. Plans: W. L. Mayne & Assocs., Alexandria, Va. UPPER MALBORO: Garden apartments and townhouses, $2 million. Sponsor: Laz Development, Washington, D. C. Plans: Cohen-Haft & Assocs., Silver Spring.

MICHIGAN—BIRMINGHAM: 136 houses, $4 million. Builder: Slavik Builders, Oak Park. GRAND BLANC: 39 houses, $1 million. Builder: Hovey Building Corp. PLYMOUTH: 90 houses, $2.25 million. Builder: Stewart Oldford & Son.

MINNESOTA—EDEN PRAIRIE: 200 houses, $6 million. Sponsor: Semrad Home Builders, Hopkins. ROSEVILLE: 12 townhouse apartments, $1.6 million. Architect: Associated Architects & Engineers, St. Paul. ST. PAUL: Townhouse apartment, $500,000. Sponsor: Harlan Grayden.

MISSOURI—BELLEFONTAINE NEIGHBORS: Condominium apartment, $8 million. Sponsor: R. F. Lusk Corp., Clayton. FLORISSANT: 55 houses, $1 million. Builder: Keystone Development. Plans: L. E. Spellman, Hazelwood. KINLOCH: 100 houses, $1.5 million. Architect: William H. Royal & Assoc., Chicago, Ill. MOBERLY: 73 houses, $730,000. Builder: B. L. Batt, Carrollton. ST. LOUIS COUNTY: 62 houses, $1 million. Builder: Concord Park Corp., Sappington; 268 houses, $4 million. Builder: J. E. Jones Construction, Hazelwood; 103 houses, $1.5 million. Builder: Massey Realty & Construction, Sappington. UNIVERSITY CITY: Houses, $1 million. Builder: R. G. McKelvey Building Co.

NEW JERSEY—ATLANTIC HIGHLANDS: Garden apartments, $800,000. Builder: Allen J. Tracy. BERKELEY HEIGHTS: 51 houses, $1,785,000. Builder: Jeffroe Estates Inc., Springfield. BLOOMFIELD: Garden apartments, $800,000. Architect: Henry Boyer, Newark. ELIZABETH: Garden apartment, $800,000. Architect: Benjamin Nienart, Elizabeth. MATAWAN: Garden apartments, $1.6 million. Architect: Burton Appel, Newark. MONTCLAIR: Garden apartments, $900,000. Architect: Henry Boyer, Newark. MOUNT HOLLY: Garden apartments, $2.24 million. Architect: Martin M. Laibow, Cornwell Heights, Pa.

Business continued on p. 39

Circle 49 on Reader Service Card

Circle 50 on Reader Service Card

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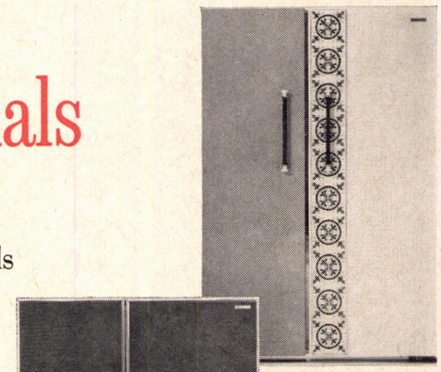
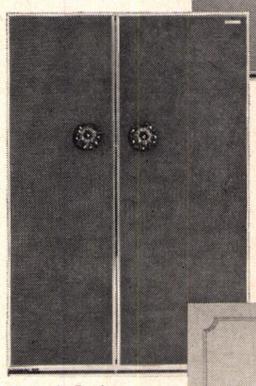
The Kelvinator Originals

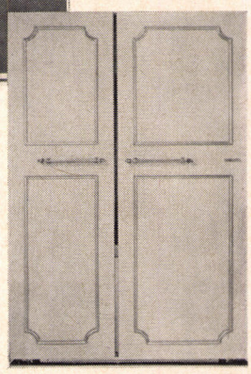
Now a very special plan offers you the unique drawing power of the Kelvinator Originals Refrigerator-Freezers to help you sell your houses! Available only to a very select group of builders, this plan offers you very important incentives for including the Kelvinator Originals shown here in your model homes. But you must hurry! We plan to select only one builder in each area for this program. The Kelvinator Originals are the most talked-about appliances of the year. They have received more publicity than ever accorded any appliance. People from coast to coast have thronged to see them. Don't miss this unusual opportunity to profit from this appliance sensation in your area. Mail the coupon today.



Delft Foodarama



Hacienda Foodarama



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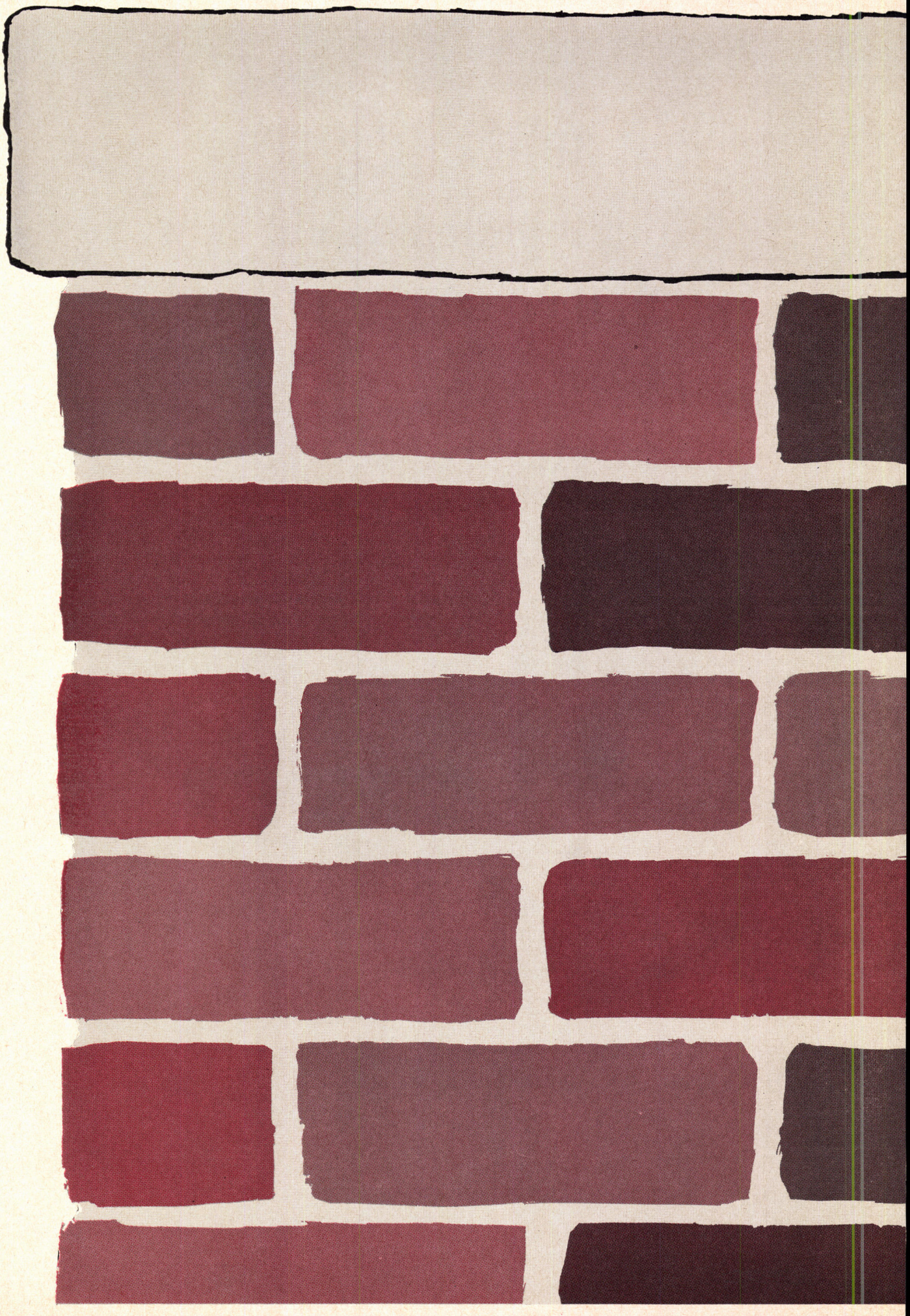

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Bryant's new sealed combustion direct vent gas furnace eliminates the chimney.

And we say good riddance.

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Something else. There's a good chance you'll save a considerable amount of money in the duct system with a Bryant sealed combustion furnace.

Ask your Bryant dealer, distributor or factory branch about the new Bryant 393V. Or write Bryant Manufacturing Company, Indianapolis, Indiana.

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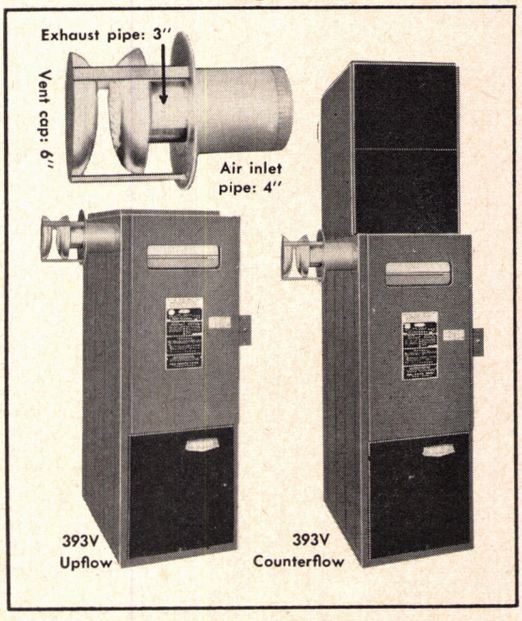

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NEW 2424 TRACTOR

Got dirt to move?

Now there's a sixth International® compact to slug out jobs in the tight spots

Outmaneuvers every other tractor in its class: • Turns in an 8.5′ radius • 70″ wheel base • Hydrostatic power steering • Fast reversing • Differential lock

Ask your dealer for a demonstration of the 2424—or any of these other husky International earth-moving rigs. 3414 loader: 43.5 hp. Torque converter with Hydra-Shuttle® transmission. 2404 tractor: 47 hp standard and Lo-Boy® models. International Cub® tractor: 13.5 hp. Versatility for small utility jobs. T-6 crawler tractor: 52 hp gas, Diesel optional. T-340A crawler tractor: 47 hp gas, Diesel optional. Set the date for a test on your toughest job—soon. There's a "pay as you earn" finance plan worth investigating, too. International Harvester Company, Chicago, Illinois 60601.

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Rip up the ground with ease. You'll handle all assignments, raw site to finish grade, with the 2424. Proven 4-cylinder engine. Manufacturer's rating: 47 hp (gasoline), 43.5 hp (diesel). Delivers big power for scarifying, lifting and digging; smooth power for precision grading.

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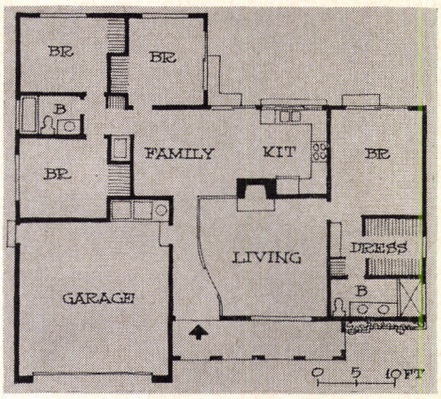
Load up to a ton—no sweat. Full-length subframe carries loading shocks direct to rear axle carriers. Protects engine and power train. Visibility? Unbeatable. Towers are 6½″ lower than earlier models.

Snake this scraper through the narrows, around the corners, maneuverability is the payoff in the 2424. Pick your transmission: 8 speeds forward, 2 reverse—or optional 8 and 8.

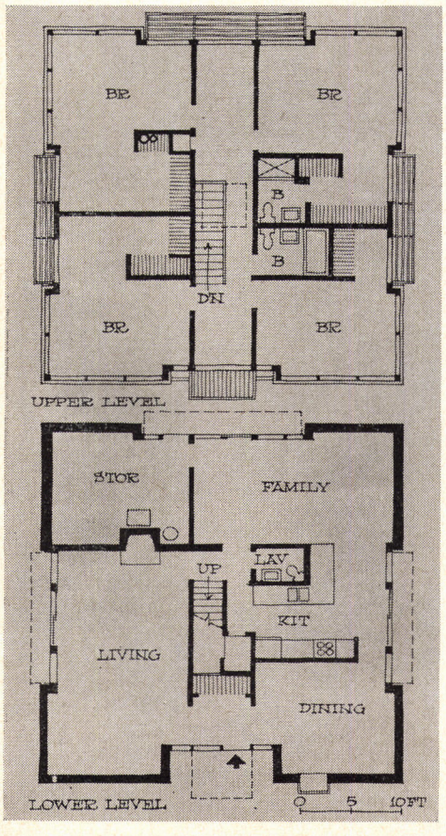
Dig a big bite in comfort. Pick your backhoe: 16′ reach with 13′ digging depth, or 17′ reach with 14′ depth. Only split console on the market. Makes plenty of room for legs and feet. No hot housing to straddle.

Julius Shulman

A traditional one-story ranch with an up-to-date plan



The arched motif of the facade is typical of the early Spanish mission architecture of the Southwest. But the plan of this California model is zoned to meet today's buyer demand for adult privacy. The step-down living room off the entrance gallery completely separates the big master-bedroom suite from the family room in the center of the house and the other three bedrooms at the opposite end. This separation of adult and family living is so popular that the plan is the bestseller in Deane Bros.' line of seven models at Diamond Bar. Priced in the middle of the line ($24,-950), the house has accounted for 91 of the 350 sales made since the project opened a year ago. The same 1,525-sq.-ft. plan is offered with four other elevations on a minimum 7,000-sq.-ft. lot. Features include a stone fireplace, carpeting throughout the adult area, a "garden kitchen" (H&H, June '64, May '65), sunken tile bath in the master bathroom and 12′ of closet space in the master dressing area.



Warren Ballard

A contemporary two-story designed for difficult sites

Architects Cross & Adreon designed this square-shaped model specifically for by-passed but expensive hillside land in Bethesda, Md. The builders, Matthews-Schwartz, can cut into the side of a hill, turn the plan in any direction or reverse portions of it, and thus literally shoehorn the 2,616-sq.-ft. house into almost any difficult slope. A well of railroad ties around the recessed window panel on the uphill side (*right in photo*) and a central skylight and clerestory windows provide extra daylight for both floors.

Nine of the 20 houses planned in the current project have been sold, and two other Washington, D.C., area projects of similar design are now under construction. Price of this model: $43,500 on a 8,500-sq.-ft. lot (which cost $12,000 including development). Carport is optional.

Circle 57 on Reader Service Card ➤

When you've almost sold a manufactured home, can closets close it?

They've been known to. When they're numerous, and fronted by the beauty and convenience of Float-Away metal bifold doors.

Closets carry a lot of weight with prospective buyers. They want attractively designed storage. And plenty of it.

Float-Away bifold doors add above average closet space to your manufactured homes at no extra cost. Simply by using existing space to better advantage. Here are ways Float-Away can help you solve storage problems beautifully and profitably.

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- ☐ No rust to spot your reputation. These are the only doors made with zinc electroplated and bonderized steel.
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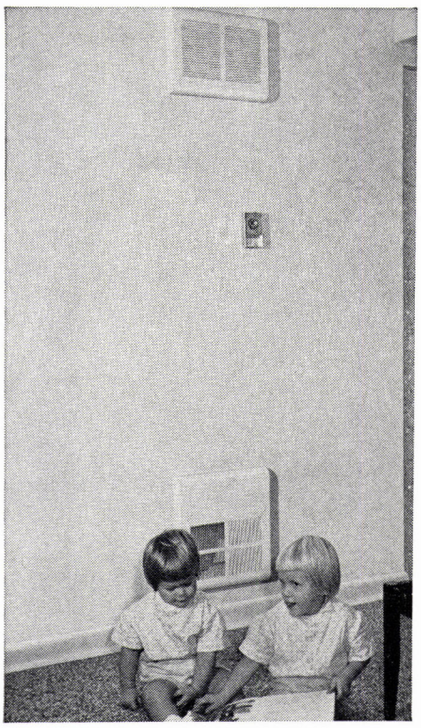

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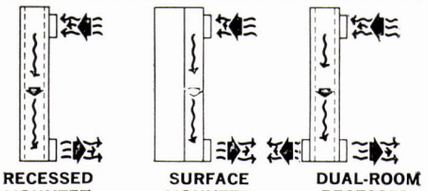

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LETTERS

Remodeling

H&H: Compliments on your fine article about the remodeling business [Aug.]. I was pleased by your knowledge of this very hard subject.

I have already mentioned the article to local trade associations and the Better Business Bureau. And salesmen and others in the industry have called me with their favorable comments.

ROBERT P. BECHT, president
Becht & Co.
Cleveland, Ohio

Reader Becht speaks from 30 years' experience in the remodeling business.—ED.

H&H: Mr. Oxenberg [of Federal Builders & Home Improvement Co.] says he does not want to be associated with a department store because he would have to charge customers 20% more and pay the department store 10% to 15%. These figures would inform the reader that if he associated with a department store, he would have to cheat his customers and be defeated before he started.

I feel the present remodeler will associate himself with a department store as well as maintain his own business to *deflate*, not *increase*, the high cost of doing business.

East Coast and R. H. Macy Co. charge their customers the same price and have not increased prices in the past three years despite the steadily increasing cost of labor, materials, trucks, gasoline and advertising rates. We can hold our prices and in many instances decrease them because:

1. East Coast and R. H. Macy combined . . . produce over $3 million worth of business a year.

2. We buy all our merchandise, lumber, hardware and electrical fixtures, not at wholesale, but at carload prices.

I also feel it is misleading to encourage contractors to open many showrooms. The trend today is away from showrooms. I do recommend one small all-inclusive showroom to show that you are established in business.

DORIS SCHWEITZER, president
East Coast Attic and Basement Co.
Mineola, L.I.

Urban restoration

H&H: The German Village restoration program in Columbus [Aug.] is almost exclusively the product of the talent, perseverance, enthusiasm, personality and hard work of Frank Fetch, the founder and president of the German Village Society. Mr. Fetch was proving the efficacy and profitability of restoration in this area at a time when the current crop of "speculators" were fearful of investing a dime.

In view of this, plus the fact that at least two of the four examples you depict were done by Mr. Fetch, I find it extremely unfortunate that there is not so much as a mention of his name. I am sure that this makes no difference to Mr. Fetch, but you should at least give credit where it is due.

DON A. DENISON, urban renewal coordinator
City of Berkeley, Calif.

H&H intended no slight to Frank Fetch and, in fact, appreciates his generous help in preparing the article. We credited the German Village Society because singling out any individual might have done a disservice to other hardworking members. We do not share Reader Denison's apparent view that so-called speculators should be allowed no share in rehabilitation. This attitude, prevalent among many officials, may be one of the biggest barriers to successful rehabilitation.—ED.

Not a circus

H&H: Your article on auctioning a sick subdivision [NEWS, Aug]. creates a false impression of the real estate auction profession, which, on the West Coast, is conducted in a most sophisticated manner. We are businessmen, not showmen dressed in striped blazers.

We do not look upon an auction as a gimmick. We have sold by public auction everything from tract homes to multi-million dollar industrial complexes, handling all properties in a fast, clean and efficient manner. Our high percentage of success indicates that real estate auctions are becoming an accepted way of both buying and selling real property.

GEORGE S. GOLDBERG, executive vice president
The Piatelli Co.
Beverly Hills, Calif.

Urban renewal

H&H: Please accept my belated thanks for the excellent editorial [June] on urban renewal. It was most refreshing.

WILLIAM L. SLAYTON, commissioner
Urban Renewal Administration
Washington, D.C.

Erratum

Weyerhaeuser's atrium house (Sept.) was designed by Architects Elizabeth and Winston Close. H&H regrets the omission.—ED.

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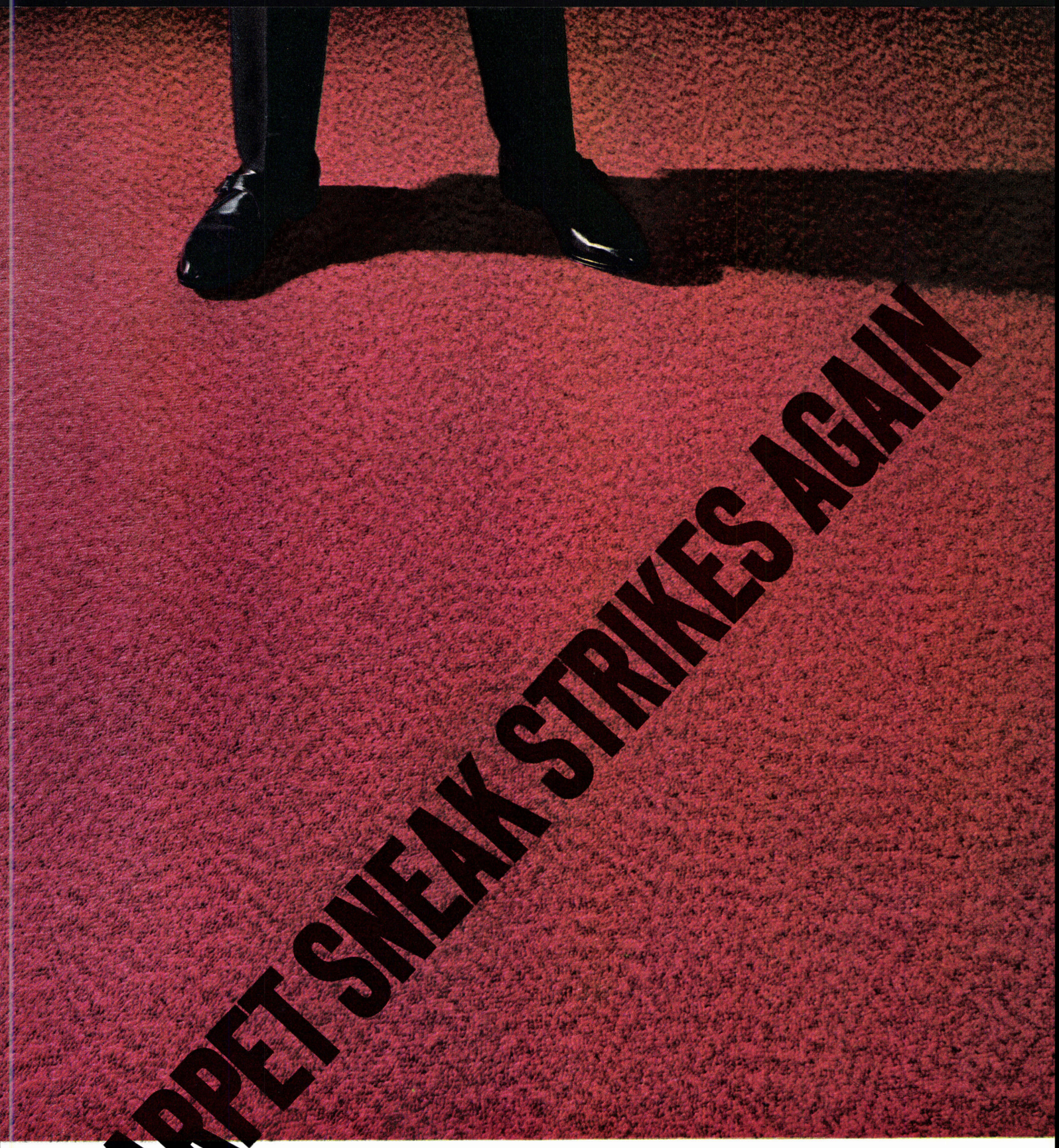

CARPET SNEAK STRIKES AGAIN

A Carpet Sneak refuses to pay the high price of really good carpet, but knows how to get it anyway: 1. Find the kind of high-priced carpet you'd like to put wall-to-wall in your homes. **2.** Then contact Trend. We'll show you the same kind of style, fiber, and color, with the same wearability and cleanability you get in high-priced carpet. **3.** Trend just costs less, that's all. **4.** If Trend's low price makes you nervous, reflect on this: Trend is a young, tough-minded company, super-automated to produce great quantities of superb carpet. Efficiency that means savings for you. **5.** Later, when a competitor sees your homes done up in Trend and says "Boy, you must have broken the bank for this carpet," cool it. A good Carpet Sneak never blabs.

The carpet shown is "Lakewood," a favorite with builders turned Carpet Sneak. Rugged carpet quality made of 100% continuous filament nylon. Double jute backing, 12 and 15 foot widths. A variation, "C-650," features high-density quarter-inch rubber backing, in 12 ft. widths. "Lakewood" and "C-650" are available in 8 great colors.

Trend Mills, Rome, Georgia

I'd like to join the growing corps of Carpet Sneaks. Send swatches and prices immediately.

Name_____

Company name_____

Your position_____

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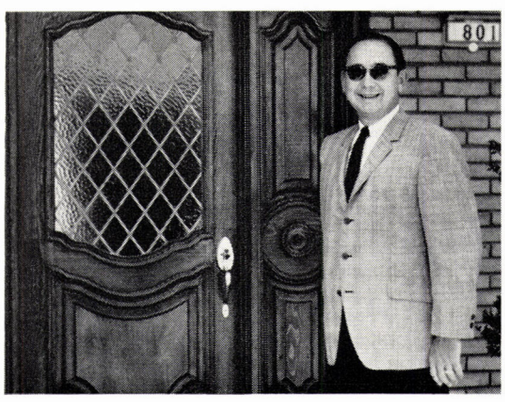
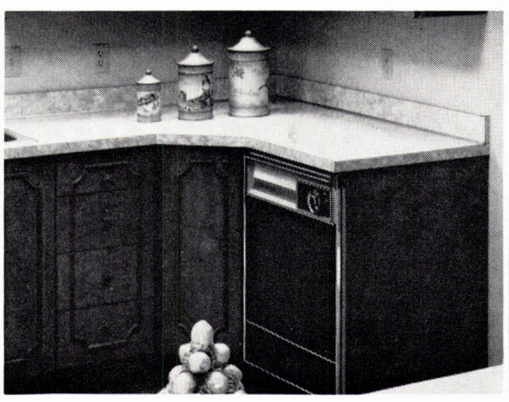
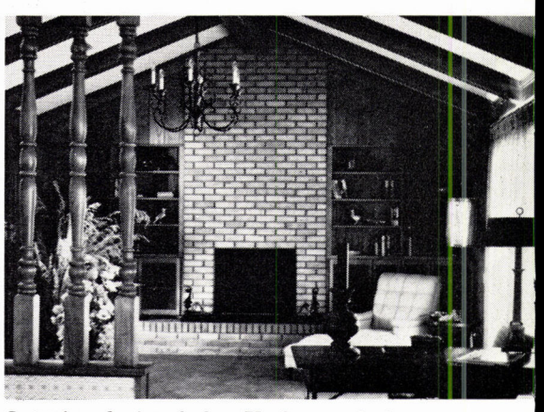
Who says Tappan appliances can help you be the biggest builder in your state? The biggest builder in Mississippi—Underwood Homes. Here's Bill Underwood with one of his best "salesmen": an amazing Tappan Electronic Cooking Center. He has used an electronic oven in his own home for several years. How can a prospect resist, when you show her how to bake a potato in four minutes?



Bill Underwood stays in first place—by design. Attractive Underwood homes are now built in five Jackson locations plus ten other communities around Mississippi.



Tappan Reversa-Jet Dishwasher builds in beautifully, enhances this distinctive Underwood kitchen. And Tappan outwashes them all with exclusive reversing spray action—gets dishes clean on all sides, even without hand-rinsing.



Interior design helps Underwood close more sales than any other Mississippi builder. Home prices range from $11,500 to $55,000, deliver top value at every level. And offer the buyer all the extra quality of Tappan Time Machines.

Tappan Electronic Cooking Center helps Underwood Homes stay on top in Mississippi

Underwood Homes adds to its competitive edge by featuring Tappan Time Machines.

"We offer the homebuyer a bigger return on his investment," says J. W. "Bill" Underwood. "More solid value in design and construction. And more convenient living because of such features as Tappan Time Machine appliances."

It's this kind of thinking that has made Underwood Homes the largest builder and developer in Mississippi.

Underwood attracts prospects with the latest innovations in modern living. The Tappan Electronic Cooking Center, for example. This totally new concept of food preparation cooks with microwave energy—cuts cooking time for the homemaker by 70%. And turns out more appetizing, nourishing meals.

And Underwood features the remarkable Tappan Reversa-Jet Dishwasher. Its automatic reversing spray arms wash in one direction, then the other—to reach hidden food other dishwashers miss.

Tappan Time Machines give you extra quality to help close more sales. Plus a big edge on competition. Choose from a wide variety of models and prices, including Tappan's new Profile Line range (gas or electric). It slips in—but looks built-in. You've never seen a range this good at prices so low. For information on the complete Tappan line of builder appliances, write to The Tappan Company, Mansfield, Ohio.

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1 **Brighten a kitchen** with the cheerful colors and fashionable lustrous texture of crystalline glazed tile walls made with a harmonizing ceramic mosaic floor. No smoke or grease can ever mar the beauty of this sunny-bright kitchen with walls of 392 Cr. Buckwheat—it wipes clean with a damp cloth. The attractive ceramic mosaic floor (P53-3191) will last forever and never needs waxing. Work-saving counter top is 98 Smoke Gray. Plate 125.

2 **Use popular earthtone colors,** such as Murray's Canyon Red quarry tile, to create a floor that blends with the rich colors of the cabinets, as in this kitchen designed by the Frank Lloyd Wright Foundation. The tiled counter and backsplash provide a crisp, clean contrast to the darker tones. Counter: Scored design SD-5, 97 Gardenia. Backsplash: Contempora J-4. Plate 153.

3 **Add design interest around the range** by using crystalline glazed scored tile with gay decorated tiles. Original treatments like this add so much sales appeal, yet can cost as little as $5 extra. And this most practical wall is a housewife's delight for it will still look new after years of service. Wall is scored design SD-1, 362 Cr. Charcoal with inserts Rooster Q-4. Counter is tiled also, with SD-1, 45 Salt & Pepper. Plate 134.

3 Ideas for kitchens that will help sell homes

Color-bright, care-free kitchens that always look new and sparkling clean do more to sell a home than any other room. Build them with walls, floors and countertops of American Olean ceramic tile . . . the best there is! For a wealth of sales-building ideas, write for our new booklet 470, "New Decorating Ideas."

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EDITORIAL

Challenge to HUD and housing

We now have all the tools to build all the housing the nation needs—and no excuse for failure

When President Johnson signed the Department of Housing and Urban Development into existence, he flung his second challenge in a month to both government and private enterprise to provide better housing for the poor.

The first challenge was the Housing Act of 1965, which supplies virtually every legislative tool needed to create better environments. The No. 1 issue in the 1965 housing bill was the issue of housing the poor. And the cleavage of opinion on that issue was dramatized by the vote, closest in Congress this year, on the bill's rent-supplements provision.

Rent supplements can in time let private enterprise eliminate the need for public housing, which for years has been paralyzed by racial problems in Northern cities.

For the most part, public housers have created ghettos. What's more, they have built far fewer units than Congress actually authorized. So Congress and the Administration, in effect, simply told the public housers: since you cannot do the job, we will remove it from your hands and give it to the housing industry.

The President's second challenge is the departmental bill creating HUD. It is no accident that a change in the department's name—from "Urban Affairs and Housing" to "Housing and Urban Development"—gave housing top billing. Better housing for the poor is the key to better environments and hence to cities with healthier citizens and lower crime rates.

In meeting this need, HUD, as a cabinet-level department, will be relatively unencumbered by the kind of legislative crisis which kept the old HHFA busy fighting bills through Congress. In a word, HUD officials can keep their minds on housing instead of succumbing to Potomac Fever—the bureaucratic disease which seizes so many government agencies.

Furthermore, the role of private enterprise is clearly spelled out in the bill creating HUD. Congress directs HUD "to encourage the maximum contributions that may be made by vigorous private homebuilding and mortgage lending industries to housing, urban development, and the national economy . . . [and] . . . to encourage private enterprise to serve as large a part of the nation's total housing and urban development needs as it can . . ."

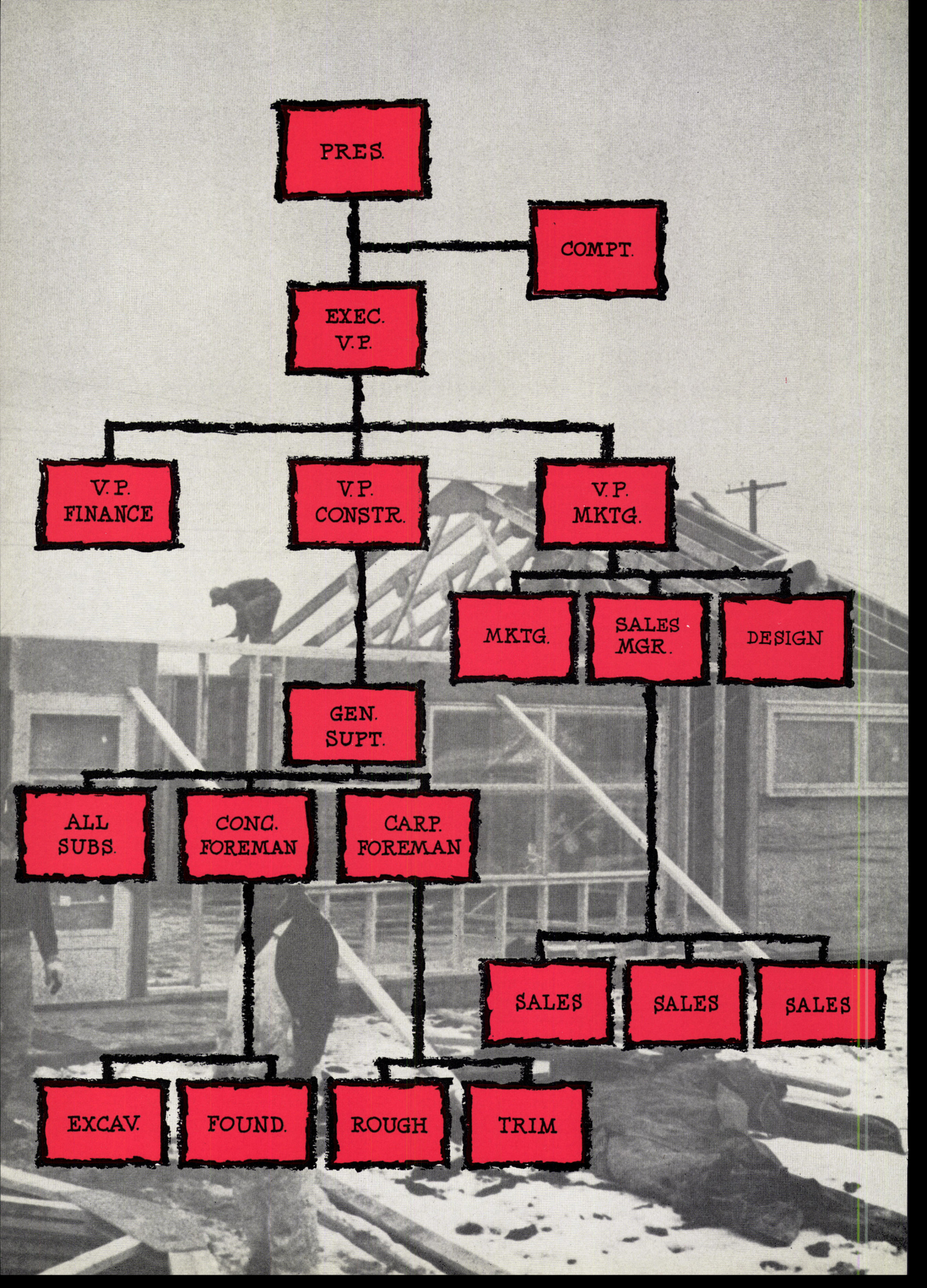
But private enterprise can do the job only if HUD *can grease the administrative wheels.* Only then will HUD have demonstrated its ability to upgrade the living conditions of the more than 15 million people now occupying substandard urban housing.

Meeting the challenge is not a matter of money. As a nation, we are prepared to spend $20 to $30 billion to get to the moon, and our national economy is now steaming along at a rate of $670 billion a year.

Our failure to provide adequate housing for the poor is purely a matter of local politics. Now, to all intents and purposes, the creation of HUD gives the federal government new muscle to halt the local political maneuvers that have blocked mass housing.

Everyone connected with housing will watch HUD's activities with interest and high expectations. Anything short of success will be an almost unforgivable failure. Anything short of success will mean that HUD is simply the old HHFA with a new name.

—RICHARD W. O'NEILL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If there's one weakness that hurts builders today, it's sloppy management or, worse yet, no management at all. On the next 16 pages you will find case study reports on the trials, tribulations and triumphs of six builders in their search for the secret of a successful business . . .

better management

Taken as a group, these six case studies point up a fact too often overlooked: the quality of a builder's management is the determining factor of his financial success and growth. Good design, land planning, construction and merchandising are all useless unless they are integrated with—and controlled by—clearly defined and efficiently run management.

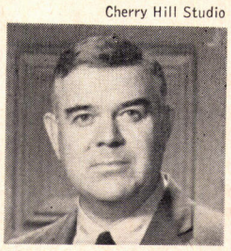
Lack of such management is the chief reason for the current high rate of attrition in the building industry. Last year, according to Dun & Bradstreet, almost 2,400 construction firms went out of business; and of these, 50% had been in existence more than five years and 25% for more than ten years.

Taken individually, the case studies illustrate another important fact: there are no exact formulas for good management. Just how a builder should run his company depends on his own talents, weaknesses and personality as well as on the size of his operation and the character of his market. And since homebuilders are notorious for their strong individuality, it follows that their management systems must be equally individual.

But while there are no exact formulas, there are principles on which every efficient management system must be based. The case studies were selected because they illustrate some of the most important of these principles. Furthermore, the studies show—in terms that will be unpleasantly familiar to many builders—the symptoms that can arise when these principles are not followed.

The first case study begins on the following page.

Cherry Hill Studio



JOSEPH LENNY

better management 1

Organization: the smaller builder's key to growth

Builder Joseph P. Lenny of Cherry Hill, N.J., learned the importance of organization the hard way. He tried to grow without a clear system of management—and fell flat on his face. Not until he restructured his company from top to bottom was he able to start moving—and growing.

For most of his 17 years of homebuilding, Lenny, like most smaller builders, ran a one-man show. By scrambling and working seven days a week he managed to reach an annual volume of 50 project houses (priced from $13,000 to $15,000). Then, realizing his dollar volume had reached its limit in this market, he decided to shift to a higher price range: semi-custom houses priced from $40,000 up. He bought 300 acres of prime land, sold out two half-completed projects, and began.

"As soon as I started," says Lenny, "I knew I was in trouble." The complexities of the new operation—particularly the dozens of changes required in each house—paralyzed the simple one-man organization. Lenny had added four men to his staff, but the only result was more chaos—and no growth.

Faced with an impossible situation, Lenny brought in a management consultant who reorganized the company from top to bottom. When he finished, Lenny was head of an efficient five-man staff that had built and sold 20 houses and had 16 more under way. Profits were up despite the cost of a bigger staff, and Lenny feels he can double his dollar volume next year.

Builder Lenny's goal: to top his $700,000 ceiling in annual sales

Lenny reached this ceiling in 1960. Working with a two-man management team (himself and a field superintendent) he built and sold 50 project houses priced from $13,000 to $15,000. And to maintain his four starts a month, he had to struggle with operating problems and fight through an endless string of seven-day work weeks.

But Lenny, a long-time builder (he started as a prefabber in 1948), was not satisfied with his $700,000 annual volume. During the next four years he made two unsuccessful attempts to increase his gross income—and his profits:

Lenny's first growth attempt was gradually to raise the price range of his houses, and so boost his dollar volume without increasing the number of starts. By 1963 he was offering models at up to $21,000 in two projects and selling a few $35,000 custom houses in a third.

Result: no growth. Despite the higher prices, Lenny's gross sales remained close to $700,000.

Why he failed the first time: higher prices forced him to cut his volume

As they moved up in price, Lenny found that his houses became more complex to build and sell—and thus put heavier demands on his time. Specifically:

1. He had to spend more time with customers who demanded more personal attention and more changes in basic models.

2. He had to spend more time in the field because his subcontractors and even his superintendent (later replaced) resisted the higher quality expected by buyers of higher-priced houses. Furthermore, with so much pressure on his time, Lenny could not shake himself free to scout out and buy land.

Lenny's second growth attempt was to jump to a much higher price range. He decided to concentrate on semi-custom houses and set a sales target of 40 houses a year in the $40,000 class.

Three market factors helped Lenny reach this decision:

1. Local demand for lower- and middle-price houses was shrinking, while . . .

2. Demand for expensive houses was growing. This demand showed up in a market survey, which also revealed a surprising lack of competition for upper-income buyers.

3. Lenny already had an ideal site for upper-price houses: Fox Hollow Woods, a rolling, wooded 300-acre tract in Cherry Hills, N.J., only 20 minutes from Philadelphia. Lenny had already built and sold 16 over-$35,000 houses there and he felt that its potential was limited only by his ability to produce. So at the end of 1963, he sold out the land in his other two half-finished projects and concentrated on Fox Hollow Woods.

This time, however, Lenny realized that he couldn't do the job by himself. So he bolstered his staff, adding a general manager, a sales and marketing manager and a project engineer.

Result: in 1964, Lenny's volume soared to more than $1 million. But his profit barely budged. And, even more important, he hit another ceiling: 30 houses a year—10 short of his target.

Why he failed the second time: he still ran a one-man show

So, although he had increased his staff (and his overhead), he had no real organization. As a result:

His staff was ineffectual. Duties often overlapped, and responsibility and authority were not clearly defined. Lenny's staff people, through no fault of their own, were getting in each other's way and in his way.

He was still bogged down in detail because he had neither a firm building schedule nor systematic, written procedures for handling such matters as purchasing, custom changes, inspections and callbacks. Everything was being done on the spur of the moment and with the inevitable results: a breakdown in staff communications and a lack of over-all control.

What's more, this damaging informality affected everyone it touched. Buyers were allowed to vacillate over minor changes—tile colors, for example—even when their indecision delayed construction. Subcontractors told Lenny when they would arrive on the job and how much

time they would take instead of the other way around. And even suppliers adopted a relaxed attitude because they had come to realize that delivery deadlines were never firm.

Lenny was alarmed by the gravity of his problems—so alarmed, in fact, that he was ready to quit business unless he could solve them. But, he says quite frankly, the solutions were beyond him.

For help, he turned to an old friend, Management Consultant Paul G. Gill, of Stony Brook, N.Y. Gill had little previous experience in housing—for the past ten years he had worked with electronics and ship-building corporations—but in frequent informal talks with Lenny, Gill had quickly grasped the builder's management problems.

Gill spent three months—and 15 hours a day—studying Lenny's operation. The upshot: recommendations that finally started Lenny growing.

Why he succeeded: he finally organized every phase of his company

The first major job was to organize the staff. Out of this came:

1. An organization chart that clarifies lines of authority. A general manager, Alfred Masullo, reports to Lenny, and four departmental managers—project engineering, construction, marketing and finance—report to Masullo.

2. Detailed descriptions of each staffman's duties, responsibilities, authority and relations with other staffers. These job descriptions are included in a 50-page management handbook prepared by Gill.

This arrangement frees Lenny from most day-to-day problems and lets him concentrate on policy making and long-range planning—particularly land acquisition.

The second major job was to organize procedures and controls. Out of this came written procedures and control charts and forms, which are also included in the management manual. Two examples:

1. *A wall-size scheduling chart* (copyrighted by Gill) that shows deadlines for every step in the sale, financing and construction of each house. For example, it shows not only when each construction job must be finished, but also due dates for deliveries from suppliers, customers' down payments and payments to suppliers and subcontractors. And keeping the chart up to date takes only five minutes a day.

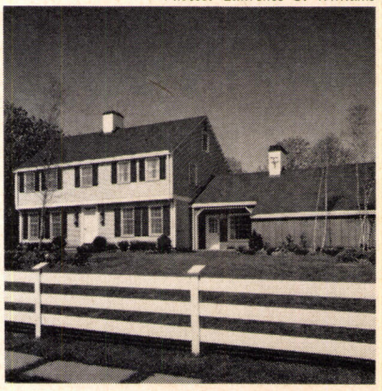
The chart has let Lenny put every house on a firm 77-day construction schedule, no matter how many custom changes must be made. Because it calls for advance planning, it has permitted economical bulk-purchasing of materials. And it has put pressure on suppliers and subs: suppliers know that delivery deadlines are inviolate, and subs know exactly when they are due on the job and when they must be finished. They perform well because Lenny's long-range planning now assures them of steady work and helps them plan their own operations.

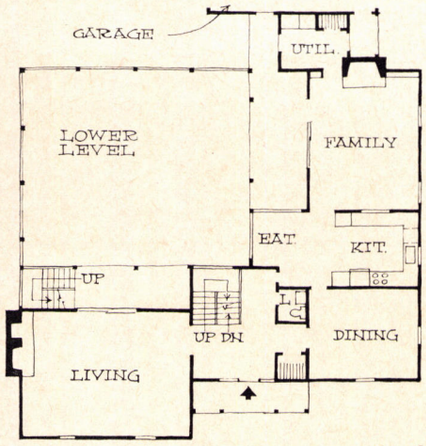
2. *Streamlined custom-change procedures.* Buyers are given deadlines for ordering changes and selecting materials and colors, and every change is entered on a "customer selection" form. If a buyer hasn't met the deadline for choosing, say, the color of interior woodwork, "white" is written into the contract. Currently, nearly 90% of changes are ordered before construction starts.

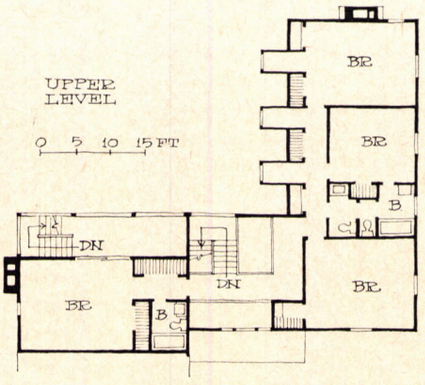
Results: this year Lenny's volume will hit about $1.5 million

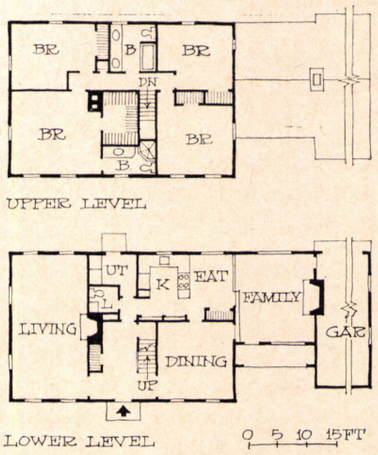
Lenny started acting on Gill's recommendations last February and didn't finish until September, but already the benefits are apparent. By the end of this year he will have sold 36 houses averaging $42,000. And next year he expects a minimum of 48 sales for a volume of more than $2 million.

Photos: Lawrence S. Williams









LENNY'S MODELS include a $65,000 home *(left)* with a two-story window wall at its front entrance and a colonial *(right)* with four bedrooms priced at $42,000. Other semi-custom models begin at $38,000. The architect is William Thompson.

continued

better management 2

JOHN MINCHEW

Delegating responsibility: how much and how fast?

*This question has dogged John Minchew since he started full-time building in the Washington, D.C., market in 1959. Despite a growth record that most builders would envy (*chart, right*), Minchew admits that his failure to delegate properly put his operation into the red once, and threatened to do it a second time.*

Ironically, success produced the first crisis. In 1962 Minchew Corp. opened a 98-unit subdivision of $30,000-and-over houses in Mt. Vernon, Va. Sales soared and so did trouble; by the time he reached the $1 million mark (Minchew, a former airline pilot, calls it his sound barrier), gross margins had fallen from 21% to 7% and profits had disappeared.

"I underdelegated," says Minchew. "I had hired good men, but I pushed things off on them without any system, and I completely lost control of the business."

Faced with both a losing operation and the opening of a new subdivision (Camelot, a 300-house community in Annandale, Va.), Minchew took his company apart and put it back together again, with special attention to delegating. He drew up formal organization charts, prepared elaborate job descriptions and instituted reporting procedures. Eighteen months after it dropped into the red, Minchew Corp. was again earning money at its 1959 rate.

Minchew's second crisis grew out of his handling of the first: he had overdelegated. Early this year he discovered that despite good profits, his organization was making far too many expensive mistakes. Fearing a repetition of his 1962 losses, Minchew grabbed back much of the authority he had given up. "Perhaps, I reacted too quickly again," he says. "But when there's a fire you act fast."

Minchew knows he must return to a delegated operation. And this time—based on the experiences detailed below—he expects it to work.

Lack of defined responsibility created Minchew's first crisis

On the surface, Minchew Corp. was booming along: between 1961 and 1962, sales rose from about $850,000 to almost $1.5 million. But there were signs of danger. Buyers started complaining about construction, causing service costs to rise $400 per house. Houses were not finished on time. Subs began to complain about errors in the field. Financing costs rose. The company missed cash discounts for the first time. Minchew found himself okaying custom changes that turned out to be costing him money. On one model alone, a split-foyer, lumber costs rose from $1,800 to $2,700. (Part of this increase, Minchew discovered later, was caused by a subcontractor who started using Minchew's lumber to build scaffolding.)

Unfortunately the significance of all these warnings disappeared into the company's primitive accounting system. "Like most small builders, we charged all our costs to the pot," says Minchew. "We had no way of allocating costs to individual houses." It was not until he was deep into 1963 that he discovered that his direct construction costs for the previous year had risen $517,000—nullifying a $509,000 increase in sales.

Main reason for Minchew's losses: he had failed to build an organization.

"I was the works," says he. "I was my own sales manager and my own general superintendent. When I found I couldn't do everything myself, I pushed jobs off with no system. I had been signing checks; I let my accountant do it. I gave the job of handling customer complaints to my superintendent. I hired an agency to take over my sales. I hired a man to do my purchasing. In the field, I just juggled men around, leaving houses sit here to put out fires over there."

Most important, Minchew set up no clear areas of responsibility for his men. He established no procedures for reporting, no standards for measuring performance. When a man fell down on the job, Minchew could not reprimand him justifiably. "When you haven't given a man sufficient instruction to do a job, you can't blame him when he muffs it."

Through all of this frantic period, Minchew had no trouble with sales; in fact, he was continually sold out ahead of production. But even this caused problems. Salesmen let inventory houses sit unsold because it was easier to presell houses even as much as a year in advance of production. This cost money because the prices of the presold houses could not be adjusted later to reflect rising costs.

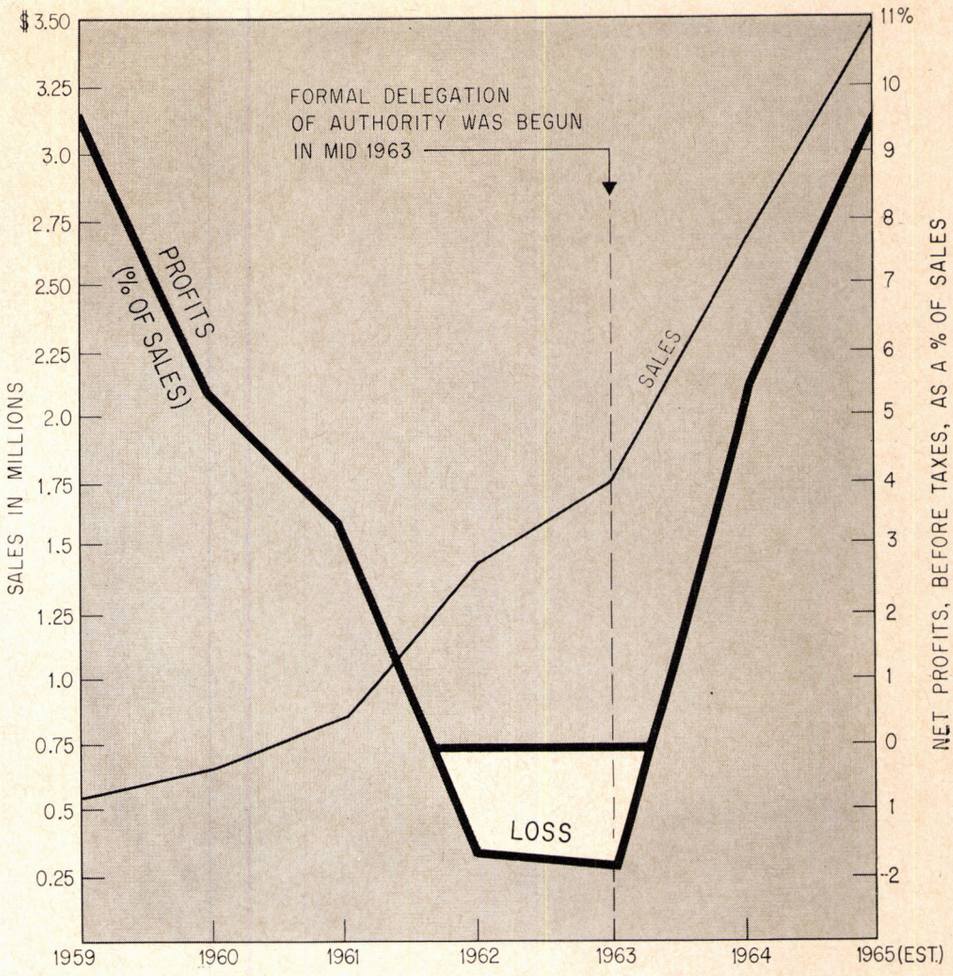
"Maybe what happened to us happens to all builders," Minchew says. "Once you pass $1 million in sales you go through a change of life, in a way. You become a different company. You've got to begin building a formal organization."

Answer to the crisis: broad delegation of authority

Minchew's first step was to examine his own aims. He analyzed why he had entered homebuilding. He set down goals and frankly compared them with his abilities and failings. Then he transcribed his personal goals into company goals, aiming the company toward a long-range sales goal of $10 million and a net profit of 8% (before taxes).

His next step was to bring his men into the reorganization process. He asked them to describe their jobs and to suggest where they would fit best into the company. He urged them to volunteer changes. He sought out subcontractors and asked for suggestions. He went to other builders and to NAHB for advice.

Finally Minchew distilled all his findings into a trial organizational chart, passed it around to his men, pored over their comments, then revised the chart.



PROFIT PICTURE shows results of Minchew's reorganization in 1963. After falling from 9.6% of sales in 1959 to a loss of 1.8%, profits revived after the reorganization and, this year, are expected to return to 9.6%. Sales during this entire period kept rising.

The company that emerged from this reorganization process was built of four main blocks:

1. Minchew functioned as president, but delegated all major areas of responsibility to others. He hired a secretary whose job it was to "float through the company, and reroute any questions that come to my desk which someone else can handle."

2. The accounting department, headed by Comptroller Dick Cottingham, 38, supervised bookkeeping, accounting and office personnel. Cottingham began putting together a lot-by-lot accounting system that promised to warn Minchew quickly when costs started getting out of line.

3. The marketing department handled all sales (Minchew had dropped his outside agency), advertising and marketing research. It is headed by Marketing Vice President Craven Hughes, 38.

4. The production department handled not only Minchew's own crews and subcontractors (Minchew was in the process of changing from a 30% to a 70% subcontracted operation), but also purchasing, materials inventory and customer service.

Jim Wilkenson, 31, an engineer who had worked on NAHB's TAMAP project, was made director of production. Between Wilkenson and the field, Minchew set up three layers of supervision: a general superintendent, a construction superintendent and a labor foreman.

Wilkenson applied his TAMAP experience to smoothing out the production schedule and was soon able to give buyers exact move-in dates. He also convinced Minchew to get better control over his biggest area of cost—materials—by taking advantage of volume discounts and building a bigger materials inventory. Minchew agreed and assigned Wilkenson two men—purchasing agent who worked in the main office and a worker who received deliveries in the field.

This reorganization left Minchew with time to plan the company's future. He studied new accounting systems, looked around for opportunities in townhouses and shopping centers and scouted his market for choice land. He even had time to become president of his local home builder's association.

Meanwhile, Minchew kept in touch with his departments by calling for reports.

From Comptroller Cottingham, he asked for annual forecasts every January 15. Each quarter brought reports on cash flow, break-even rates, profits, costs and sources and applications of funds. And by the 15th of every month, he wanted reports of job-cost deviations from budget, profit and implementation of schedules.

From Marketing Vice President Hughes, Minchew asked for an annual sales forecast (to be turned in two weeks before Cottingham's forecast), quarterly and weekly reports on sales and a weekly report on buyer preferences.

From Production Director Wilkenson, Minchew asked for monthly status reports on production progress, schedule problems (and action taken), customer move-ins and cost control. He also asked Wilkenson to keep him informed on any and all production problems as they cropped up.

These steps brought results: profits reappeared after two years of losses.

Direct construction costs peaked at 77% of sales in 1963, then fell back to 67% in 1964. In 1964, net profit climbed to 5½% of sales and continued climbing in 1965. Sales kept climbing, too, from $1.5 million in 1962 to $1.8 million in 1963 and $2.7 million in 1964. This year, Michew expects sales to reach $3.5 million on about 90 houses.

Overdelegation brought new problems —and threat of another crisis

The organization that Minchew set up in 1963 had, in 18 months, completely pulled the company out of recession. But early in 1965, Minchew suddenly dis-

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EVENING MEETING of the production department is attended by Minchew, right, Production Director Wilkenson, center, and the production staff. The group listens to a subcontractor who was invited to the meeting to comment on procedures in the field. Minchew attends these meetings regularly now to keep abreast of construction problems.

covered that the company was on the verge of another crisis. Particularly alarming were these production problems:

General labor costs began to rise.

Laborers, who now did only 15% of all construction work, began to blend into the busy construction scene, making it difficult to supervise them. Eventually, Minchew and Wilkenson discovered that their laborers were doing clean-up work that was subcontractor responsibility.

Inventory control got out of hand.

Jim Wilkenson explains: "When new material was needed, no one checked our storage. As a result, we often ordered material when we didn't need it. And nobody bothered to tell purchasing when a design was changed. Even if the change cut down on materials, we went ahead and ordered the full batch anyway. And when we found ourselves with extra material no one bothered to see that it was used somewhere else."

Another problem: lost materials were being traced too slowly, partly because purchasing and receiving were divided between two men, one at the main office and one in the field, and partly because of an accounting error: estimates were being used to calculate actual material allocations. For example, if a job was half completed, it was assumed that it had received half of its estimated materials. But often the estimates did not coincide with actual needs. The upshot of this problem: a $5,000 shortage was discovered in materials inventory.

A new lumber delivery system failed to work out.

"During 1963, we tried to switch over from bulk delivery to per-lot delivery, to get better control of our lumber," says Minchew. "But you can't tackle a change in procedure like this when you're putting your whole management system into shape. Nobody thought it would work. We built up excuses: that the lumber yards would not give us the right amounts of lumber, that there would be no convenient place to stack the lumber when it arrived, that it would threaten the trees we were trying to save." The result: Minchew was forced to back away from per-lot delivery, at least temporarily.

Subcontractor bids on new contracts jumped way up. Aluminum siding bids rose from 39¢ per sq. ft. to 44¢. Plumbing bids rose $50 a house and bricklaying went up $250 per house.

Danger signs emerged in other areas. The accounting department fell behind in its monthly reports. Sales kept rising, but it took 15 interviews to make a sale now, twice as many as before. And Minchew noticed that the sales staff had become smug about its success and complacent in the face of new competition.

Finally, Minchew detected an increase of politicking among his men, and a lack of cooperation between departments. "Everyone took satisfaction in my chewing out somebody else."

Minchew's concern over these danger signals came to a head during a visit of Business Consultant Lee Evans (of Denver University) early this year. Minchew had invited Evans (whom he met at an NAHB seminar) to help him with financial planning. But, as Evans began uncovering problems throughout the company, his visit developed into a week-long audit.

None of Evans' or Minchew's findings spelled disaster, but they did indicate serious shortcomings in the company's organizational structure. So rather than risk a second crisis, Minchew, in effect, declared an emergency.

To head off the crisis, Minchew reassumed direct authority

He reasoned that he had tried to build his organization too quickly, delegating responsibility to men who not only had to adjust to their new jobs but had to cope with the problem of setting up new departments as well.

His first step was to order a special Saturday meeting of the entire staff: "I told them I wanted them to come in on their time—not mine. I shook their security a little. I told them the politics had to stop or the politicians would be removed. I announced that I wanted 50 ideas from everybody on how to improve his department—and I wanted those ideas in two weeks."

Then he moved back into every department, often bypassing department heads to get at problems directly.

The results came fast: the sales inter-

view ratio fell from one sale out of 15 interviews to one out of four. The sales manager was freed to spend 80% of his time on selling, instead of being tied up on non-productive detail. Lumber delivery was put on a per-lot basis, and a man was assigned to make certain that lumber packages were correct and were delivered on time. Materials purchasing and receiving were revamped. The central office employee charged with purchasing was shifted to the field, where he also checked delivery. Bulk purchasing was taken out of his hands and delegated to the director of production. Minchew, meanwhile, insisted on making final decisions on prices paid for materials.

Field labor costs were sliced by pinning numbered white buttons on all laborers (so they stood out in the field), by raising wages 25¢ a hour to attract better men, by assigning men to smaller work groups for closer supervision and by forcing back on subcontractors their clean-up duties.

Minchew took personal charge of all subcontractor renegotiation and began rolling back inflated bids. He brought aluminum siding down from 44¢ per sq. ft. to 41¢, eliminated the $50 per-house increase in plumbing contracts and sliced $220 from the $250 rise in bricklaying.

Most of these savings resulted from Minchew's negotiating with the particular subcontractors he wanted on the job, rather than relying on competitive bidding.

These emergency tactics quickly snuffed out the threat to the company's profits. But Minchew fears that his abrupt tactics may have disheartened his managers, and he knows that one of his first reorganizing concerns must be to restore their confidence.

For the future: a management system based on checks and balances

Minchew plans eventually to return the department reins to his managers. But this time he will take steps to guard against overdelegation. Specifically:

He will delegate responsibility more slowly, perhaps giving his men staff authority over new jobs before assigning them line authority. "I learned that when you give a man a job you don't give up your own responsibility for it," says Minchew. "You must stay one step ahead of him, anticipating his problems, guiding him."

He will insist on seeing the negative side of operations as well as the positive, and he will urge his managers to take greater pains to explain exceptions from standards in their reports. "Most of the reports I got were cold statistical sorts of things. You might say I got a weather report when I wanted a discussion of trends."

He will shorten the chain of command in the production department, so he can keep in closer touch with the field.

He will broaden areas of responsibility of each department, so they overlap to a degree. And he will build in procedures by which one department automatically checks on another.

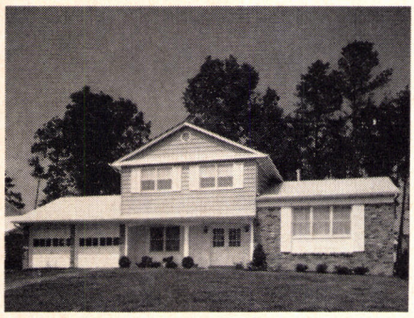
He will give individual men specific jobs, free of overlap, so their performance can be isolated and measured. "Our hardest job as builders is knowing when a man can absorb all the responsibility you want to give him. We need better ways to measure him."

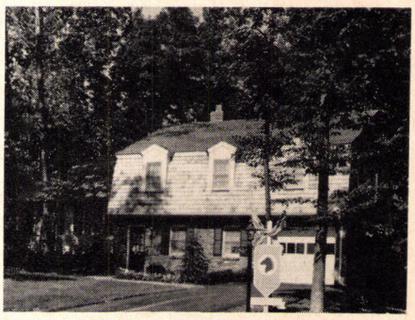
He will continue his frequent and unannounced visits to his men. "The best way to get to know what your people are doing," says Minchew, "is to prop up against a desk somewhere and have a talk."

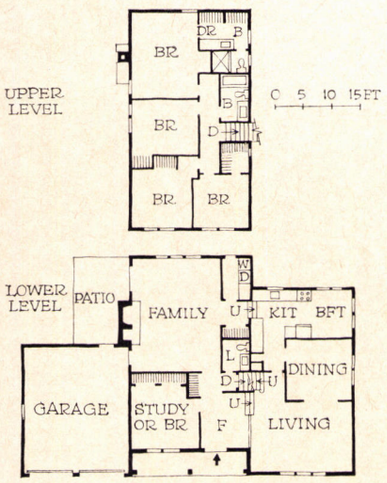
He will make final decisions in subcontractor negotiation and materials purchasing. "I don't think I'll give these up again. They're just too close to the heart of this operation."

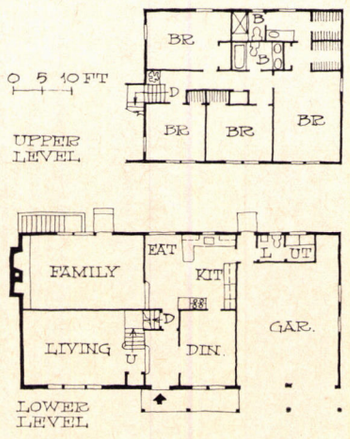
Minchew hopes these steps will help him pass through what Evans considers a critical point which confronts most builders when they reach 50 to 100 houses a year. In this range, says Evans, builders so expand their organizations that sales are unable to keep pace with rising overhead. What's more, they are grappling with an organization that is new to them and to the industry.

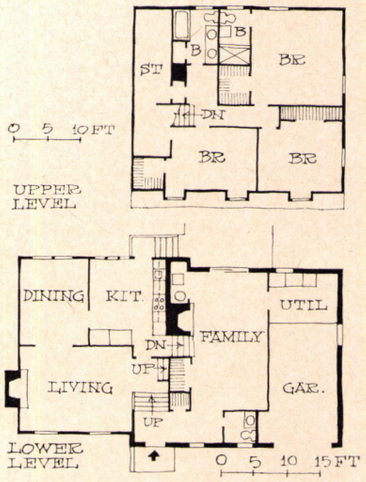
Photos: Warren Ballard











MINCHEW'S MODELS include a five-bedroom, three-bath house for $39,700 (*left*); a four-bedroom two-story (*center*) with three baths at $38,150; and a four-bedroom colonial for $35,905 (*right*), which expands to five bedrooms plus a two-car garage, for $38,400.

continued

better management 3

MATT JETTON

Clear communicating: key to avoiding costly mistakes

And the more complex the building operation, the greater the need for mistake-free communications. Failure to heed that lesson threatened the survival of Sunstate Builders, Tampa, Fla., until a group of industrial engineers came in and straightened things out.

For five years Sunstate had been building a hundred one-of-a-kind houses a year, winning national design awards—and moving ever closer to a crisis. Change orders, rework and delays were getting beyond control. Late completions had mounted to the point where buyers were living in motel rooms as well as courtesy houses. And profits were plummeting.

But President Matt Jetton was not about to abandon custom building. Dollar volume was high—$3 million on 90 houses a year. And in the past five years he has found custom volume immune to general building slumps. So last year Jetton called in Stanley Management Services, a division of The Stanley Works, to find a way to make his operation work.

It took four Stanley men two weeks to realize that the basic trouble was poor communications within and between the design, production and cost accounting departments. So they recommended a few staff changes plus a lot of paperwork. Jetton acted on the recommendations and got these results: 1) change orders were cut in half; 2) more than 90% of rework was eliminated; 3) profits stopped falling, started rising (up 3% after the first nine months).

Exactly what was done—the problems discovered and how they were solved—is highlighted below.

Problem: buyers who couldn't make up their minds kept stopping jobs

Sunstate's first communication breakdown came right at the beginning of each house sale—in preconstruction planning.

Customers were not pinned down on every single plan detail and product choice. Result: delays and rework later on during construction.

And in an operation like Sunstate's, there are plenty of details and choices. Customers can put together any kind of house their money can buy—they use Sunstate's model homes (four new ones will be opened in December) and its extensive product selection room only as idea sources. To compound the problem, they can add or substitute products and finishes at any time while the house is being built.

Until last year, Sunstate carried a six-man architectural staff to accommodate custom buyers. These architects sometimes prepared ten complete preliminary drawings before arriving at one the customer liked—and could afford. And if the customer couldn't decide on a product—kitchen countertops, for example—he was allowed to put off his decision until the construction schedule absolutely demanded it. Unfortunately, at the last minute the customer sometimes decided on, say, post-formed countertops, which take five weeks to deliver, and production came to a halt.

Solution: a faster pricing system, strict deadlines for buyers' options and a single design manager.

Sunstate dissolved the architectural staff and now farms out new plans to four independent architects. In the staff's place, following the Stanley consultants' recommendations, is a new design manager who can be counted on to have a sympathetic understanding of production problems: he is Sunstate's former production manager, the man who suffered most under the old system.

An interior designer was retained to concentrate on overseeing customers' selections of colors, finishes and fixtures. And meticulously detailed order forms were worked out to keep track of the selections.

A new specification form was drawn up to 1) eliminate omissions in plans, products and finishes, 2) make the pricing of houses faster and more accurate, 3) simplify materials takeoffs, 4) avoid discrepancies between working drawings and the specification sheet and 5) help architects make working drawings that are complete and accurate. The form works in combination with a newly developed retail pricing system based on unit costs for all material and labor categories, and on standardized construction details (*see below*). With this system, the design manager can produce a pricing sheet in about 1½ hours.

A special revision form was devised to keep track of changes ordered by the customer during the preparation of working drawings and specifications. It permits an immediate revision of the sale price accompanied by a breakdown of the charges and credits responsible, so there is never any doubt of whether the customer is over or under his budget.

In addition to the forms, the design manager has other ways to control the job at the planning stage. He interviews each customer in depth before any preliminary drawings are made. He works closely with the production department, checking out the problems and extra costs caused by customers' special construction requests and forewarning the customer of the extra time they may take.

Now, instead of running through ten preliminary drawings, the new design department usually gets the customer's approval on the first or second. And when the final specifications go to the production department, there is a minimum of omissions to come back and haunt the construction crews a few weeks later.

Problem: supers didn't see plan errors until construction started

Even though each new Sunstate house presents a different set of problems, job supervisors used to be given the plans with so little lead time that the problems had to be worked out on the job. Confusion about plans was a source of delays and rework.

Tommy Eure

DAILY REPORT from Sunstate's supervisors updates production control board at the end of each working day. General manager Herb Pearce inks out completed work stages, house by house, on CPM-type schedule strips. Each super has his own ink color to identify the houses he is responsible for. Vertical bar (at right) advances with day of week.

Solution: supervisors now review all plans in writing before construction is even scheduled.

While a house plan is out for bank approval, one of three job supervisors gets a copy along with the specification sheet. He studies both, using a preprinted checklist to make sure no structural or finish item has been omitted. He also looks for unusual construction problems.

With the completed checklist in hand, the super meets with the design manager and discusses the plan. He points out omissions and may suggest further detailing of special or complicated features.

Another important subject in the discussion between super and design manager is the customer's personality. What kind of problems is he likely to cause? Does he expect to be consulted on every detail during construction? What aspects of the house is he especially concerned about? This lets the super anticipate trouble and prepare ways to cope with it.

Sunstate's job supers each oversee about nine houses at a time. In the new reorganization process, the three men are being upgraded, through training and delegating, to a much higher level of responsibility than they held under the old Sunstate organization. They are now preparing sections of the estimating takeoffs and, with further training, will eventually do complete takeoffs.

A new system will make it easy for management to shift quantity and cost estimating to the supervisors. A pre-priced estimating sheet is being developed in the production and design departments. By continually comparing estimated job costs with final costs, Sunstate hopes to refine its materials and labor rates to the point where costs will never deviate more than 1% or 2% from the estimating sheet.

Problem: informal progress reports hid job troubles until too late

One of the first things the Stanley industrial engineers noticed about Sunstate was the loose way construction schedules were maintained. Job progress was not reported completely or consistently on a day-to-day basis. Problems that should have been foreseen arose unexpectedly.

Construction schedules were not always realistic because the production department did not allot enough extra time for special features or complicated details. And when a job began to lag, materials ordering could easily get out of phase.

Solution: a highly visual production control board that is kept realistic in two ways —1) house schedules are set up with the advice of the job supervisor and 2) they are reviewed and updated every 24 hours.

Production schedules for each house are printed on a strip of paper about a yard long and placed in a horizontal metal channel on a wall-high board. The board contains some 50 channels, one above the other. A full-length vertical bar, suspended from the top, indicates the day of the week.

The schedule strips are patterned after the Critical Path Method. They contain some 90 construction steps, and the critical steps are circled in red. As each operation is completed, the production manager crosses it out with a broad ink marker. Each of the three supervisors uses a different color. The line extends farther

continued

across the strip as the house progresses and, hopefully, keeps up with the vertical indicator which is moved ahead a notch each day. Late houses show up at a glance and the color of the ink line identifies the supers responsible. A closer look reveals which jobs have not been completed and the exact number of days the house is behind schedule.

Materials and labor ordering can no longer get out of phase. Ordering points are keyed right into the schedule strip—with alphabetical letters for subcontractors and numbers for materials—three days in advance of need. This gives suppliers two days notice to deliver materials the day before they are to be used. Each materials ordering point is clarified by a materials checklist displayed on the wall beside the control board. A new schedule is placed on the board with three days lead time, and ordering begins immediately.

Inspection points are also indicated on the schedule. A supervisor signifies he has completed an inspection by writing in his initials.

The job supervisor and the production control manager make up the house schedule together. The super has completed his review of the plan and is familiar with all the factors that will affect the job, so he knows where to allow extra time. After construction starts, however, it is up to the production manager to order subs and materials and to maintain the schedule.

Every afternoon at about 4:30 the supers meet at the control board and bring the production manager up to date. This meeting uncovers problems on the day they occur so staff managers can act on them at once.

A typewritten master control chart, prepared weekly, breaks down the progress of each house into phases *(see below)*. Status of each work step is indicated, and completion dates are written in for uncompleted steps. The chart is mimeographed and distributed to supers, foremen and staff managers to help them plan the following week's work.

Problem: production control never knew the exact status of any job

When it came to job inspections, Sunstate had somehow given the same job to two different men. A foreman would look over the work at various stages and either pass on his findings verbally or wait until somebody asked. But rather than ask or wait to be told, the production manager would drive out to the job and check for himself. Neither man followed a strict inspection schedule or submitted periodic reports.

The upshot was daily confusion. Painters would be sent to jobs before the drywall was finished. Customers would discover omissions and errors requiring rework—electrical outlets in the wrong places, for example—that occurred because no one had asked them for an okay at a critical construction stage. A customer's change order would require a trip or phone call to the job site to find out exactly what the change would involve.

Solution: 11 formal inspection reports filled out by the super at critical construction stages and turned into the production manager. And these reports are taken seriously; no materials or labor may be ordered for an upcoming stage of construction until the okayed report on the just-completed stage is in the manager's hands.

Also important: three of the inspections are made with the customer. For example, the customer inspects electrical outlets and telephone locations before the drywall is applied and inspects his lawn sprinkler system before final grading and construction of the driveway.

The direct result—and it came about within the first few months after the reports were put into use—has been the virtual elimination of construction rework and delays.

Sunstate divides construction into three phases. Phase I is from house start up to and including lintel pouring; Phase II from lintel completion up to but not including drywall; and Phase III from drywall application to house completion. (Individual house schedules are staggered accordingly on the control board.)

At first, inspection checklists were drawn up for only the three phases. But as their effectiveness in exposing undone work became obvious, Sunstate began adding more inspections at more frequent intervals. Now the inspection points are: 1) layout (with customer); 2) Phase I; 3) pre-frame; 4) pre-drywall (by super); 5) pre-drywall (with customer); 6) pre-paint prime, exterior; 7) pre-paint prime, interior; 8) pre-paint finish, interior; 9) pre-paint finish, exterior; 10) Phase III; 11) final inspection (with customer).

If construction is delayed despite the inspection controls, Sunstate now demands a written explanation on a special construction delay form. This pinpoints the cause, helps prevent future delays and lets Sunstate charge the extra cost to the right source.

Problem: extra costs got buried, and accounting had to trace them back

Change orders continually drained Sunstate's profits. An order would reach a construction site, but the additional cost—and hence the revised price—would not necessarily reach the cost accounting department because there was no strictly enforced procedure for getting it there.

Example: a Sunstate architect decided to enlarge a footing under a house after the plans had been submitted for pricing. This meant increasing the original footing 4″ in width and 2″ in depth, but the change was considered insignificant and was not called to anyone's attention. Thus the original price estimate remained unchanged. Fortunately, the increase in concrete cost showed up in the final comparison of actual costs with estimates, but it took some time to trace it back to the source.

Accurate and complete cost records are essential not just to Sunstate's profit picture but also to the new unit-cost estimating system the company is trying to develop. If the reasons for estimate discrepancies cannot be identified, the accuracy of unit costs cannot be verified.

Solution: a formal change-order procedure. Every change—regardless of how little its size or cost—is now ordered in writing, and carbon copies are sent to all departments involved.

To help cost accounting attribute all costs to the right source, Stanley advised a more detailed code breakdown for identifying types of labor and materials. All subcontractor operations, for example, have a number in the 400 series: masonry, 401; plumbing, 402; roofing, 403, etc. All items that fall under masonry—lintels, stone walls, block walls, brick walls and the others—carry the 401 number, all plumbing items carry the 402 number, etc. Whenever a cost is reported or an estimate made, it is submitted with the number of the category involved.

To keep the staff cost conscious, copies of final-cost reports are circulated among managers at the close of each house. Attention is called to estimates that were off the mark and to extra costs resulting from rework.

Problem: suggestions from the field weren't communicated to the staff

One of Sunstate's biggest needs was better cost control at the construction site, yet one of the best sources of advice was virtually ignored. If a foreman or supervisor had a suggestion—or a complaint—he would pass it along verbally to the next higher ranking man. There was no certainty that the suggestion would be acted on—or even considered.

Solution: a memo form, a suggestion box and a formal procedure for reviewing suggestions. Sunstate acts on a suggestion as promptly as possible and keeps a record of what develops from it.

Ideas from the field are the basis of Sunstate's new program of "value analysis," a term introduced to the builder by the Stanley industrial engineers. Briefly, value analysis means finding ways to reduce production costs without sacrificing quality. Here's an example of how it works:

A job super observes that after the trim

carpenters finish a kitchen, they have not leveled the range. This is because the electrician has yet to come and hook up the range. After the hookup, a trim man returns and levels the range. Why not arrange to have the electrician level the range and save the trim man's time? The super reports this to the general manager in writing, or he reports it verbally and the general manager puts it in writing. Either way, something gets done about it, and the solution becomes company policy.

Besides helping set standard operating procedures, the supers and foremen now play an important role in a second cost-cutting program: the adoption of standard construction details.

More than 200 standard details have been drawn up in the last year, and Sunstate thinks it may eventually have over 1,000. Production and design managers sit down with the supers and discuss, for example, the best way to frame an air-conditioning plenum. When they arrive at what they consider the best method in terms of both economy and quality, the detail is drawn, priced out and filed away with a code number. Thereafter, whenever an architect can use that detail he draws it into his plan and identifies it by code number. The price, as well as material and labor requirements, are simply copied off a reference sheet. Copies of the standard detail sheets are made available to supers and foremen, and after a while are referred to only by code number.

For filing convenience, and to permit more orderly procedures in product selection, pricing and merchandising, Sunstate divides house construction into 13 categories: 1) floor support, 2) floors, 3) exterior walls, 4) roofs, 5) ceilings, 6) interior walls, 7) wall openings, 8) interior storage, 9) electrical, 10) plumbing, 11) heating and air conditioning, 12) exterior trim, 13) interior trim.

Future goals: closer teamwork and more independence for supers

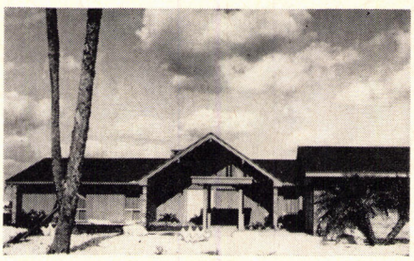
President Matt Jetton says the prime objective in Sunstate's reorganization is to encourage a flow of useful information from the job site to the staff managers. This is being done by delegating jobs further down the line and setting up the communications machinery that permits field men to offer opinions on how their own work should be done.

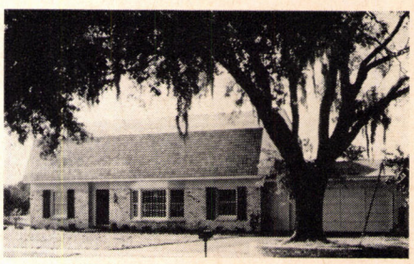
Right now, Jetton is more concerned with creating this flow of ideas and information than with writing out formal job descriptions that set the precise responsibilities of each person in the organization. The written job descriptions are being prepared, but in the general manager's spare time. His full attention goes instead to developing the new working relationships in ways that will best encourage close teamwork and the kind of job interest that produces unsolicited suggestions.

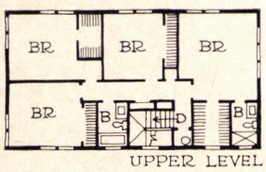
How useful the suggestions are, of course, depends on a man's understanding of the business. With this in mind, Sunstate has begun to conduct training sessions for its supervisors to help them develop skills in methods improvement and management. These training sessions are also creating a supervisor's manual of standard practices and policies. And eventually, the supervisors will define labor standards and put them in writing.

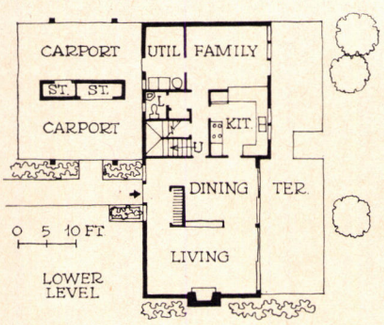
For Jetton personally, the new organization means more independence from day-to-day construction planning and production work. In August he replaced himself as general manager with a well-schooled former assistant. This permits him to devote more time to long-term planning (land purchases and future subdivisions are projected ahead 30 years) and to his other financial interests, which include an air-conditioning company and a recently acquired golf and tennis club.

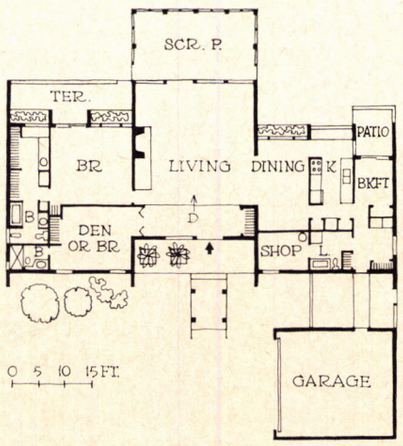
Because so much of the new Sunstate organization is controlled by written forms, a logical next step would be to program the procedures into a data-processing machine. However, this is not an immediate goal. Despite early indications of the new organization's success, it will be many months before most of the procedures are being carried out smoothly, and two or three years before they are functioning so naturally that they can be run by machine.

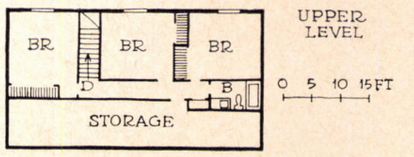


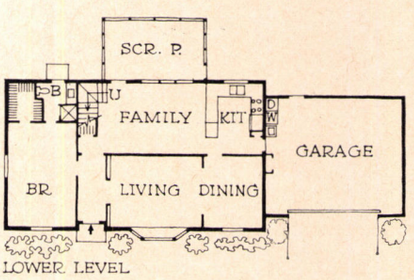












ALL-CUSTOM HOUSES in Sunstate's Carrollwood community, outside Tampa, range in price from $20,000 to $80,000-plus. Many, like those shown above, are in no way based on models. Lot prices—from $3,000 to $15,000 (for lake front)—encourage buyer diversity.

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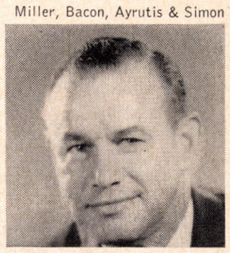
Miller, Bacon, Ayrutis & Simon

BURT HAFT



JACK GAINES

Job supervising: more freedom means better control

And the more there is to control, the more important is the supervisor's time. That's why Haft-Gaines Co. of Fort Lauderdale, Fla., doesn't stop at just hiring the best supervisors it can get—it also runs a production control system that keeps the supers free to supervise.

Haft-Gaines' supervisors need the time. The company builds nearly 400 custom houses a year on a three-month delivery schedule and does all but one operation with subcontractors. So its supervisors are responsible for 30 to 35 subcontractors—some with as many as eight crews—as well as for the countless one-of-a-kind production details that plague custom homebuilding.

No supervisor could handle such a task efficiently if he were overloaded with paperwork or constantly required to explain jobs to subcontractors. So Haft-Gaines has set up a production control system which, without weakening supervisors' authority or diminishing their responsibility, takes most time-consuming routine details off their hands. They are free to concentrate on running an efficient operation that turns out quality houses.

A key element in Haft-Gaines' production control system is a master specification chart which is the bible for each new job. It prevents misunderstandings in day-to-day dealings with the subs by making orders as simple as possible, and foolproof. How this chart is set up, and how it controls production, is explained below.

Haft-Gaines hires supervisors with solid building experience

In fact, four of the company's present five supervisors were already general contractors when they were hired.

Haft-Gaines insists on this level of experience and ability because it puts unusual demands on its supers. Specifically:

Supervisors handle a high volume of houses. One super handles about 35 houses at a time (or 140 a year) in a $19,000-to-$34,000 subdivision. A second super runs a $40,000-to-$65,000-plus subdivision across the street whose current rate is about 55 houses at a time (or 220 a year). The other three supers work as assistants in the higher-priced project, where houses tend to be much bigger and more complicated.

Supervisors are responsible for scheduling all subcontracted work. The production manager sets a completion date and the supers plan construction to meet it. They know from experience how long each work operation takes and they order the subcontractors accordingly. Materials ordering is the subcontractor's concern.

All five supervisors work out of a well-equipped centrally located field office which is also headquarters for the subs and their foremen. The office has its own independent reference and filing systems for construction orders and job records.

There is one other man in the supervisory setup: the framing foreman. Because Haft-Gaines is unable to find enough competent framing subcontractors, it currently carries 50 to 60 carpenters on its own payroll. The man in charge of these crews, which work in both subdivisions, acts as a roving supervisor.

A central chart frees supers from specification-handling routine

Job specifications are the biggest potential source of confusion between a custom builder and his subcontractors, and the man who gets caught in the middle is the supervisor. Haft-Gaines takes this burden off its supers' backs with a system which is virtually automatic.

All specification sheets are in the form of a single visual control chart. The specs for a new house are written on one large sheet, a 2′x3′ printed form, and displayed in the field office with a copy of the house plan and a list of the buyer's color choices attached. It is not removed from the office and no copies are made.

When the production manager sends a new sheet out to the field (sometimes as many as four to five are issued in a day) the subcontractors are notified that a new house is ready for material takeoffs. They consult the spec sheet at the field office, and when they have made their takeoffs and are prepared for the job, they indicate it by signing their initials on their portion of the sheet. The specifications are grouped according to the type of work—and thus the type of sub—involved.

Takeoffs are usually easy for the subs because the majority of Haft-Gaines' houses are based to some degree on the builder's models (which offer a choice of up to 50 elevations each). Subs have previously bid on each model, so they already have quantity-and-cost bases for several different Haft-Gaines house styles, and they can adapt them to variations of the models without figuring a new bid. New bids are only necessary (unless the sub is new) for the few houses that are 100% custom designed.

Haft-Gaines first developed the master specification form to point up variations in plans based on models. A typical notation: "Balance of house as Bristol [a model] except as noted." But gradually the form was enlarged to encompass every detail of a house and now is so complete that it can be used for completely original houses.

The sheet is closely dependent on the attached plan. Instead of going into full detail on many of the written specs, the production department will stamp "see blueline" next to the item: this means the sub should refer to the plan for further clarification. Stock items, particularly finish materials, are simply referred to by a code number.

Manager-to-sub system frees supers from change-order routine

Despite the efficiency of the specification system, it is still no insurance against the custom buyer's changing mind, and a Haft-Gaines house is subject to changes in specifications right up to the day it is completed.

The problem: how to get the changes to the job in the simplest and safest way possible without loading the supervisors with paperwork. Haft-Gaines' solution:

The production manager gives change orders directly to the subcontractors. Each sub has an inter-office mailbox in the field office which he is supposed to check two or three times a day, and change orders are placed there as soon as they are received from the production manager. Supervisors naturally get a copy of each order so they can integrate it in their scheduling, but they are free from the work of distributing it and putting it into effect.

(Other copies of a change order go to the specification chart, the production manager, the customer and the customer file.)

The production manager has sole responsibility for initiating change orders. Customers' plans and designs are developed by a salesman, design manager and interior designer, but once construction starts, the customer deals only with the production manager. This gives the manager an opportunity to talk the customer out of introducing hard-to-get products and materials in favor of easier alternatives, thus shortstopping potential problems for his supervisors. The manager writes the change orders and prices them out.

Brief daily meetings free supers from time-wasting report writing

All supervisors meet with the production manager in his office every morning at 7:00 (the manager himself comes to work at 6:30). They go over the previous day's problems and discuss ways to cope with the problems they anticipate for the work day ahead.

If reports are necessary during the day, they, too, are verbal. Supers can always be reached through the radio dispatcher, a woman who also serves as the field office secretary. (It is she who distributes incoming orders to the proper tables and mail boxes, files records and relays messages to the head office and field personnel.) She is also in contact with all of the subs, most of whom have radio-equipped cars or trucks.

Supers do have some routine paperwork: every other day they turn in a brief written progress report listing the job number, delivery date, and status of each house—on one line. This gives the production manager a quick guide for scheduling new starts and for answering customers' queries about how their houses are coming.

The supers also keep a master job status chart on display in the field office. All houses are listed on horizontal lines, intersected by vertical columns representing the construction phases. As each phase is completed, it is checked off in the appropriate column. The promised completion dates are emblazoned at the end of each line in large red numbers.

Subs can plan their own long-range work schedules by keeping track of each job's progress on the master chart. They know exactly how long to allow for each work stage because the Haft-Gaines production standards spell out time as well as quality requirements. A roofer, for example, soon learns that the company allows five days from dry-in to roof load, one day for sheathing a roof.

The front office backs up supers in making subs toe the mark

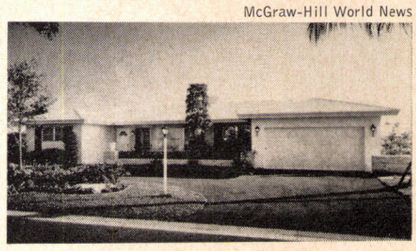
"Those who work get to keep their jobs," is the motto displayed on the wall of the Haft-Gaines production office. It is a reminder that is particularly significant to the company's subcontractors.

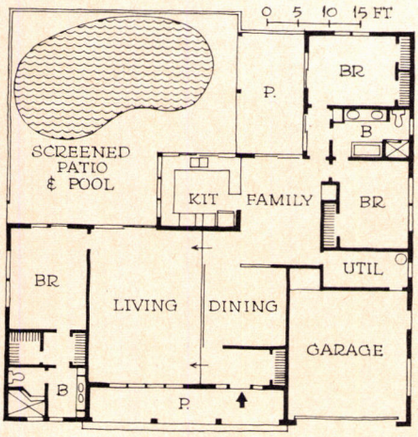
Haft-Gaines has only one criterion for deciding which subs are called for a new job: past performance. The super is the man who evaluates performance, and he is concerned as much with cooperation as with workmanship. If he vetoes a sub on either count, the production manager will invite new bidders into the project.

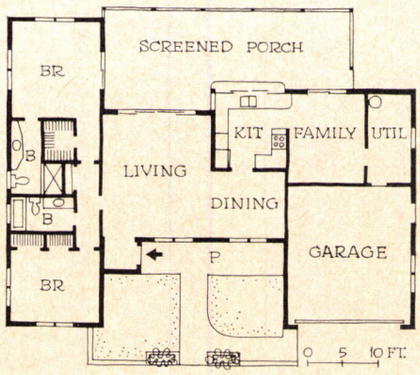
Haft-Gaines also uses a more subtle method to improve subcontractor performance. For almost every trade, the company employs two different subs. This in effect forces competition between the subs and helps keep up work standards.

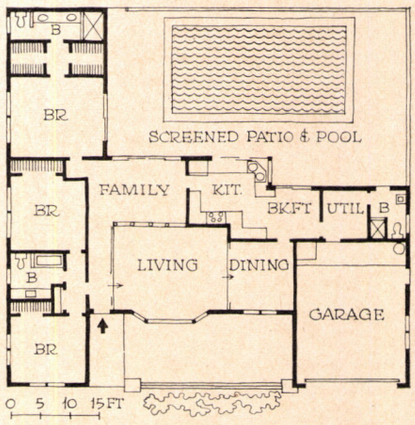
Standards are important to Haft-Gaines. That's why many of its buyers are repeat customers who move up to bigger houses in the same subdivision. Last year the company started a major quality-control program to protect its already strong reputation for top workmanship and service. Closer attention is given to materials by a specially appointed quality-control manager, a former building-materials distributor. The production manager personally inspects each finished house. But the key control is the super, who oversees the workmanship at every stage.

McGraw-Hill World News









HAFT-GAINES' MODELS include three-bedroom Georgian (*left*) for $53,000, two-bedroom Provincial (*center*) for $40,000, and three-bath Regency (*right*) for $54,000. Each model has up to 50 elevations. Most are colonial, but contemporary is gaining.

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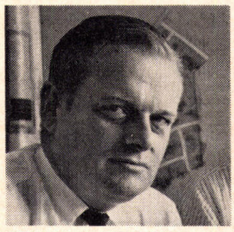


WILLIAM BROSIUS

Electronic cost control: helpful, but not a panacea

Like most builders, William Brosius of Frederick, Md., wants better control over his construction costs. And he knows that to get better control he must collect, process and analyze information very fast.

So 18 months ago, Brosius rented an electronic calculator and card reader, plus a card sorter. This equipment, said the manufacturer, would give Brosius a periodic report on all costs, show him where they depart from estimates and help him zero in on production problems. What's more, the system would give him this information once a month—three to four times faster than the accounting machine system Brosius was then using.

Unfortunately, things haven't worked out quite that way. Brosius' electronic data processing machine does indeed work fast—so fast that it inundates him with floods of unnecessary detail. And it accepts bookkeeping errors as fast as accurate data, whipping them through the system before they can be caught and turning them into highly misleading information.

But Brosius' calculator also does valuable work. It has given him far more cost information than he ever had before, and it has found expensive mistakes in his operation. Furthermore, with a growing business that now includes houses, townhouses and apartments in three areas and a dollar volume of over $4 million, Brosius needs effective cost control more than ever. So rather than abandon his system, he is trying to make it more effective. For the present, he is taking steps to insure the flow of more accurate information into the system; these steps are outlined below. And for the future, he is considering a new, more complex and faster computer system that will eliminate unnecessary information and give him just the facts he needs to know.

Brosius' big problem: too many facts, not enough information

Once a month Brosius receives, fresh from the electronic calculator, a thick report. It lists every house and apartment building under construction and breaks each job down into more than three dozen cost categories. It is the kind of report most builders have to wait a full year for, if they receive it at all.

But all too often Brosius just drops the report into his brief case, and it may be days before he looks at it.

"There's too much detail in the report," he says. "I can't find the time to plow through it and pick out the information that's really valuable."

Furthermore, much of the information in the report is absolutely meaningless. That's because the computer has caught an operation at an illogical moment and made it appear ridiculous—much as a high-speed camera catches a horse with all four feet off the ground and makes it appear to fly. Some examples:

It announces that a job saved $250, when actually a subcontractor was late turning in his bill.

It sends management out in the field to chase down problems that don't actually exist. ("Boss, don't you remember that we agreed to increase the brickwork on that job?")

It rushes a sleepy bookkeeping clerk through her invoices on Monday morning, then speeds out a report with her errors tucked away in its materials column.

It accepts a foreman's illegible time card and then proclaims to management that job 163 has absorbed eight hours of unnecessary labor, while 164 was completed with eight hours less labor than was forecast.

The upshot: every time the calculator indicates there is something out of line in the construction operation, chances are 9 to 1 that the trouble is actually in the way the calculator presents the information or with the information that has been fed into it.

Brosius is now feeding his machine a more accurate diet

A cost accounting system like Brosius' deals with two kinds of costs—actual and budgeted. Its job is to compare one with the other, so if the comparison is to be meaningful, costs must be accurate and realistic.

Actual costs depend on the accuracy of two types of documents—invoices and time cards. The invoices, which cover materials and subcontractor charges, come to the accounting system from outside the company, so their accuracy is to some degree out of Brosius' hands. But Brosius keeps urging his accounting staff to watch for invoice errors that can be caught within the company.

"Our clerks must be fussy about detail. They've got to develop a questioning attitude, say, about a job that has 15 yards of concrete delivered to it when it usually takes only ten yards. They've got to track down the superintendent on the job and ask him, 'Did this job take the normal amount of concrete?' "

Time cards are prepared by crew members in the field. They must note how they've spent their eight hours each day—what jobs they worked on and what tasks they performed. These cards carry a significant segment of Brosius' costs because he does most of his own work, and he insists that they be checked by the foremen in the field and also by the clerks in the accounting office. "But I know errors creep into these time cards. You can overhear a laborer talking to another laborer: 'What job did you work on today?' 'I think it was 48 and 51. Or was it 52? I better put down 52.' "

Budgeted costs should be the lowest possible construction costs. Brosius is working with engineers to develop ideal costs based on current building methods, rather than on "the way we've built for the last five years." These budgeted costs will have to be changed from time to time to accord with changes in design or the development

of new cost-saving techniques. And, says Brosius, these changes cannot stop at the accounting department. "What good is it if our architectural draftsman finds a way to save lumber but doesn't get his findings down to the men in the field? This happens every day, despite our watching for it."

Accurate cost data can be useless if it doesn't reflect how far along the job has come. Brosius has found that often a job that appears to be running under budget is actually a job to which all invoices have not yet been posted. So he has just inaugurated a status report, prepared by a clerk in the accounting department, which tells which jobs are complete and notes whether or not all invoices have been recorded. The result: a sharp decrease in the number of cost-report errors that have to be tracked down.

Really effective cost control requires a full-fledged computer

Brosius' present equipment is now working a full 40-hour week. The monthly cost report is only one of sixteen programs it handles; the rest deal with routine accounting, mainly payroll, and the calculator does this work so fast (it has, in effect, replaced two people) and so accurately that Brosius can't afford to go back to his old accounting methods.

But even if the machine were to run 120 hours a week, it wouldn't be able to produce the quantity or quality of cost-control information Brosius wants. So he is considering a much faster, more sophisticated electronic computer.

Here are some of the problems that Brosius hopes will be solved by the new equipment:

1. *Cost reports should come out weekly, not monthly, for adequate control.* "Most jobs on a house are completed in from one to three days," says Brosius. "By the time I get the report and start checking out problems, the foremen have gone on to other jobs. They find it hard to remember what happened a month ago. And certainly it's too late to correct a job when the house is completed."

2. *Reports should single out and flag any jobs that deviate from budget.* With Brosius' present equipment, deviations can only be located by laboriously reading through every job category on every house or apartment.

3. *Reports should not be cluttered up with data on jobs which have absorbed no labor or materials since the previous report.* The present machine does not discriminate between jobs that are moving and those that are stopped, so the current report must be checked, job by job, against the previous month's.

Brosius could hire an assistant to do the analysis required by problems 2 and 3. "But," he says, "a man like that would probably cost between $10,000 and $12,000 a year. It would make more sense to put that money toward better and faster electronic computing equipment."

There are other reports that Brosius would like to get, and that he feels he could get from faster equipment. These include a task trend report, covering specific categories of labor, which would average task costs over a four-month period; a monthly profit-and-loss report; and a ratio-analysis report in which approximately 20 production indicators, including both labor and materials, would be compared on a continuous basis to give a picture of production performance.

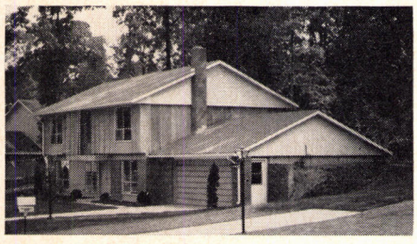
Finally, reports are only as good as the improvements they generate

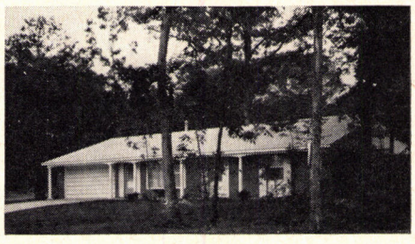
Unless a builder knows how to act on what he has learned, says Brosius, the report hasn't helped him. He gives this advice to guard against the waste of valuable information:

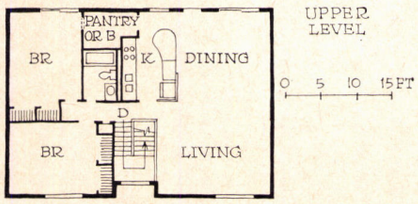
1. When you discover exceptions from standard performance, analyze them to see if they are one-shot variations or warnings of more fundamental problems that may recur.

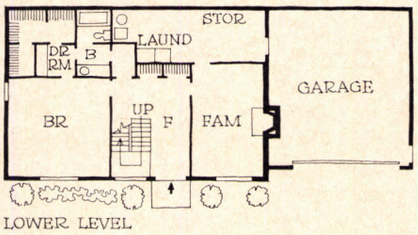
2. Don't settle for excuses from your men when you look for explanations. Lots of things are blamed on the weather, but rarely is anything blamed on poor planning or inefficiency.

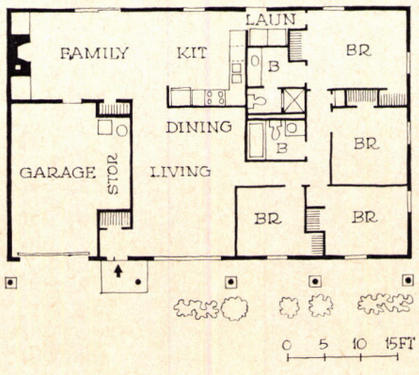
3. Don't let exceptions become part of the rule. Unless you insist on correcting an adverse situation, it may become the standard for your next job.

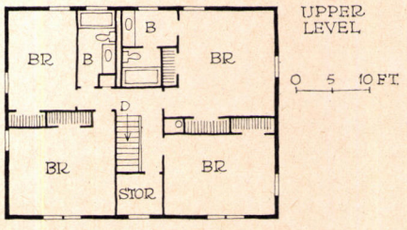


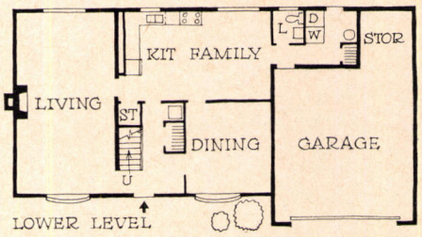












BROSIUS' MODELS include a bi-level contemporary with living room and kitchen on second floor *(left)* for $32,450, a four-bedroom ranch home *(center)* with two baths for $27,650, and a two-story with four bedrooms and 2½ baths for $34,500 *(right)*.

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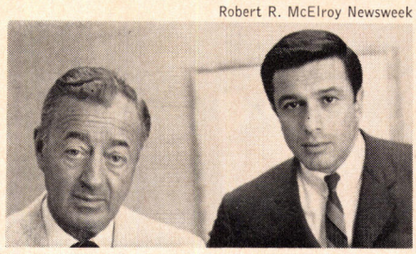
better management 6

Robert R. McElroy Newsweek



BILL LEVITT and DICK WASSERMAN

Decentralization: the way to become—and stay—a giant

Four years ago Levitt & Sons sold $15.8 million worth of land and houses—and lost $1.4 million. Last year the company's sales volume was $60 million and net profits before taxes were $5.1 million. The immediate reason for this enormous resurgence was the expansion of the hitherto one-site building organization into seven widely scattered major markets. But this expansion was possible only because President William Levitt decentralized his management structure, creating regional organizations with a high degree of autonomy, backed by a strong headquarters team to handle corporate problems and to provide top-level expertise in production, marketing, finance and corporate law.

It was plain in 1961 that not even the acclaimed Levitt efficiency could achieve in one location the 3,000 sales per year that the company needed. But if there was no one 3,000-house market, there were many potential 600—or more—house markets. Today Levitt has well-managed branches building in Long Island, northern New Jersey, Philadelphia, Washington, D.C., Florida, Puerto Rico and Europe. And over 200 other markets have been analyzed for expansion possibilities.

But a 30-year-old company, like some 30-year-old men, gets set in its ways and doesn't get turned around overnight. It requires complete re-thinking of policy, personnel and operations. Here's the road that Levitt traveled on its way from a centralized to a decentralized company—and to a $60-million sales volume.

First step: take all operating responsibility out of headquarters

The need for this step arose in 1960 when Levitt was building in one area: Willingboro (formerly Levittown), N.J. Faced with the opening of the 2,300-house Belair project near Washington, D.C., Levitt had to shift his entire management team to the new site, leaving Willingboro practically at a standstill. To get Willingboro going again required two men for every key job, and when the 1,900-house project at Matawan, N.J., was begun in 1961, the critical number jumped to three.

Says Executive Vice President Dick Wasserman: "Today we have seven regional organizations and opening an eighth would require only a 14% increase in key people. But in 1961, going from one to three demanded a 200% increase."

Serious as the personnel problem was ("many of our people had to, and did, grow into bigger jobs, and we brought in some new men"), it was far less serious than the need to establish a clear relationship between branches and corporate headquarters. The first expansion taught Levitt that each project has its own particular complications; a management staff that wasn't actually on the site had trouble getting the feel of these nuances and thus couldn't respond quickly to simultaneous change in different areas.

The first reorganization established a manager for each branch project with "full authority" but with his key people reporting to the corresponding executive at headquarters (i.e. construction super to construction vice president, local sales manager to general sales manager, etc.).

This naturally led to bypassing of the regional manager on many things for which he was theoretically responsible. Says Wasserman: "This may look dumb today, but it really was not. We were thin at the top, our most experienced men were at headquarters, and we had to use them on all fronts. It made a pool of expertise available to men who just did not have the experience and skills they have today."

The flaws, however, were obvious: headquarters just couldn't respond to all problems, and it was insensitive to the feel of local communities and the peculiarities of individual projects. With every problem bucked back to Willingboro, things began bogging down in paperwork and delay.

The company's reaction: become a big business and act like one

Management consultants were called in to analyze every employee's job and to interview each man on his duties, responsibilities and authority. Says Wasserman: "The consultants made us more sharply aware of the problems we faced and the directions to take to solve them."

Result: an inch-thick company policy manual, two years in the making and constantly being revised, that outlines the responsibility and authority of everyone in the corporation.

When responsibility is delegated, authority goes with it

Policy and programs are established at headquarters, and systems are set up to audit performance. Then the regional managers are told: "Get the job done."

"We attempt to give the broadest possible authority at local levels," says Wasserman. Regional managers now have full control over all personnel in their division, and are also empowered to:

Buy materials indigenous to the area or available under better local warehousing or delivery arrangements than could be obtained through headquarters.

Obtain bids on all sub-contracts and recommend those they think headquarters should accept (not always the lowest).

Hire and fire, up to but not including the level immediately below them.

Arrange local mortgages where they would be more attractive to buyers.

All branch managers report to one man at headquarters—Herbert Praver, senior vice president in charge of all branches (and land acquisition). Praver in turn refers branch problems to one of three other senior vice presidents—Nelson Kamuf, production; Norman Peterfreund, fiscal; and Norman Young, marketing—or to Legal Vice President Joel Carr. Quarterbacking this headquarters staff is Wasserman, who is directly responsible to Bill Levitt himself.

Wasserman and the senior vice presidents meet every week in a session that

never lasts less than five hours. The joint meeting is preferred over individual meetings, because almost every top policy decision is intertwined with all divisions.

Levitt is unrelenting in pressuring his executives to continue recruiting and training programs for potential managers. He says, "Never let the pressure of today's work stop you from looking for the men you'll need to run the place tomorrow. Today's decisions will get made somehow, but if we don't get the men, we won't be able to do tomorrow's job."

Top branch managers are lured more by a challenging job than by money

What kind of a man does Levitt want to run a branch operation? He must have had extensive building experience, preferably running his own company (between 50 and 150 houses a year). And he must be familiar with all the problems of homebuilding.

"He doesn't have to know all the answers," says Wasserman, "but he does have to know the problems."

Levitt feels many such builders don't reach their desired growth because they can't call on enough skills and experience outside of their own abilities and because they lack the capital to hold and develop land. Finally, Levitt believes there is not enough challenge and excitement in building 50 houses a year, and a certain kind of man will jump at the chance to build 500 in a single project.

Are there builders to take such a job? The last ad Levitt ran (in the *Wall Street Journal*) brought more than 20 replies from independent builders of up to 150 houses a year who were frustrated by the difficulties encountered at this volume. Adds Wasserman: "Our reputation is important in recruiting talent. People know we have a sense of responsibility and are in business for keeps. Our name is on the front door of every house we've built."

The typical regional manager—a builder used to holding complete control—tends to be a maverick, so he must be carefully meshed into the organization. This integration usually goes smoothly when the man sees that the headquarters group is his equal in every phase of housing.

The fewest possible barriers are put between branches and headquarters

Levitt's objective is to prevent intermediate authority, committee decisions and unnecessary limbs on the corporate tree.

"We feel that a telescoped structure, using sophisticated electronic data processing, gives us the vitality and flexibility we need," says Wasserman. "We encourage fast decisions, even at the expense of some mistakes. We'd rather have 100 quick decisions 95% right, than five decisions 100% right. Good supervision and checks and balances can catch mistakes, but if you're not moving, you get nothing done."

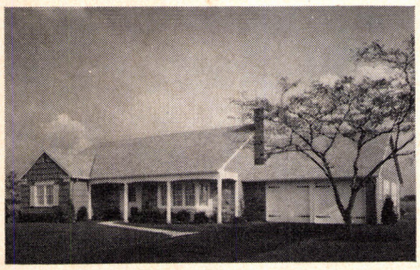
Electronic computer data processing is used to get information to top management as fast as possible. Example: an exception report from every branch every week pinpoints every operation that isn't going according to schedule. So if a house needs more floor tile than predicted, the discrepancy shows up immediately in the exception report, and the fault—a poor estimate, excessive breakage or pilferage—can be quickly found and cured. Since each regional manager, as well as headquarters, gets a copy of the report, he can head off problems before top management is even aware of them.

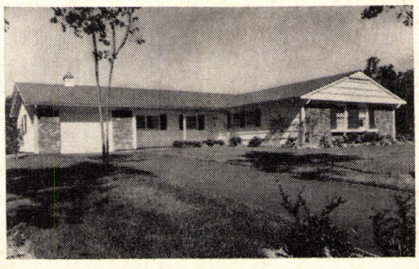
Next stage: satellite projects growing out of promising branches

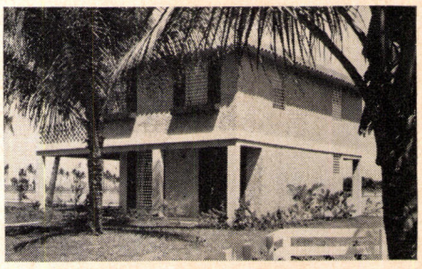
Once a branch is well established in a major metropolitan market, Levitt sees no reason why smaller satellite projects in sub-markets of the same area can't be formed on the regional base. Managers of these projects would report not to headquarters but to the regional manager, and the best of them would be candidates for promotion to regions of their own.

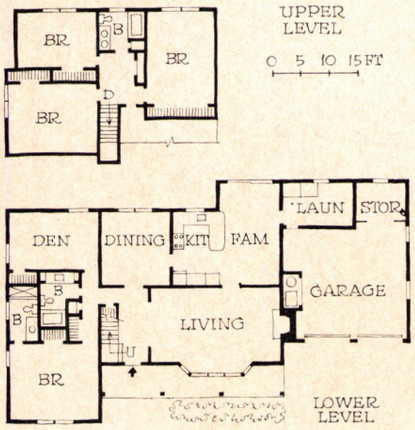
What's ahead for Levitt? Although the company does not reveal unit sales, its $60 million volume indicates it will build and sell around 3,000 houses this year. Each branch is capable of adding several satellite projects, and entirely new metropolitan markets may be invaded at any time. Bill Levitt had no serious problems in increasing his volume almost 50% last year Now he is confident that he has the organization for further growth.

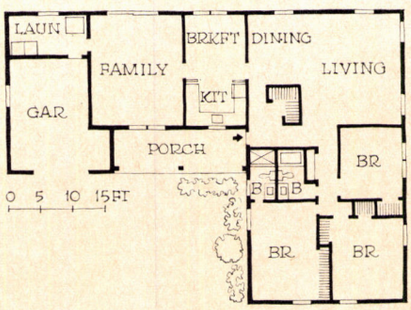
Lawrence S. Williams

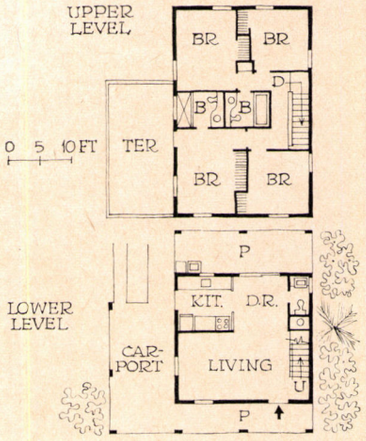












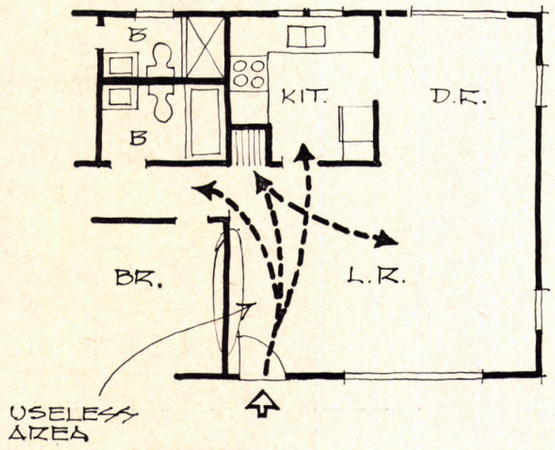
LEVITT'S MODELS include a $31,500, four-bedroom, three-bath New Jersey house (*left*); an L-shaped ranch on Long Island (*center*) with three bedrooms, two baths, at $22,500; and a $16,500 two-story model in Puerto Rico (*right*) with four bedrooms, 2½ baths.

DESIGN FILE / TRAFFIC FLOW

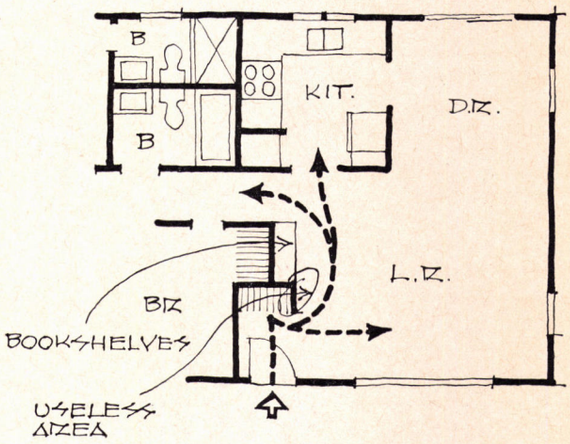
Third in a series on planning and design ideas

No single feature of a house plan is more important than its traffic pattern. Comfort, convenience and privacy all depend on good traffic flow, and the second- and third-time buyer who has lived with poor traffic will seldom settle for it again, no matter how good the house is in other respects. Yet poor traffic continues to appear in a surprising number of houses, even in the higher price ranges.

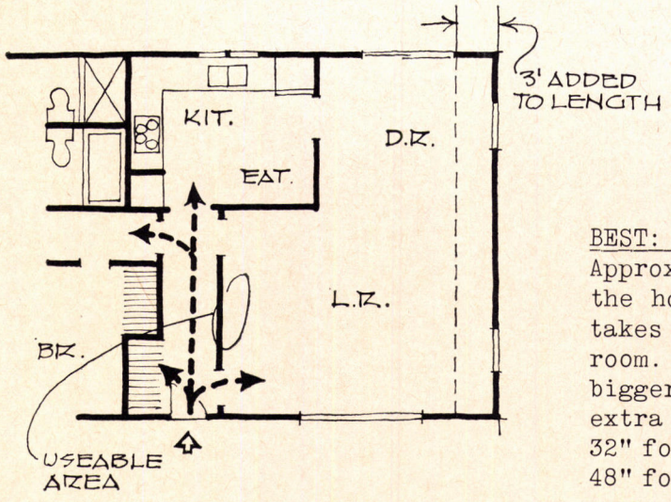
To show that there is no great mystery to designing—or redesigning—good traffic flow in a house plan, H&H enlisted the aid of Architect Herman York, the country's most prolific designer of merchant-built houses, and prepared the following examples.



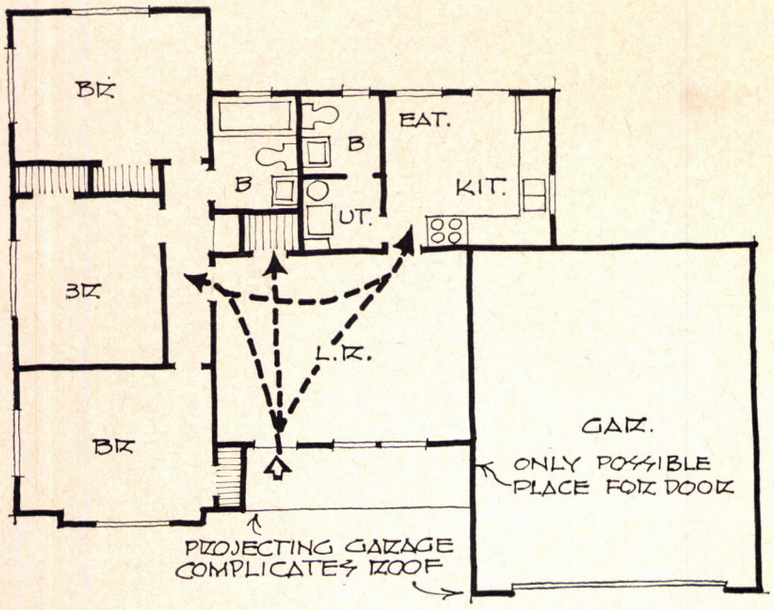
BAD: THE WALK-IN LIVING ROOM
Traffic from the front door makes one end of the living room useless, and visitors can see the whole living area from outside. Note remote position of coat closet.



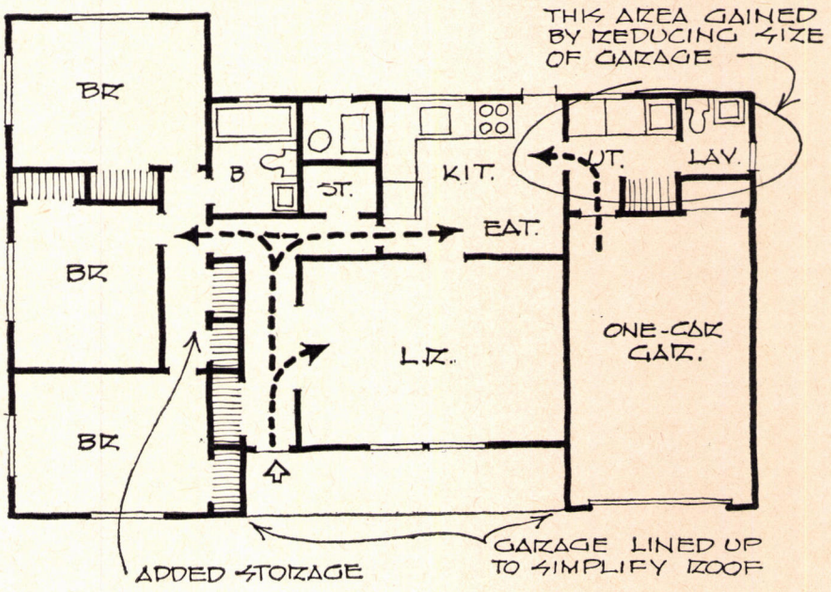
BETTER: THE ALCOVE ENTRYWAY
Relocating closets provides 1) a visually separate foyer, 2) greater privacy for the living area and 3) elimination of cross-traffic from door to coat closet.



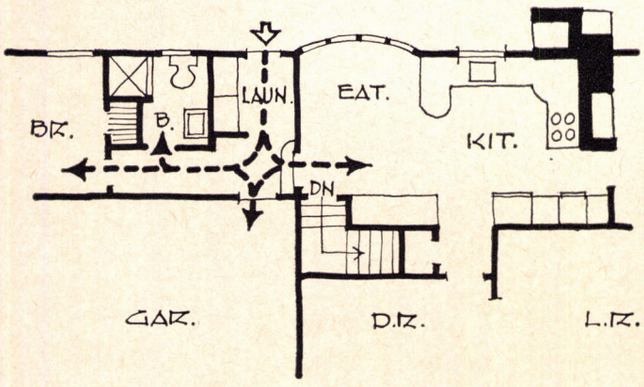
BEST: THE SEPARATE ENTRY HALL
Approximately three feet added to the house makes room for a hall, takes all traffic out of the living room. Coat closet and kitchen are bigger. To fit framing modules, the extra length would be modified to 32" for rafter construction, 24" or 48" for trusses.

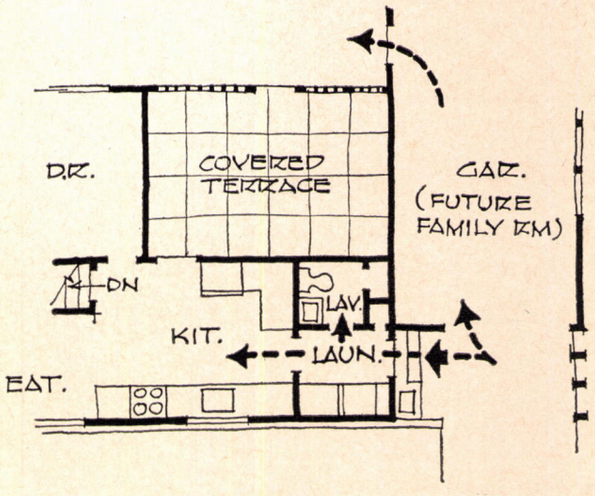


BAD: THE CROSS-TRAFFIC LIVING ROOM
The position of the door between the living room and the kitchen makes more than half of the living room useless. Another bad point: position of garage requires that all car-to-grocery traffic pass through living room.



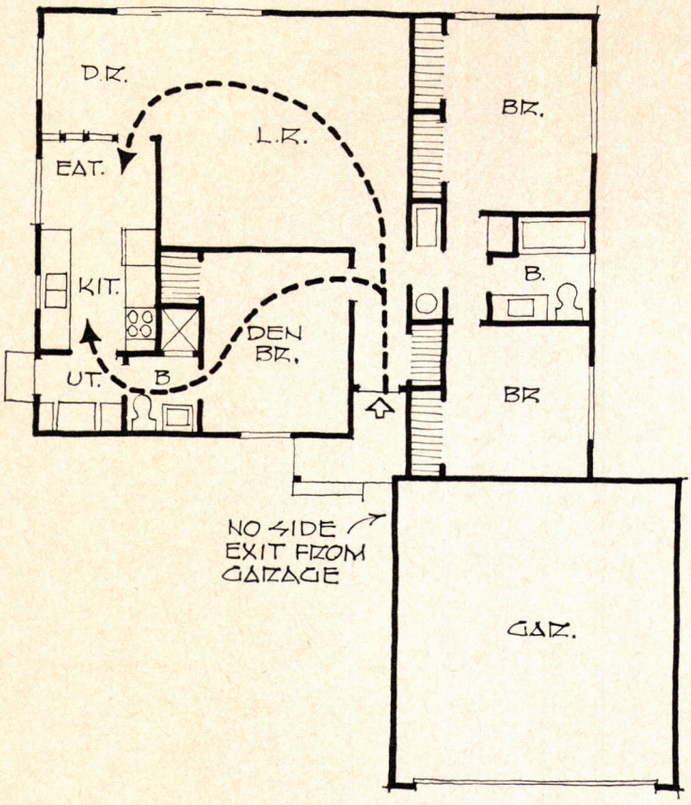
BETTER: HALLS TO ALL MAJOR AREAS
Reducing garage to one-car size adds space for entry hall and rear hall to kitchen. Mud-room area behind garage provides direct access to kitchen. Simplification of room line could save enough on cost to permit two-car garage.





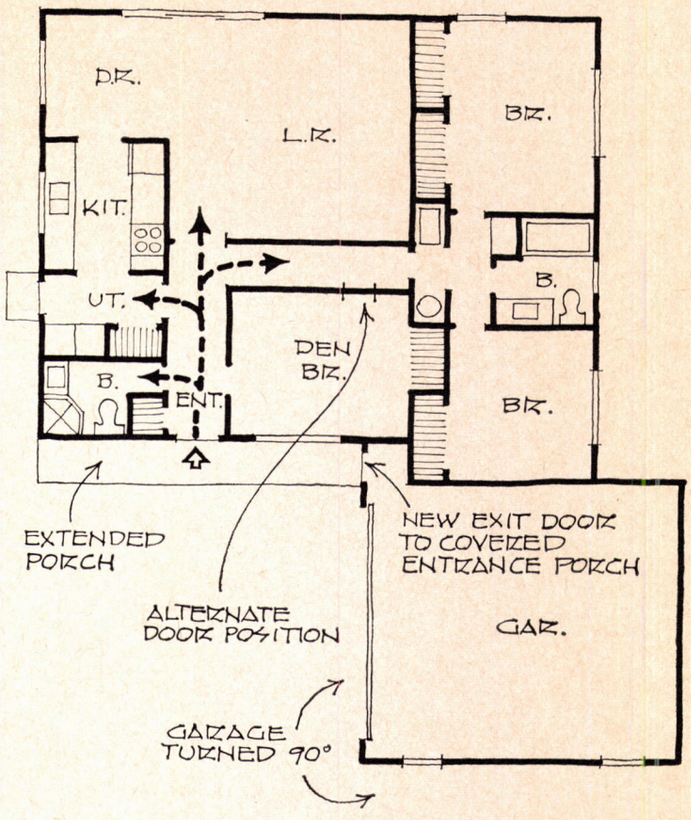
IMPORTANT: THE BACK DOOR MUD ROOM
"Back door traffic," says Architect York, "is almost as important as front-door traffic today." These plans, taken from a large house (left) and a small house (right), show the essentials of good mud-room planning: unobstructed traffic between door, kitchen and lavatory, and a laundry that works but uses minimum area.

continued



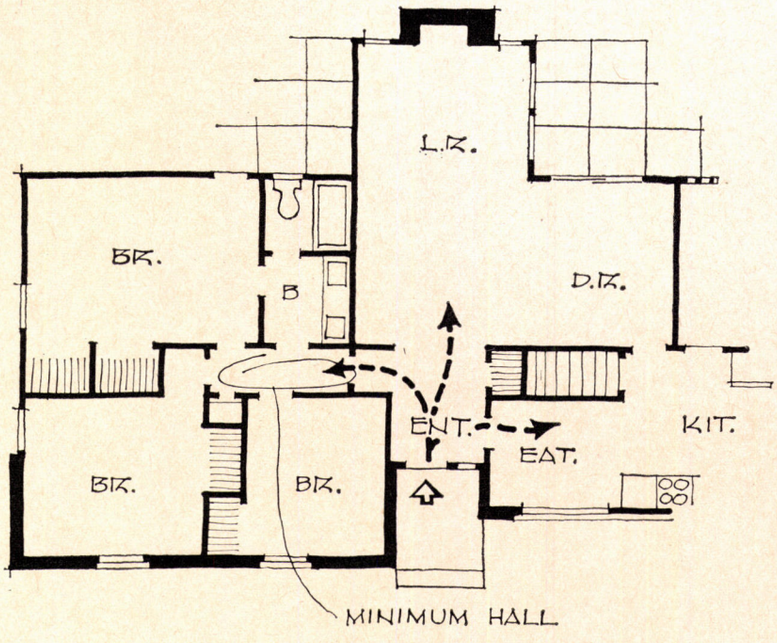
BAD: AN ISOLATED KITCHEN

Though this house has an entry hall, traffic from hall to kitchen must pass through either the den or the living room. Another problem: lack of a service door in the garage means an unsheltered trip to house in rain.



BETTER: AN EASILY ACCESSIBLE KITCHEN

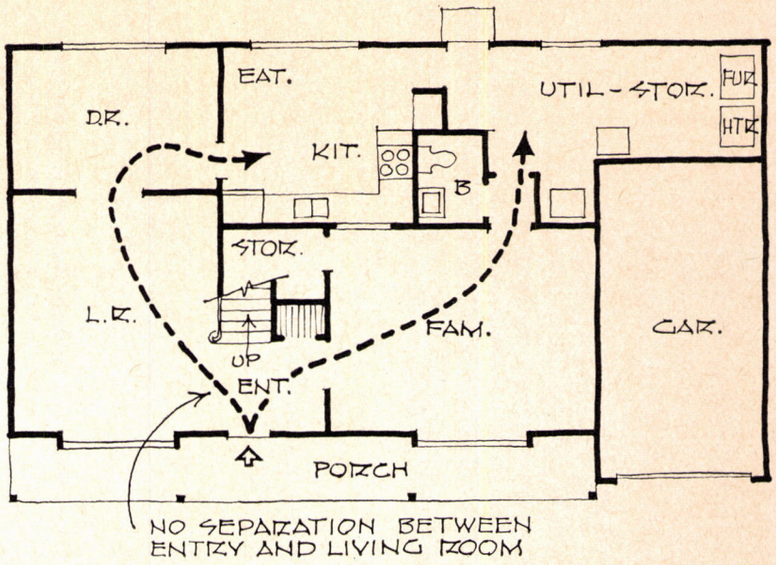
Moving entrance hall to left creates excellent traffic flow, but sacrifices kitchen-dining area to make long dark hall to bedroom wing. Garage is shifted to provide service door, sheltered walk to house.



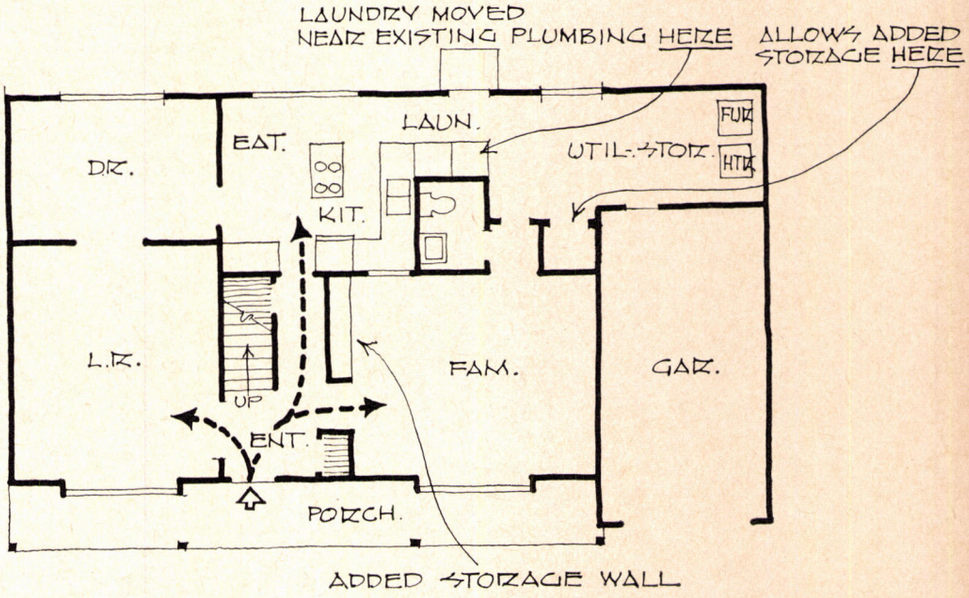
BEST: A CENTRALLY LOCATED ENTRY

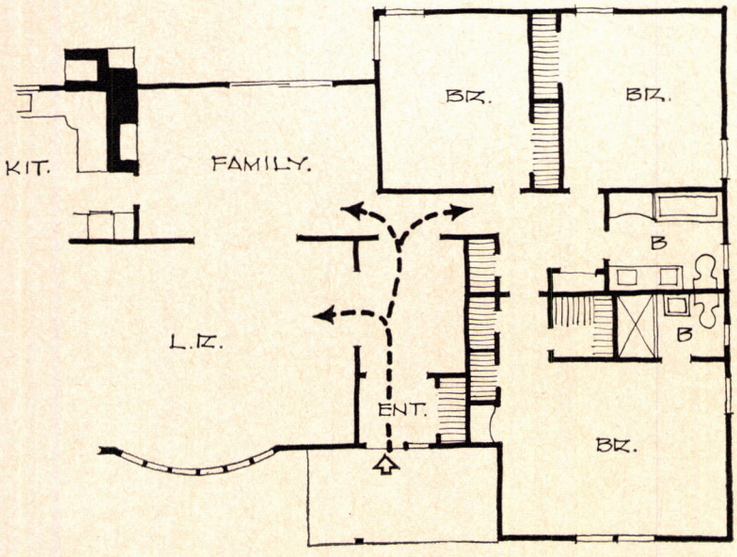
In this small house, designed by York, the kitchen, living and sleeping areas are all directly accessible from a relatively small foyer. Relation of foyer to sleeping area permits a minimum of wasted hall space.

BAD: A BIG, UNWORKABLE FOYER
In this two-story, the open foyer provides glamour, but sends kitchen traffic through either the living and dining rooms or the middle of the family room. And the foyer is so open that for all practical purposes it is part of the living room.



BETTER: A WORKABLE FOYER
Though it is smaller and less glamorous, this foyer keeps through traffic out of the chief living areas. Kitchen is redesigned to accommodate hall from foyer. Note repositioning of laundry to create a more workable mud-room-laundry area.





BEST: A BIG WORKABLE FOYER
In this one-story model, York combines good traffic flow with a foyer big enough to be considered a room in itself. Entry and coat closet form a separate area. Only drawback: traffic to kitchen must cross one end of the family room.

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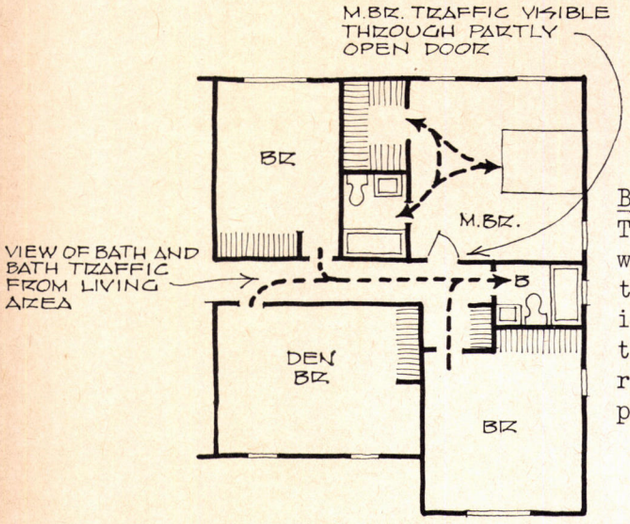
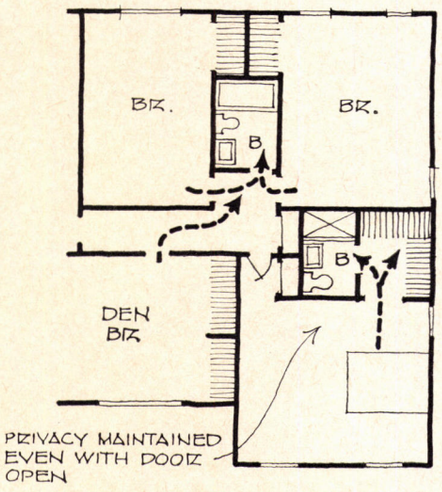


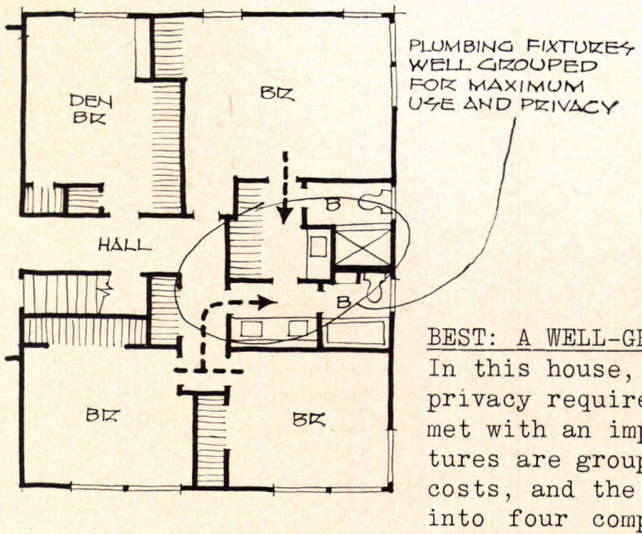
BAD: AN UNPRIVATE BEDROOM WING

The bathroom door is directly in line with the corridor, and traffic from three of the four bedrooms to the bath is visible from the living area. Further, traffic within the master bedroom is exposed if the bedroom door is partly open.



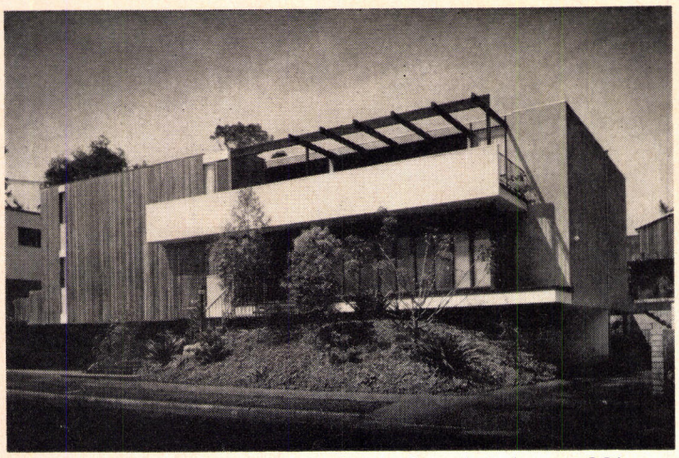
BETTER: CONCEALED BATHROOM TRAFFIC

In this redesigned wing, traffic from two of the three smaller bedrooms can reach the bathroom in complete privacy. Master bedroom is now arranged so that bedroom-bath-closet traffic is hidden from hall even when door is almost wide open.



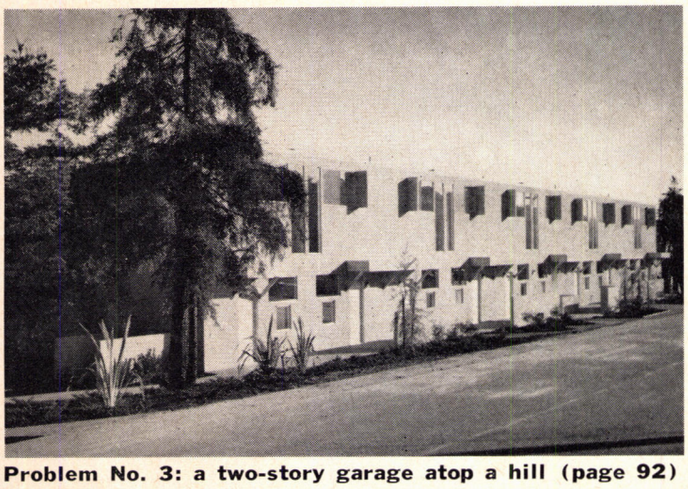
BEST: A WELL-GROUPED BATH COMPLEX

In this house, designed by York, the privacy requirements noted above are met with an improved bath plan. Fixtures are grouped to reduce plumbing costs, and the two baths are divided into four compartments for maximum flexibility of use.



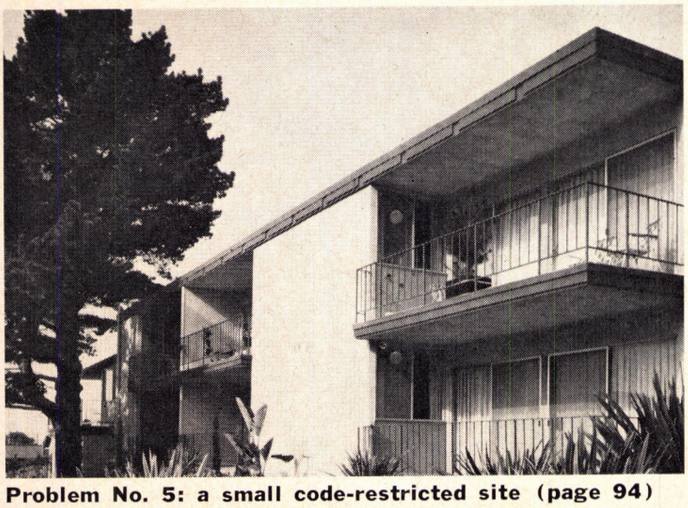
Problem No. 1: a small sloping urban lot (page 88)

Problem No. 2: a steep hill facing a park (page 90)

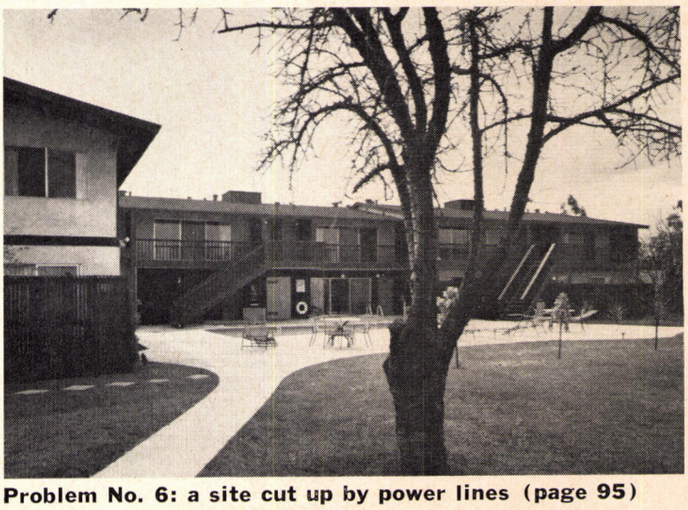


Problem No. 3: a two-story garage atop a hill (page 92)

Problem No. 4: a nursery circled by a ditch (page 93)



Problem No. 5: a small code-restricted site (page 94)



Problem No. 6: a site cut up by power lines (page 95)

Six outstanding apartments designed for problem sites

To see why all of them were successful, begin on the following page

STREET ELEVATION is dominated by walled second-level deck. Carport entrance is at left, entrance bridges are visible through center beyond entrance.

1. A stepped-down plan for privacy on a small lot

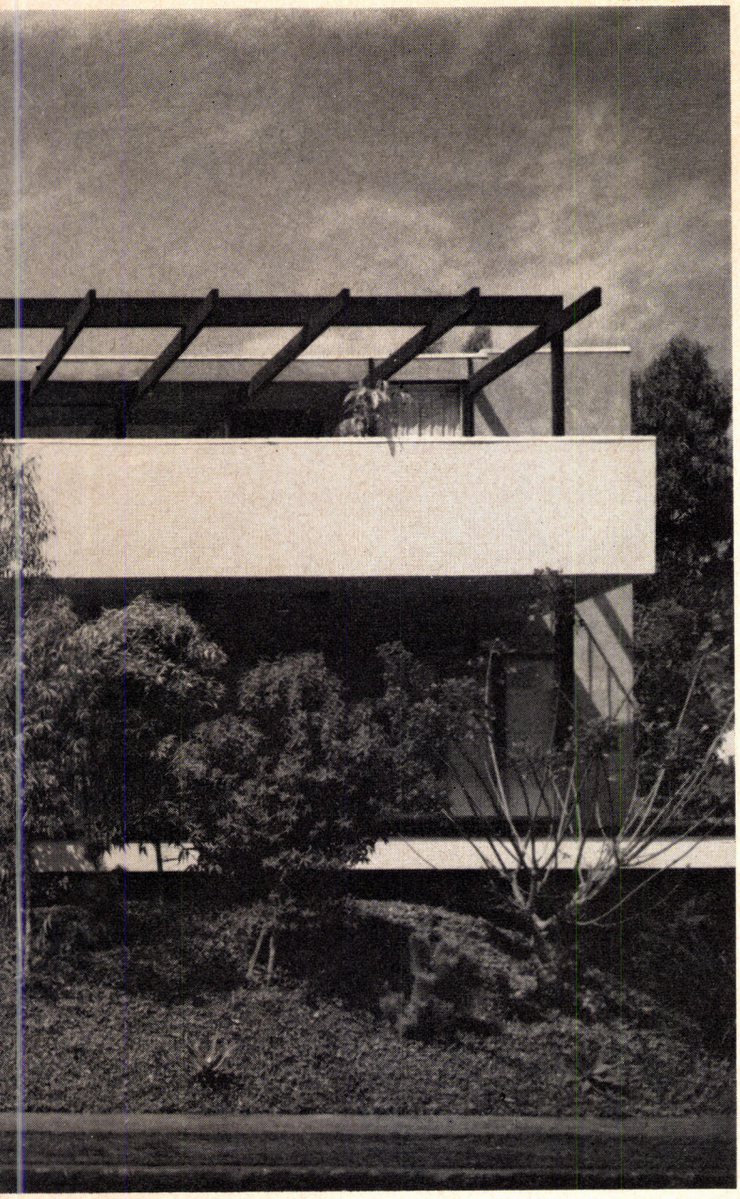
Not only was this lot small (¼ acre), it was surrounded by other apartments and commercial buildings, it fronted on a busy street, and it sloped up 25 ft. in the first 100 ft. To top it all off, a local ordinance required off-street parking, and the owner requested easy access to all ten units without elevators.

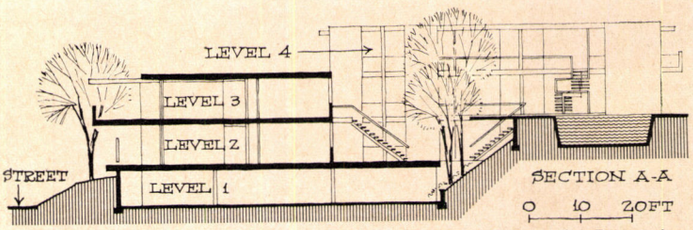
Architect Donald Peart's design solution was an L-shaped building with a total of four levels terraced up the slope (*see cross section, above, right*). There are three living levels, plus two underground carports at street level with space for 10 cars. A large, two-level recreation area, complete with swimming pool, takes up a back corner of the lot. In addition, each of the two-bedroom units has its own private entrance opening off a terrace, deck or bridge, plus a small deck or terrace oriented away from community outdoor areas. All of the units have 870 sq. ft. of space except the two on the top level, which have 1,000 sq. ft. of living area each, plus larger decks on two sides. Rents vary from $165 to $210, depending on orientation and level.

Construction cost of the building was $120,000. Total area is 13,300 sq. ft. (including 4,300 sq. ft. of carports, laundry, storage, utilities etc.), so the cost per sq. ft. was $9.02. Land cost was $30,000. Builder: Carroll G. Clampitt.

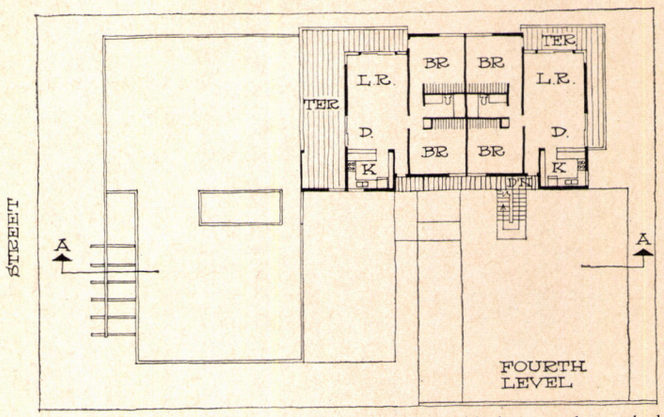
Owner J. K. Gudmundson has not had one vacancy in this Inglewood, Calif. project since its completion in April, 1963. And at times there has been a waiting list.

Photos: Amir Farr

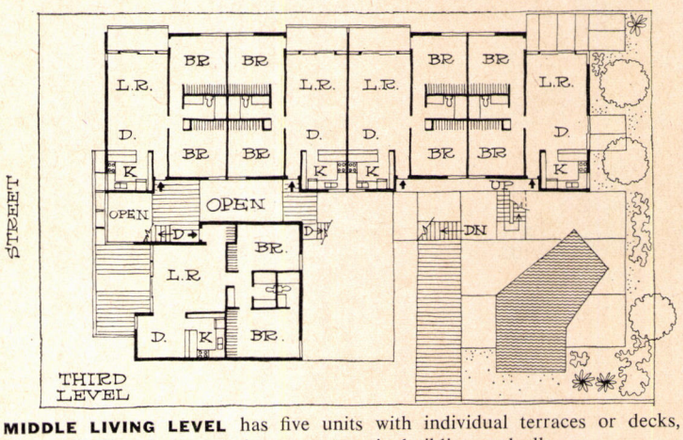




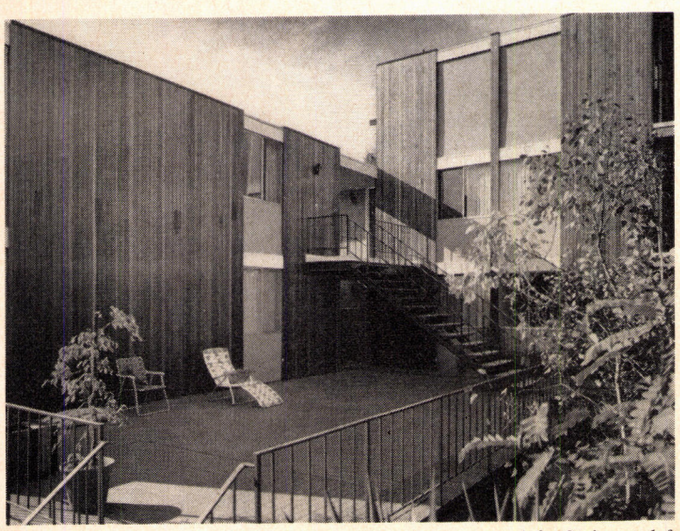
FOUR-LEVEL PLAN includes one parking, three living levels. Recreation area includes pool, right, and community deck one level below, center.



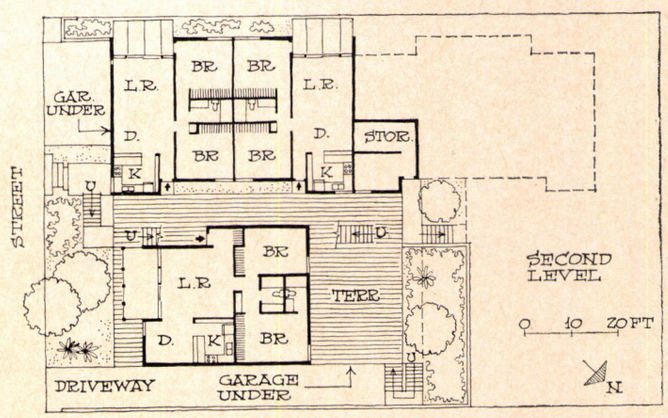
TOP LIVING LEVEL has two largest units, each with its own large deck. Open rafters at left are over walled balcony shown in photo *(left)*.



MIDDLE LIVING LEVEL has five units with individual terraces or decks, plus pool. Two bridge decks connect main building and ell.



COMMUNITY DECK is shielded from street by wing at left. Stairs at left come up from carport area, stairs in center lead to entry bridge deck.



LOWER LIVING LEVEL has entrance stairs, main gallery open to sky except for bridge-decks, and community deck over the larger carport below.

continued

COLONNADES provide outdoor living space, screen front entrances of four-bedroom units. Top floor of three-bedroom units above appear over roof line.

2. Double-decker design for townhouses on a hillside

The handsome project shown above appears to be on flat ground; actually it is on the side of a sharp slope, and it faces a ravine which is part of a public park.

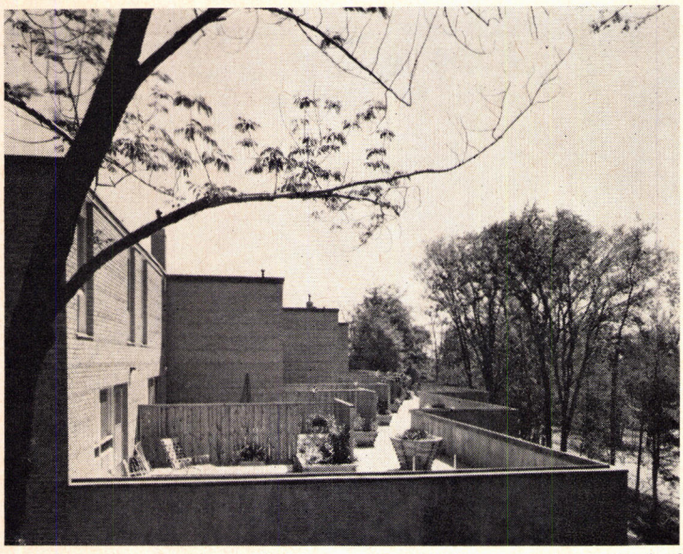
Architects Jack Klein and Henry Sears did more than cope with the site—they took advantage of it. Two tiers of townhouses (*see section at top, opposite*) face the park. The bottom tier, made up entirely of four-bedroom units, has a facade of arched colonnades partially enclosing terraces and entrances. The upper tier, all three-bedroom units, is set back so the roofs of the buildings below become terrace area—also facing the park. A third row of split-level, three-bedroom units faces the upper tier across a paved plaza and has rear terraces overlooking a green area that runs through the middle of the 6.77-acre site.

There is no automobile traffic within the project, a feature that attracts families with small children. Resident parking is in an underground garage with 161 stalls built below the paved plaza and the upper tier of townhouses. Cars enter the garage at either side of the project. Wherever the upper plaza changes levels, there are pedestrian ramps to accommodate baby carriages and shopping carts.

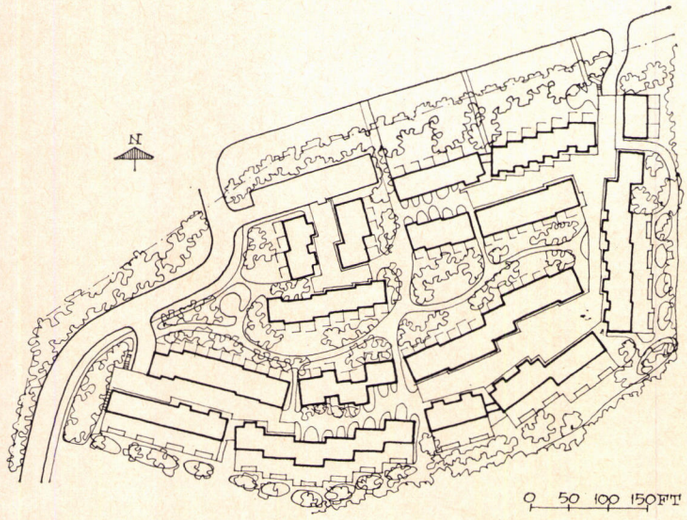
There are 143 units in the section illustrated. Rental is from $169.50 to $210 including heat and parking. A second section of 102 units has just been finished (eventually the project will contain 800 units on 30 acres). The Rubin Corp. is the developer. Location: North York, Toronto.

Photos: H. R. Jowett

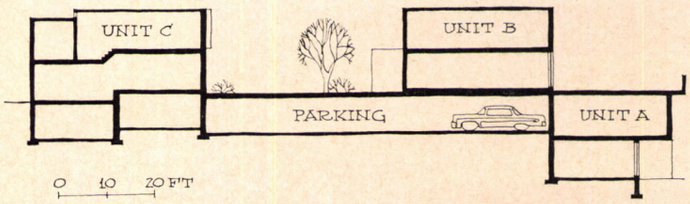
PAVED ENTRANCE PLAZA for upper units is also the roof of underground garage. Separate entrances and staggered facades add to individual privacy.



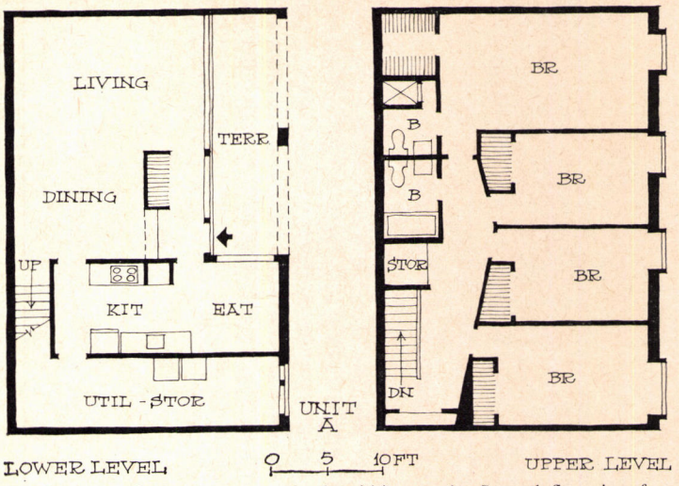
ROOF TERRACES at rear of upper units are built over bedroom level of units below and overlook adjacent park. Each patio has a privacy screen.



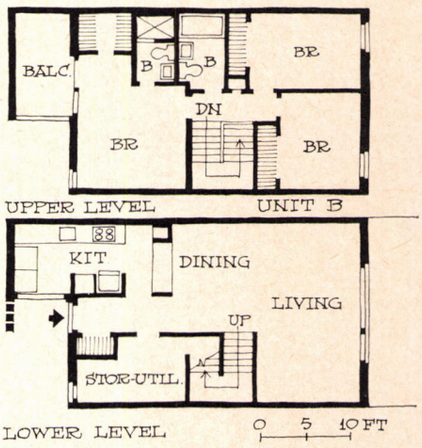
TRAFFIC-LESS SITE has walkways through green areas. Access to underground garage is at either end of site. Total area is 6¾ acres.



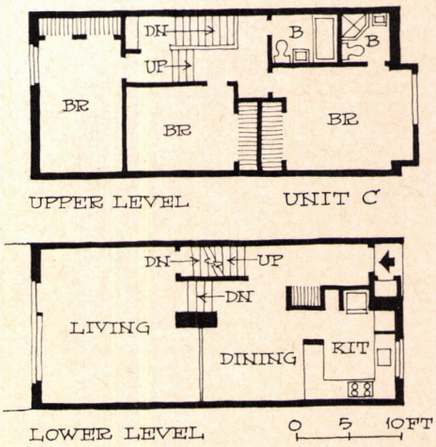
TIERED LAYOUT provides outdoor living on roof of lower units, which back up to underground garage. Basements at far left house services.



LOWER UNIT has entrance set back within arcade. Second floor has four bedrooms and two baths, first floor has big utility-storage room.



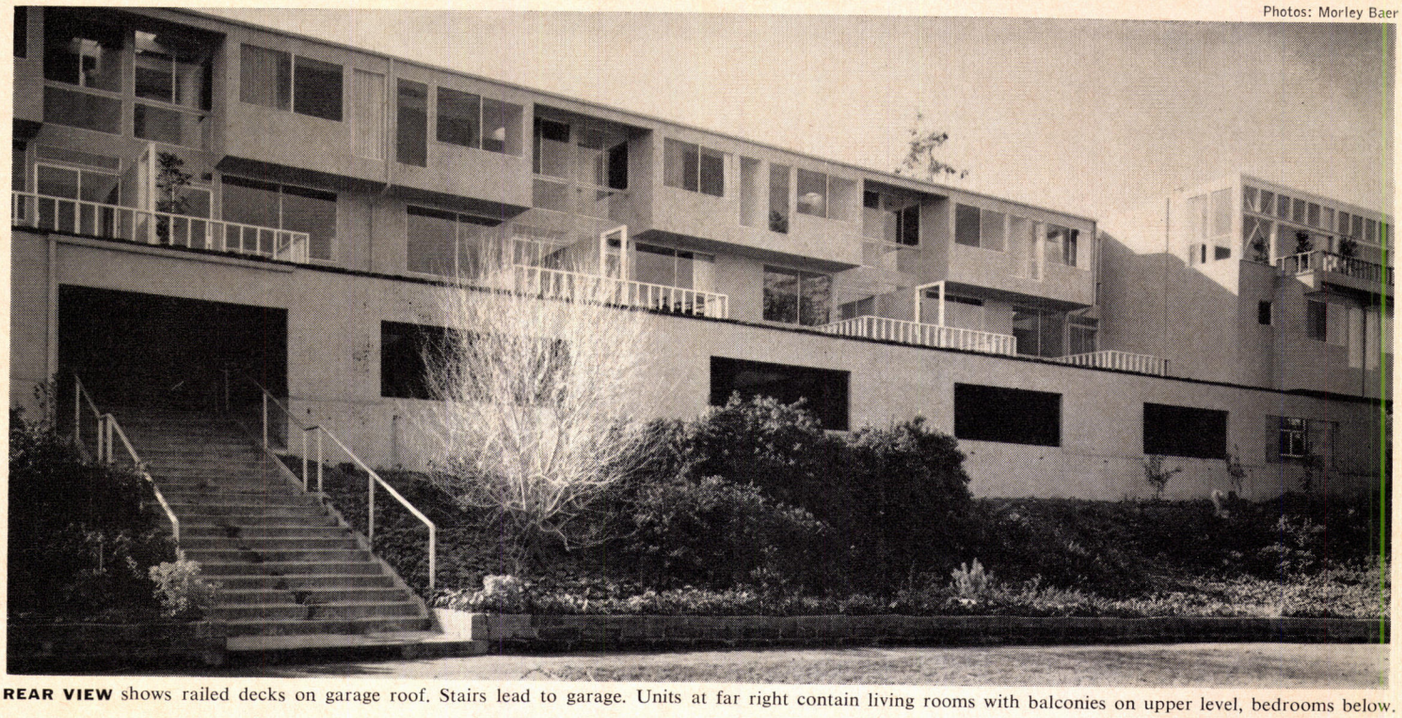
UPPER UNIT, entered from center plaza, has outdoor living area in rear on roof of unit below.



SPLIT-LEVEL UNIT has lower living room with terrace, two levels for three bedrooms above.

continued

Photos: Morley Baer



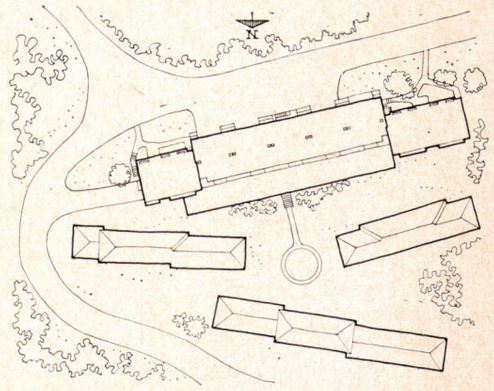
REAR VIEW shows railed decks on garage roof. Stairs lead to garage. Units at far right contain living rooms with balconies on upper level, bedrooms below.

3. Hillside townhouses built over an existing garage

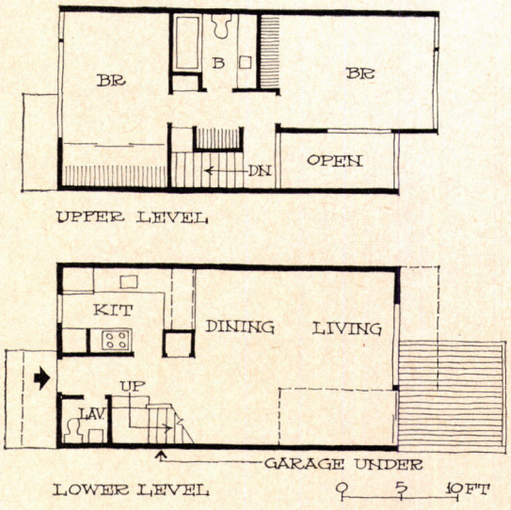
Problem: the owners of a two-acre hillside garden apartment project wanted to add more units without crowding the site. But the only spot left, at the top of the hill, was already occupied by a two-story garage for 24 cars.

Solution: Architects Moore, Lyndon, Turnbull and Whitaker designed a row of ten townhouses to sit on top of the garage and added seven more in setback extensions at either end. Entrances are on the upper or street side, while balconies and decks in the rear face the town (Monterey) and San Francisco Bay.

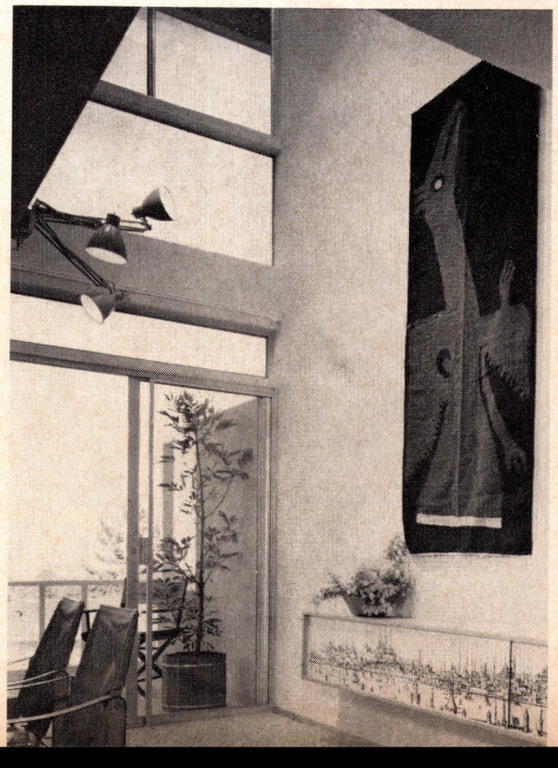
Builder Arlin Johnson's construction costs were $11,800 per unit, just $600 over the estimated budget of $200,000.



SITE PLAN shows units over garage, center, and offset side units. Drive at left leads to 33-car garage.

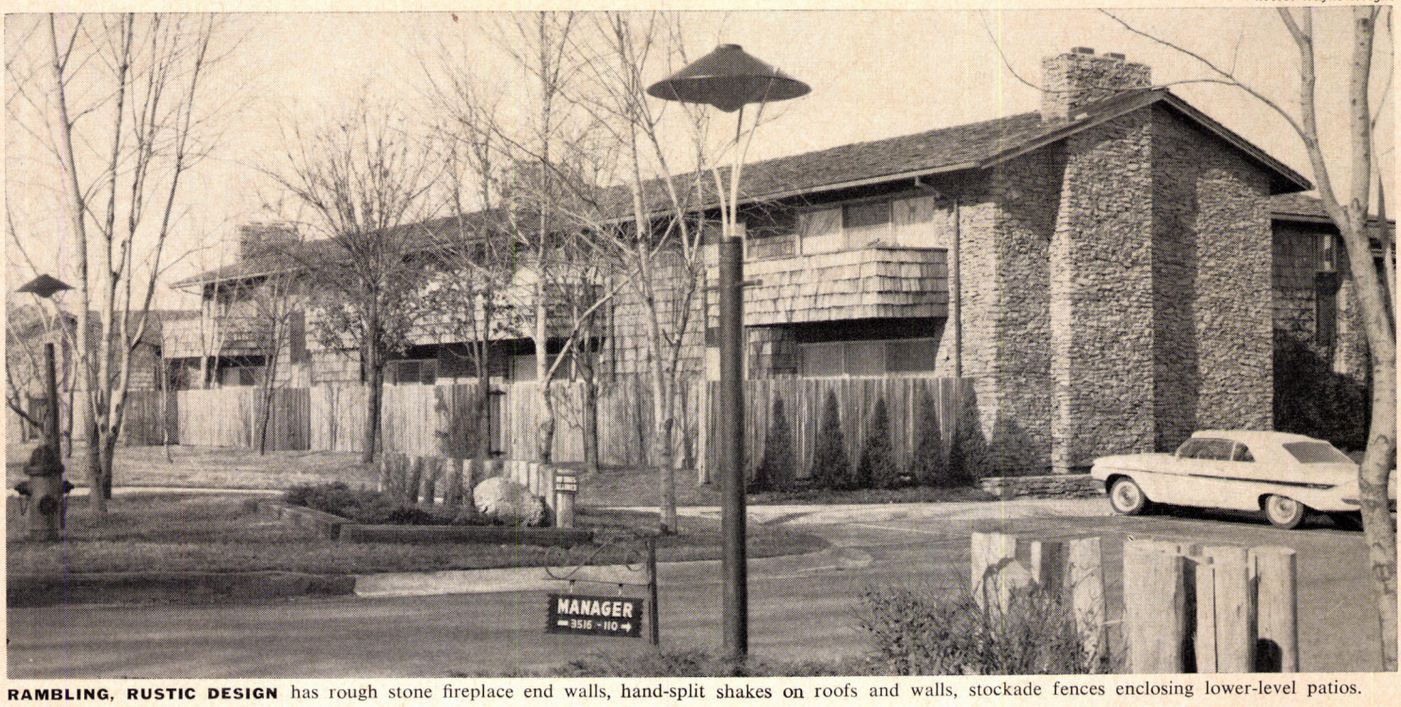


TWO-BEDROOM UNITS have entrance at street side, balcony at rear of living area. Rents are $175 to $185.



TWO-STORY WELL provides dramatic view for living room and stairway, extra daylight for bedroom above.

Photos: Wayne Wright

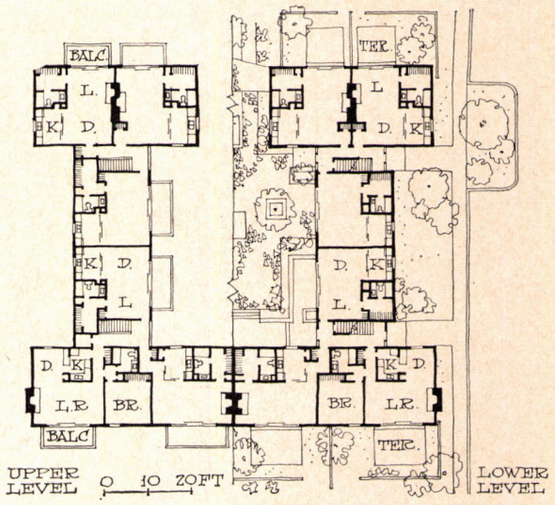


RAMBLING, RUSTIC DESIGN has rough stone fireplace end walls, hand-split shakes on roofs and walls, stockade fences enclosing lower-level patios.

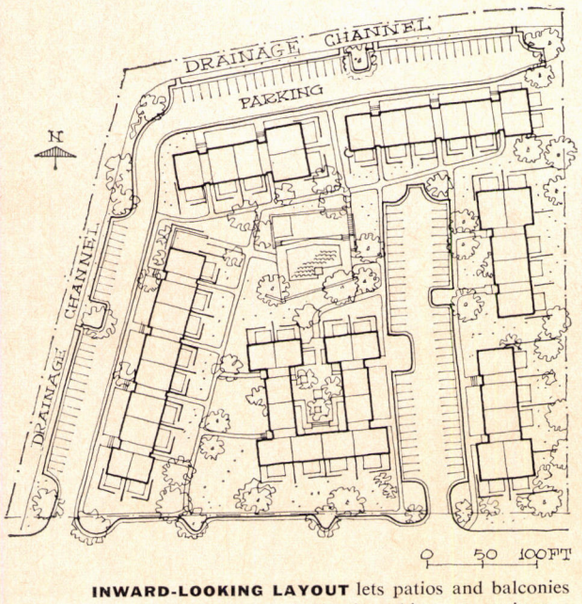
4. A self-contained project with its own rural atmosphere

Esthetically, the site is less than perfect: a former tree nursery bordered by a wide concrete drainage channel and a main road. And the neighboring open fields are prime building land that will eventually become suburbs.

So Architects Kenneth R. Boyle and William H. Wilson created a rural environment, using rough stone and hand-split shakes on exteriors and weaving landscaped green belts through the 5.33-acre site. There are 89 apartments in the project's six buildings—mostly one- and two-bedroom units, plus a few efficiencies. Rentals range from $127 to $218. Construction costs were $1,091,613. Builder: Max Okun. Location: Prairie Village, Kans.



COURTYARD BLOCK (at center of layout, lower left) contains 20 of project's 29 efficiency units, plus four one-bedroom apartments.

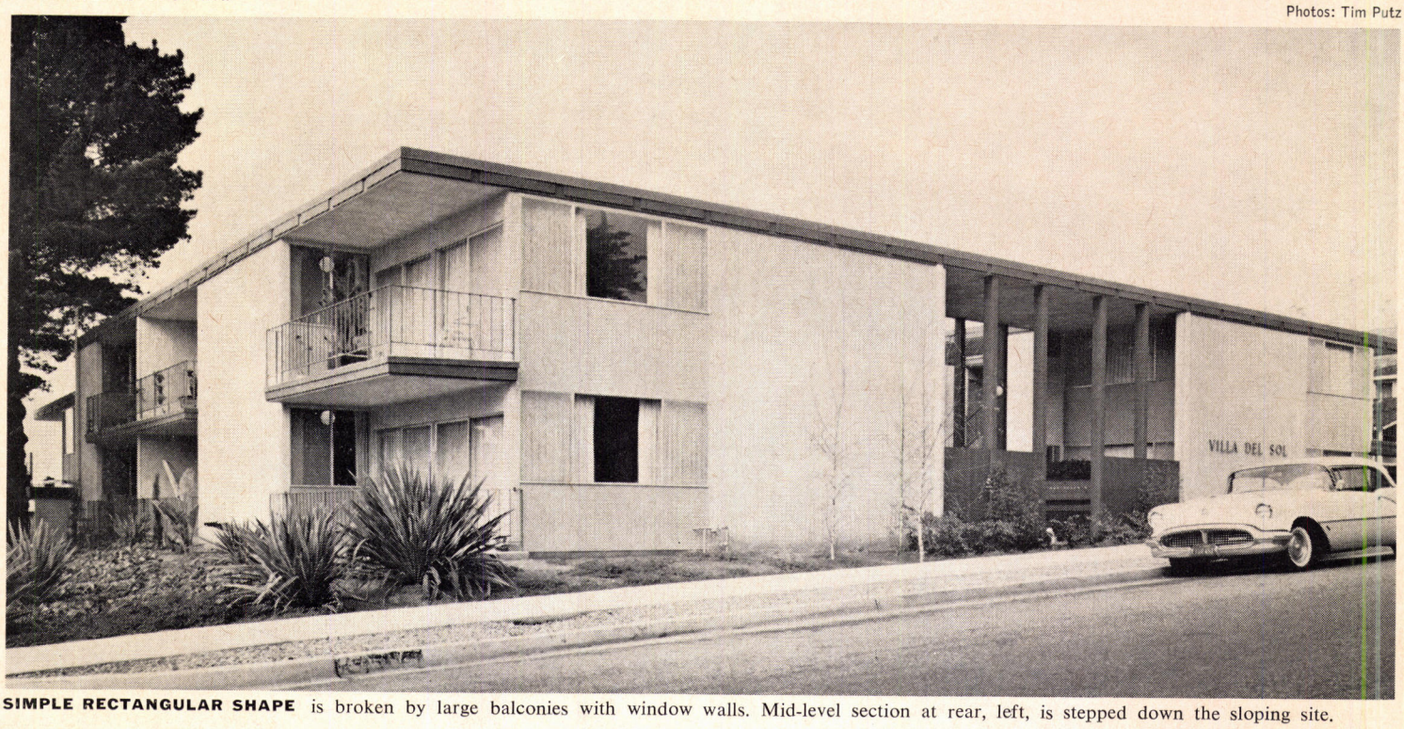


INWARD-LOOKING LAYOUT lets patios and balconies face greenery, places half of parking on perimeter.

RECREATION AREA in center of site (as viewed from courtyard building) has heated pool and large community barbecue area with shelter.

continued

Photos: Tim Putz

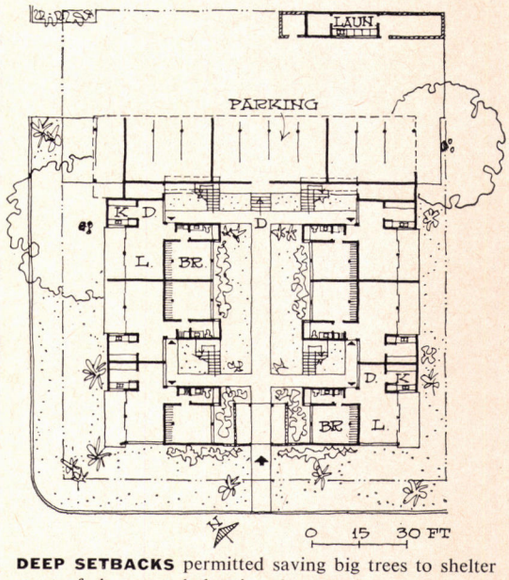


SIMPLE RECTANGULAR SHAPE is broken by large balconies with window walls. Mid-level section at rear, left, is stepped down the sloping site.

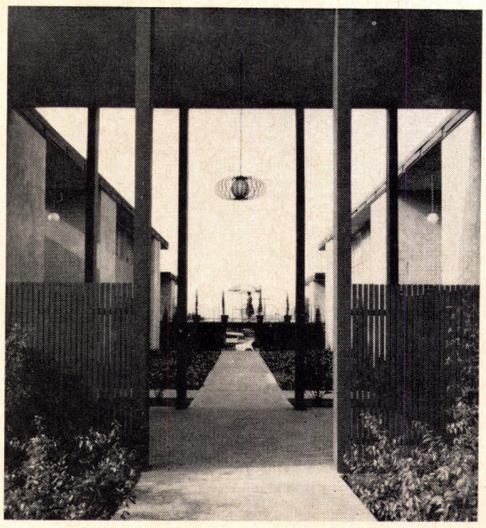
5. Big balconies to open up small apartments

Building codes in Santa Barbara, Calif., limited the size of each of the 14 units in this half-acre project to 600 sq. ft.

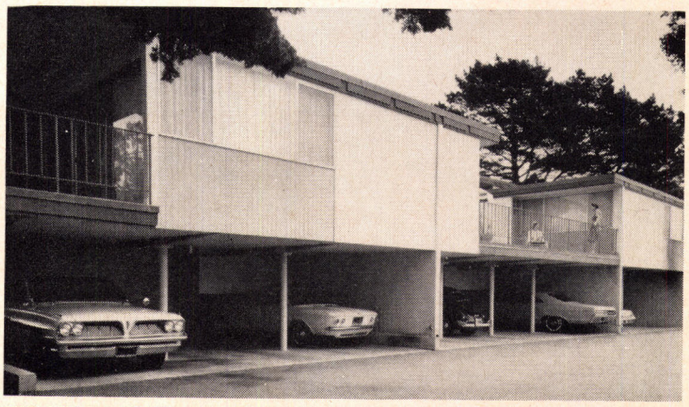
Architect Donald P. Polsky increased the living space of each one-bedroom unit by adding a 107-sq.-ft. balcony and opened up the units visually with sliding glass doors to the balconies. Back-to-back kitchens or extended party walls separate the balconies, but all have a view of the nearby ocean or the mountains. Additional privacy for the units is provided by individual stairways and entrances. Rents range from $105 to $135. The site cost $25,000, and Owner-Builder Michael Towbes' construction costs were $125,000.



DEEP SETBACKS permitted saving big trees to shelter some of the seven balconies along each side.

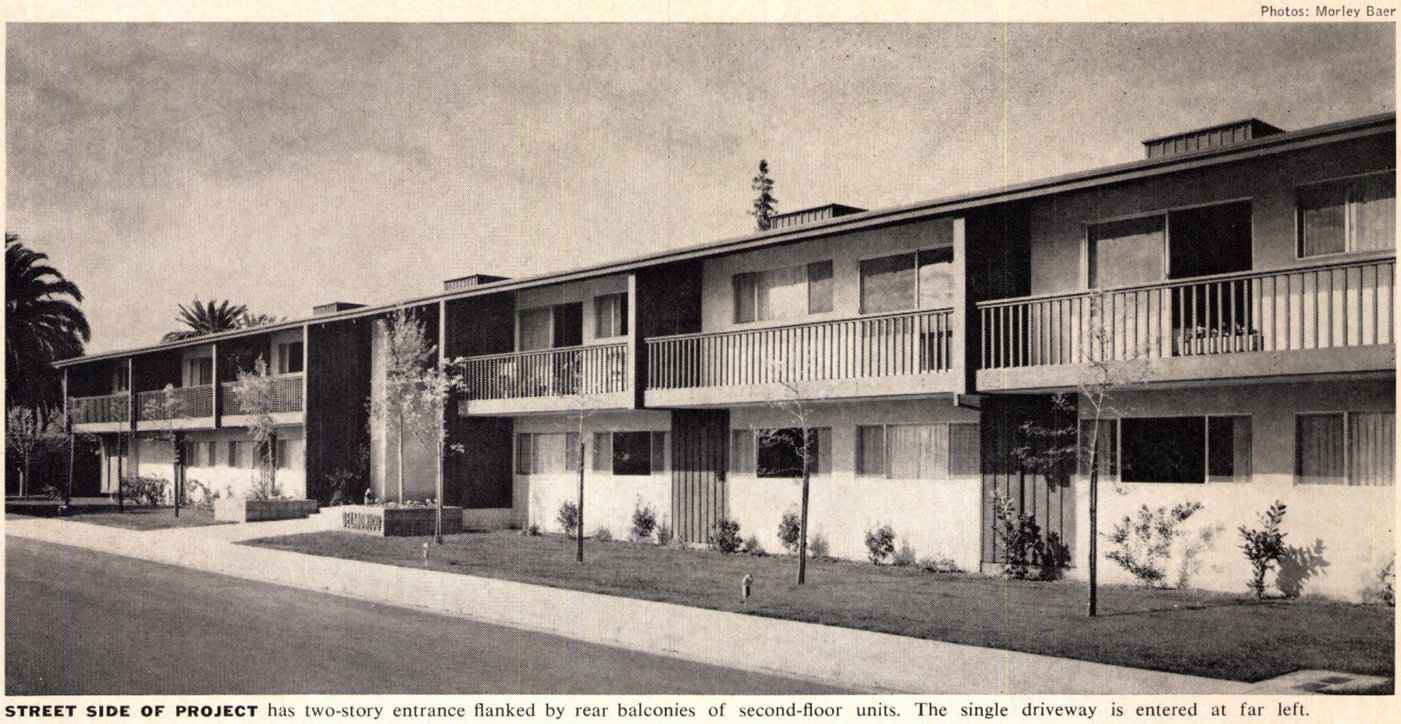


OPEN COURTYARD is protected by wooden screens at entrance. Walkway leads to mid-level deck at rear.



MID-LEVEL UNITS at rear are separated by community deck. Stairway beneath deck leads to 12-stall carport and a service area on rear lot line.

Photos: Morley Baer

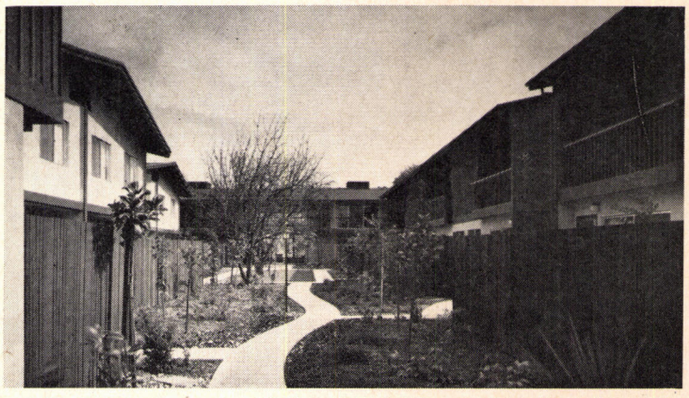


STREET SIDE OF PROJECT has two-story entrance flanked by rear balconies of second-floor units. The single driveway is entered at far left.

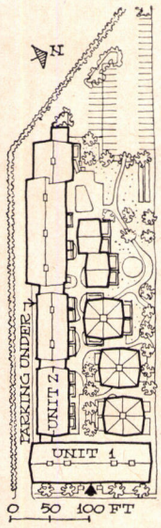
6. Tight siting for a lot with an easement problem

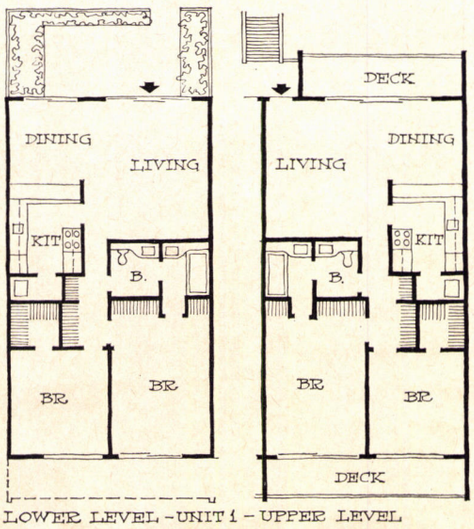
A utility easement cut a 140-ft. swath across a rear corner of this 2.34-acre site, making a third of its area unbuildable.

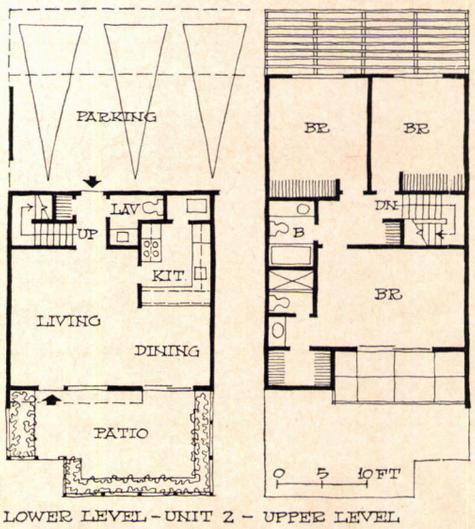
Architect Matt Copenhaver left the entire far corner open by grouping five different types of buildings in a rough wedge shape and using the open space for landscaped recreation areas and for half of the required 98 parking spaces. The other 49 spaces are set into the first floor of units along the side driveway. Rents range from $125 to $225 for the 49 units: 24 townhouses, 19 two-bedroom units, and six cabana-like one-bedroom units near the pool. Owner-builder of this Mountain View, Calif., project: Interland Development Corp.



LANDSCAPED GARDENS, winding walk and screened patios relieve tight siting. Smaller buildings at left contain three-bedroom townhouse units.







CONCENTRATED GROUPING of nine buildings, left, places larger ones along street and drive, angles smaller ones toward recreation area. First- and second-level two-bedroom units, second and third from left, are in building on street side, townhouses, right, in first two buildings along driveway.

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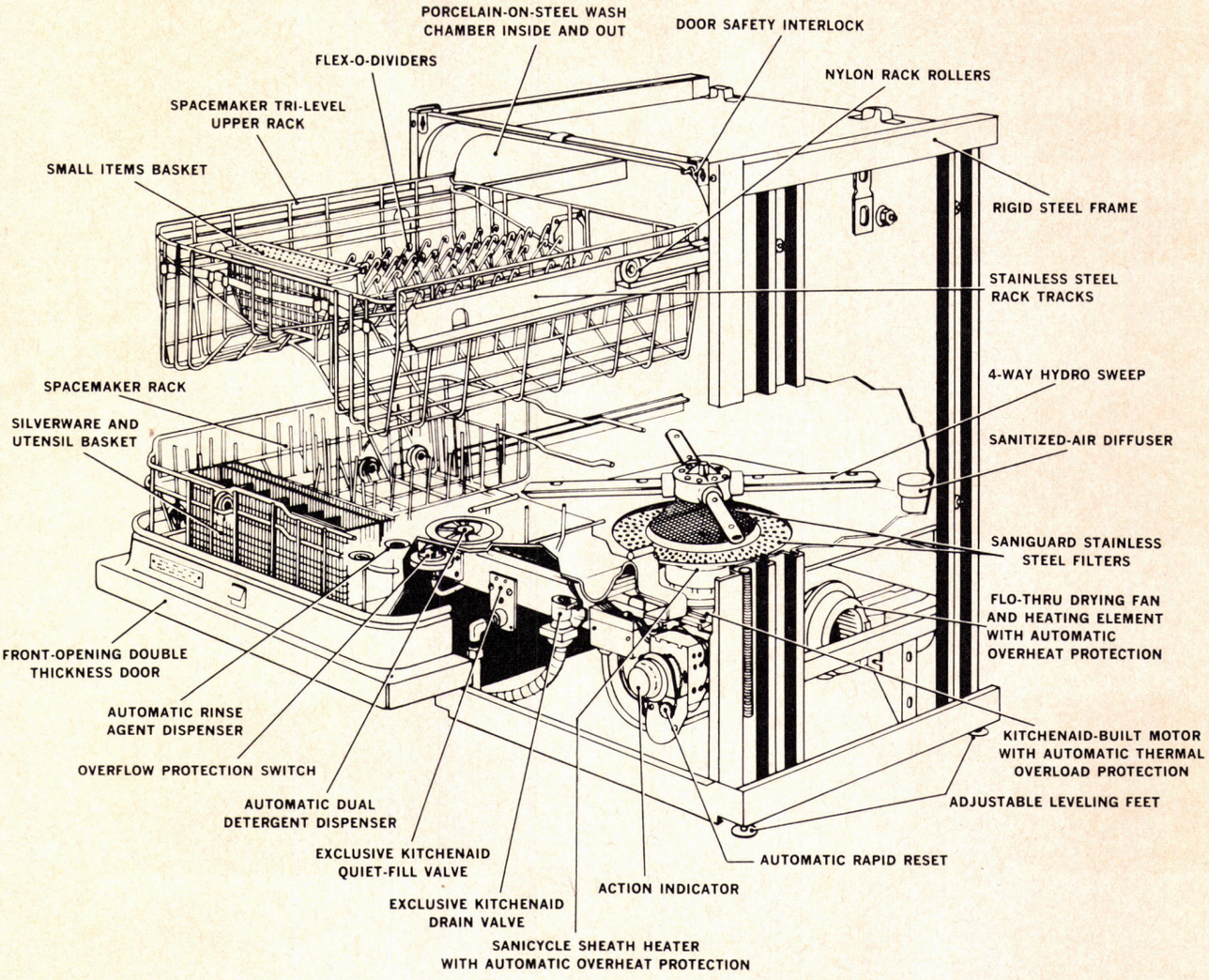

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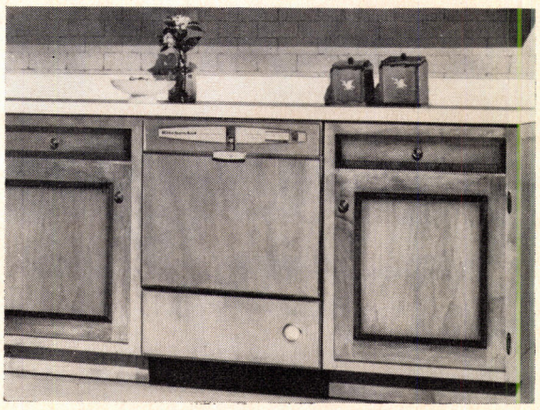

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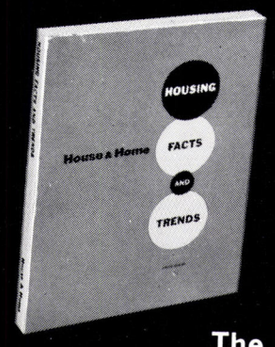

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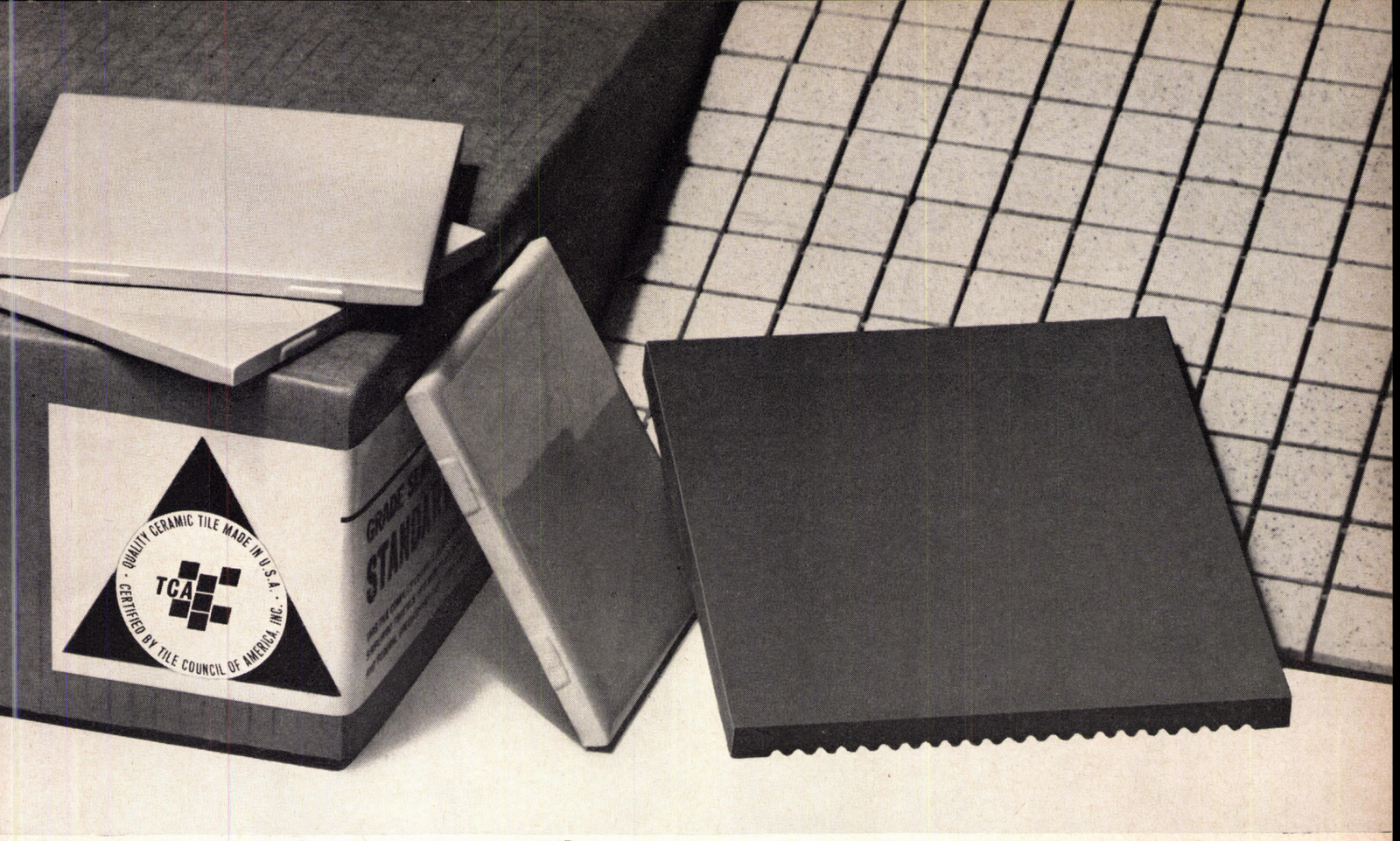

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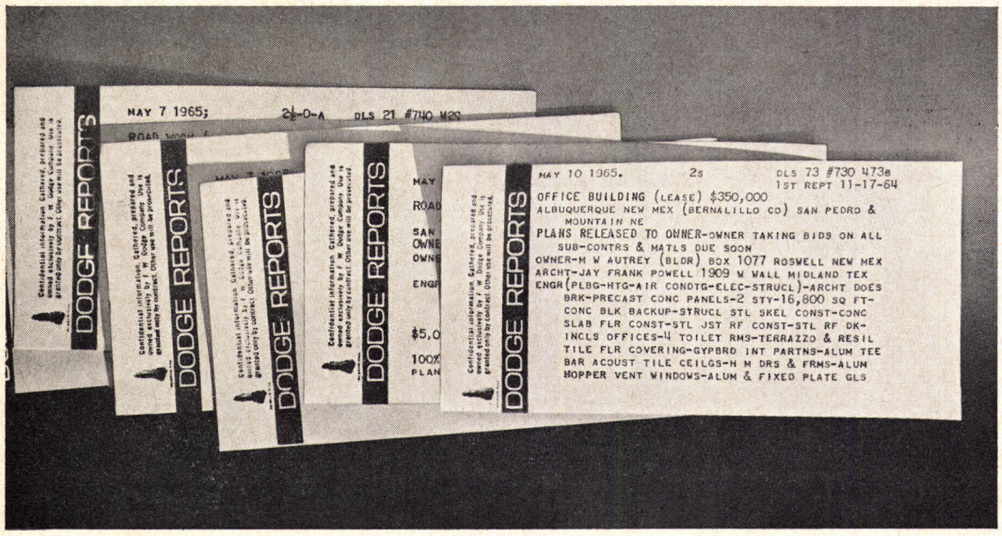

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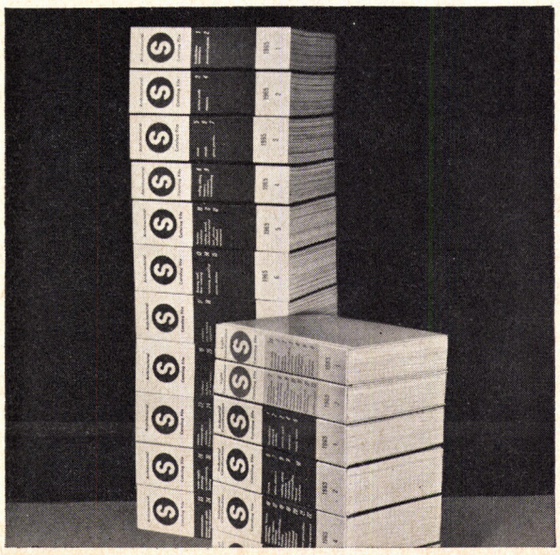
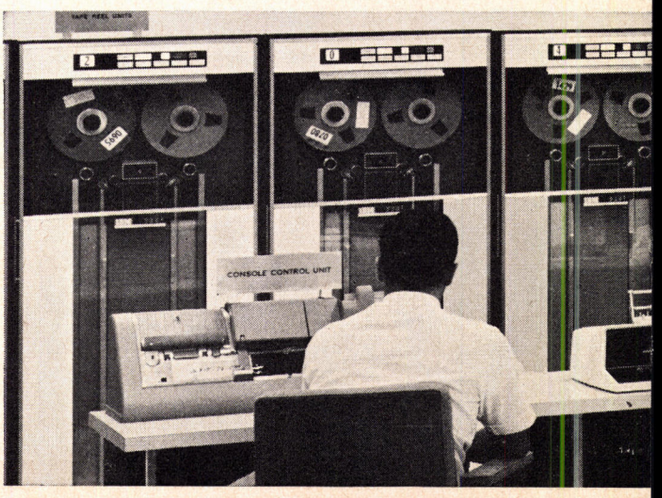


SALES MANAGEMENT TOOLS for firms selling to new construction. Construction Activity Statistics and descriptions of individual projects are combined in tailor-made sales management information systems to provide guidelines for establishing territorial potential, deploying manpower, evaluating performance and forecasting future demand. More than 1400 regional and national companies now employ Dodge Marketing Systems at national, district and field selling levels. In planning marketing strategy to the construction industry there is no substitute for . . .

Dodge Construction Statistics

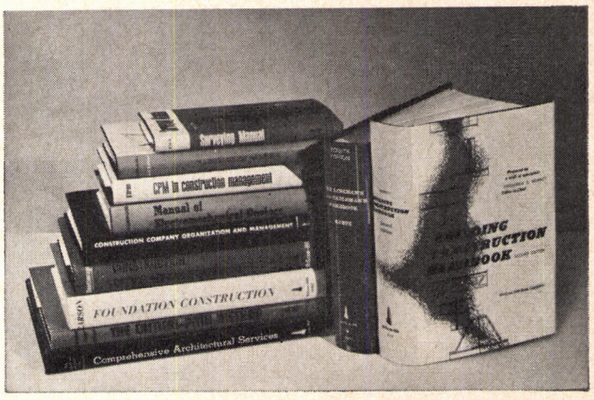


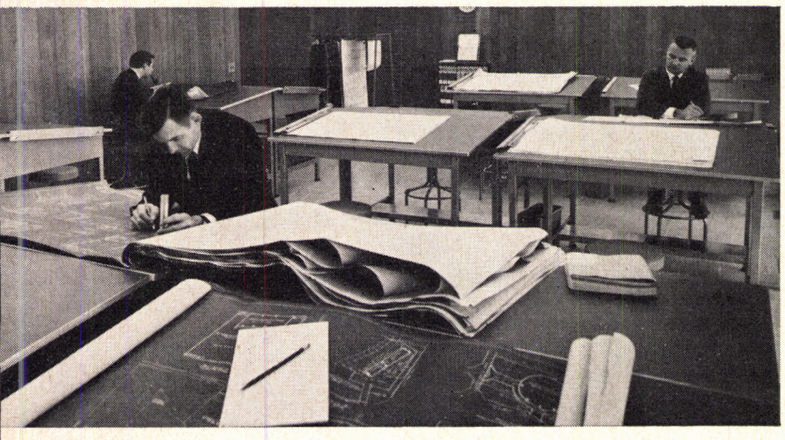
INDUSTRY NEWS, data, new product developments and applications through 7 well-known McGraw-Hill Publications. Business leaders get news and information about industry, finance and government through *Business Week* (circulation 448,411), America's leading general business magazine. Contractors and engineers rely on *Engineering News Record* (circulation 89,229) and *Construction Methods and Equipment* (circulation 51,696). Architects, designers and specification writers depend on *Architectural Record* (circulation 42,124), leading publication in its field. Home builders read *House and Home* (circulation 132,534), for news and trends of the industry. Electrical contractors and distributors subscribe to *Electrical Construction and Maintenance* (circulation 51,522) or *Electrical Wholesaling* (circulation 13,291).

McGraw-Hill Publications

SPECIALIZED TECHNICAL BOOKS covering standards, theory, application data for the entire industry. Illustrated below are a select few of the many familiar McGraw-Hill Books which are found in the libraries of professionals of all types in the construction industry . . . to train personnel, to design, to select materials and to establish construction standards.

McGraw-Hill Technical Books

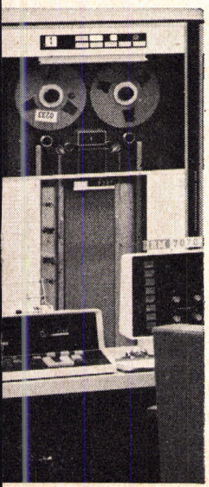




THOUSANDS OF ARCHITECT PLANS and specifications are available in Dodge Plan Rooms. To help material suppliers and subcontractors figure current jobs out for bids, Dodge now maintains more than 100 Plan Rooms in principal cities in 38 states — and will soon open additional rooms in strategic spots in Arizona, Nevada and Southern California.

This service to the construction industry speeds up the bidding process; saves countless hours of valuable time; simplifies communications between architect and potential subcontractors and suppliers. Each year, many thousands of plans and specifications on important construction projects are filed by architects in . . .

Dodge Plan Rooms



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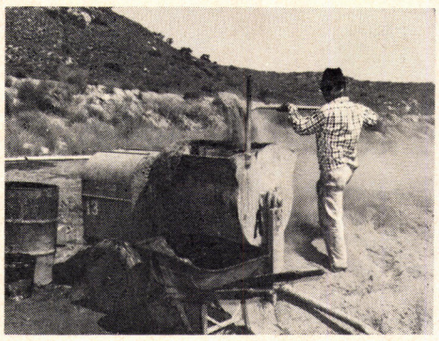
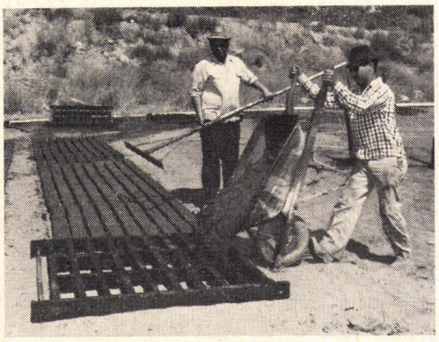


1. Adobe mixer uses soil from building site.

2. Oil emulsion and water are added to soil.



3. Mixture is poured into open wood forms.

4. Forms are removed after partial drying.

Milt Hyman

ADOBE WALLS and roof give Pala Mesa house a rugged-looking, and rugged-wearing, exterior.

Adobe brick makes a community-size comeback

Pala Mesa Village is the community, and its 300 Spanish-contemporary houses will have not only adobe-brick walls but adobe-shingled roofs as well. Like the original Indian method, the adobe components are made by hand from clay soil at the building site (Fallbrook, Calif.).

Builder-developer Dean Miller is reviving the ancient building material not because it's cheap, but because it has merchandising appeal. By promoting Pala Mesa as the first all-adobe community of modern times, Miller is attracting between 1,000 and 2,000 visitors on weekends and 200 to 250 on week days.

Adobe, the way Miller is using it, costs 20% to 30% more than conventional construction. All the Pala Mesa houses have frame walls so the adobe brick is used only as veneer. On roofs, the adobe is sculptured to simulate shake shingles and applied over three layers of 15-lb. felt. But because Miller can compensate for higher building costs with low-cost land, house prices are reasonable—$22,850 to $26,850 for 1,400 to 1,800 sq. ft.

Modern adobe (made from clay, sandy clay and silty clay) is actually better than the kind the Indians made. An oil emulsion bonding agent was developed 15 years ago which improved adobe's durability to the satisfaction of most building standards. Forms are removed soon after pouring and the bricks cure under the sun in 30 days.

Which heating system is better —baseboard or radiant ceiling?

Neither, says a new report from the University of Illinois Small Homes Council-Building Research Council. They distribute heat equally as well and they consume equal amounts of electricity.

University researchers actually compared three kinds of electric heating systems—baseboard, ceiling cable and high-density glass ceiling panels—in a split-level house during two heating seasons.

They found that cyclic temperature variations were affected more by the type of thermostat used than by the type of heating system. When controlled by low-voltage thermostats, the variation was not more than 1°F for any of the systems.

Vertical temperature variation between the levels of 4″ and 92″ at room center was the same for each system—between 1°F and 2°F per 15°F indoor-outdoor temperature difference.

Horizontal temperature variation at the 30″ level (excluding the space within 2′ of outside walls) was also comparable for the three systems—not more than 2°F.

The report—No. 65-1—offers many tested suggestions for making the heating systems operate more effectively.

Plastic foam on steel siding—another way to skip sheathing

Ryan Homes of Pittsburgh applied the steel clapboards directly to the studs and had the inside surface sprayed with a continuous 1″-thick layer of polyurethane foam. Result: thermal insulation, sheathing and sound deadener all in one coat of plastic.

But don't dash out looking for a supplier—the system isn't ready for the general market yet. Ryan is just trying it out in a new-product showcase house. Before the system can begin to compete with a conventionally insulated wall, the application technique needs perfecting. Two men with one spray gun spent 6½ hours coating the Ryan house, a three-bedroom split-level. The supplier, Callery Chemical Co., wants to cut that to four hours so an applicator could do two houses a day.

Getting acceptance should pose no problem. Polyurethane foam received FHA approval over a year ago as factory-sprayed insulation on aluminum siding.

New products start on p. 115

"If you are looking for a sure way to add fresh buyer-appeal to your homes try EXTERIOR DECORATING WITH CONCRETE"

Says Harold O. Klopp, well-known landscape architect and chief consultant to the Chicago World's Flower Show

An important trend today is to total homesite living. Home buyers are looking not only at interiors but at exterior features. They want charm in the home surroundings. For promotion-minded builders the need is answered effectively by Exterior Decorating with Concrete —a new concept in the decorative use of concrete.

It starts with the basic units of any home setting—drives, walkways, patios designed in wholly new and unusual patterns. It means special "designer touches" that give character and distinction.

Concrete is infinitely versatile. It can be patterned, shaped, colored in a thousand ways to fit the personality and style of any house, any landscaping plan and arrangement of plantings. Installed at the model home, decorative features in concrete can readily be offered as options or a part of the package.

On this and the following three pages are shown ideas for decorative uses of concrete developed by landscape architect H. O. Klopp for homes in the $18,000 to $30,000 range. They give you a good idea of the exciting possibilities of exterior decorating with concrete.

"Turning a yard into a selling feature is simple with concrete." In this design, Mr. Klopp shows a walk of precast concrete rounds set in exposed aggregate concrete made with black Japanese pebbles. This contrasts beautifully with a driveway landing strip of brushed and scored white concrete. A separate "sneak path" of black precast rounds adds interest to the house entry. These designs and surface effects, as well as innumerable others, can be easily and economically duplicated by a builder's own finishing crews.

"Make it a decorative driveway . . . use concrete to add drama!" says Mr. Klopp. Here, a natural concrete surface is given interest, a new look, with a bold pattern of redwood divider strips. Adjoining walks supply an appealing contrast with surfaces of black concrete, broom finished and scored in random rectangles. There's no limit to the ideas that can be created. Exterior decorating with concrete can add unique sales appeal to homes in any cost range.

"I look on concrete as a decorator material for outdoor living features, as well as a construction material.

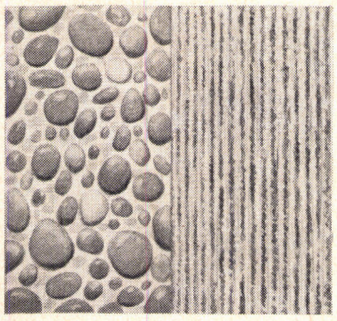
Most builders have thought of concrete pretty much in terms of its strength and durability and its popular structural uses in homes—and with good reason. But, today this viewpoint is changing. As a landscape architect, I'm really enthusiastic about the striking decorative effects and beauty that concrete can produce. Actually concrete meets the three basic needs in any decorating—texture, color and form. And this is what gives such limitless potential to exterior decorating with concrete."

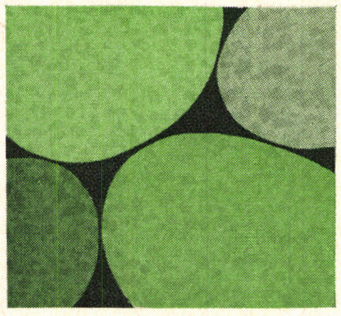
Texture
Color
Form

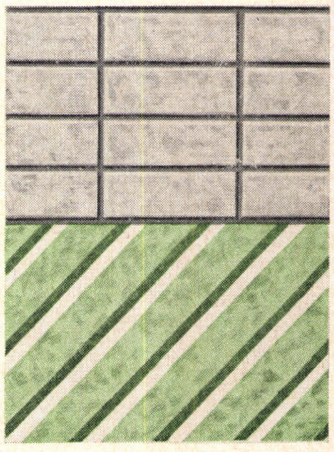
In using concrete decoratively, there's practically no end to the beautiful and unusual effects you can get. Surface texture can range from toppings of sparkling chips or fine pebbles to inlaid stone, to broom, comb or burlap drag patterns.

Color? Mix it right into the concrete—pure white to jet black and all the bright hues in between. And concrete takes any contour so it can be formed and tooled to fit every decorative need and idea.

Out of the material itself grows this whole idea of exterior decorating with concrete—and the exceptional opportunity it offers any builder to add a new distinction and competitive selling advantage to his homes at a realistic cost.



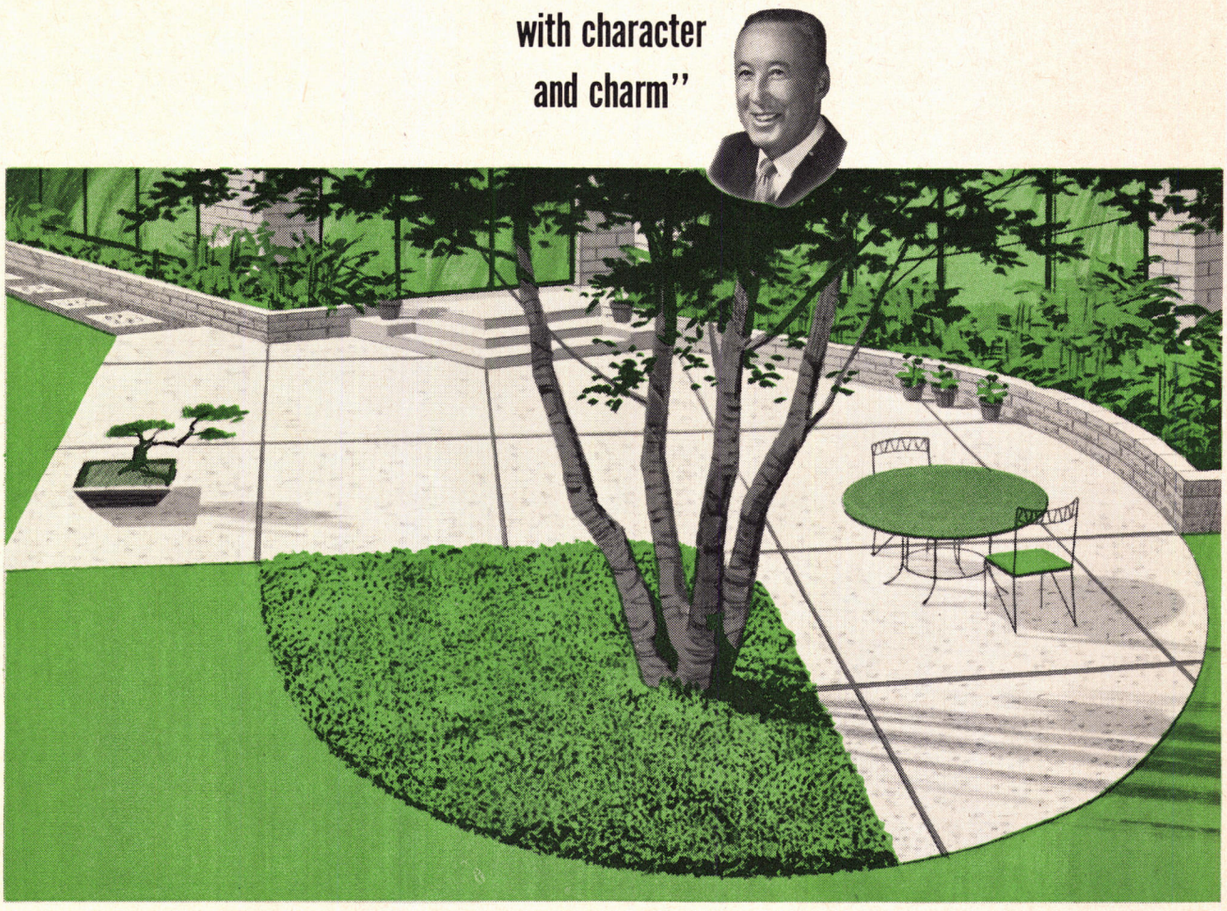




In the sketch below, Mr. Klopp shows how simple but effective use of angles, curves and surface texture creates a concrete patio that's distinctive and high on livability. It also provides a handsome setting for plants and flowers.

The patio itself is exposed aggregate concrete with redwood dividers. It's bordered by a low planting wall of split-block concrete masonry. The garden walk, too, is textured—in squares of exposed aggregate concrete, set in loose matching aggregate.

"A patio can be an 'outdoor living room' with character and charm"



FOR MORE INFORMATION

Write .....▶

Ideas unlimited. For suggestions and assistance in developing distinctive uses of decorative concrete, call on your ready-mixed concrete producer or your local PCA office. They can also provide any needed technical information. For free booklet on the newest ways of finishing concrete, write the address below. (U.S. and Canada only.)

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Dept. A10-94, 33 West Grand Ave., Chicago, Illinois 60610

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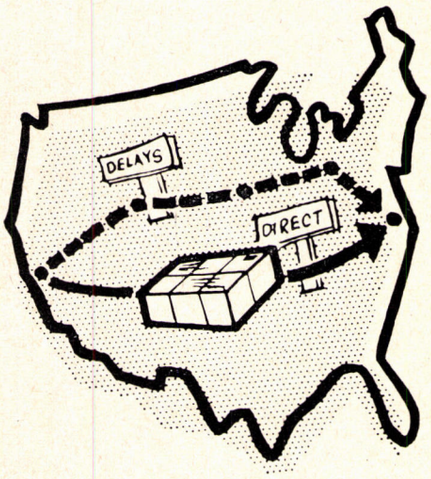

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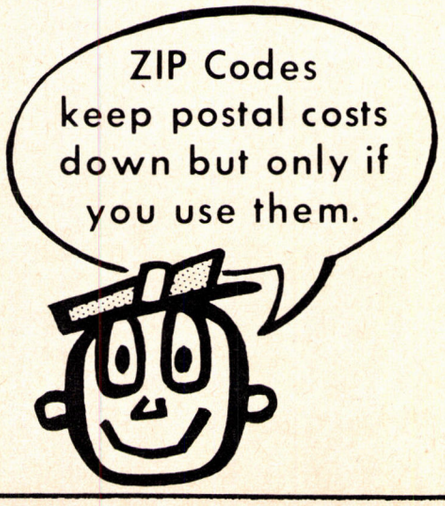

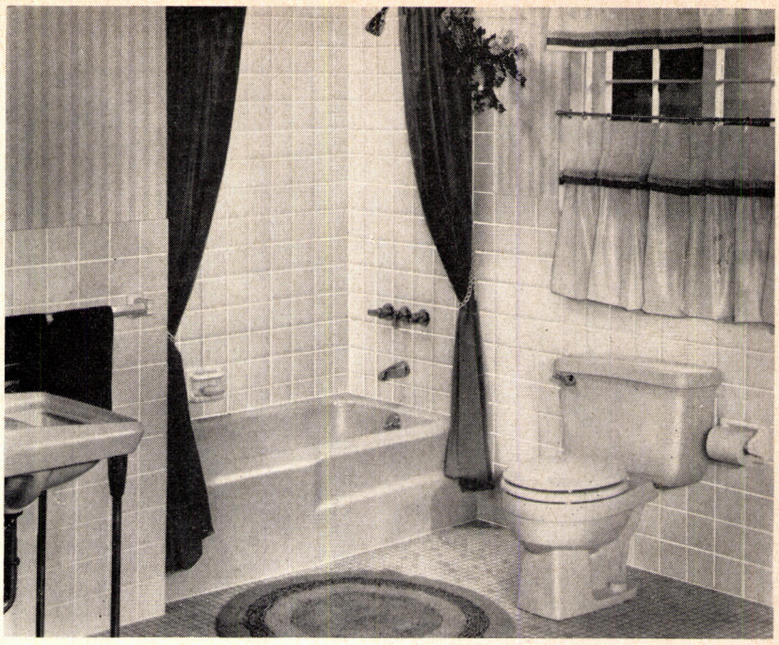

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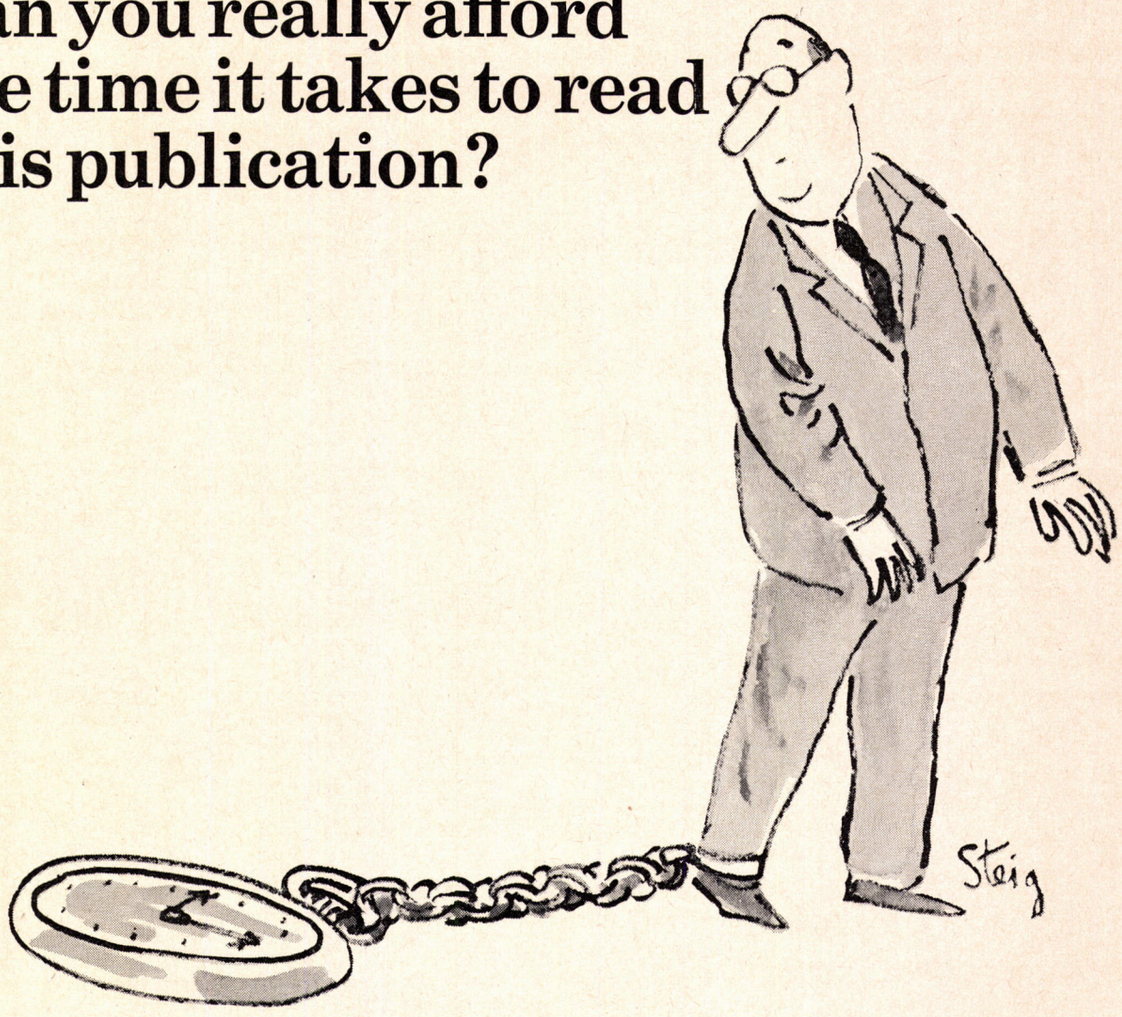

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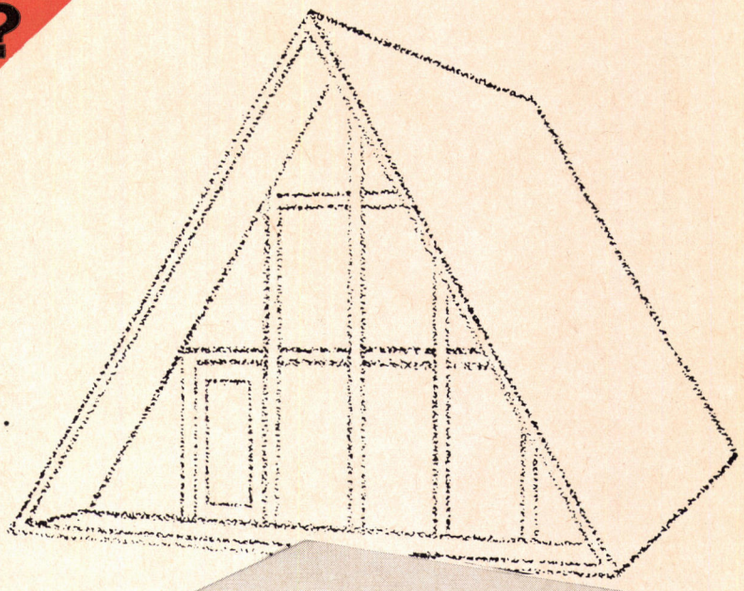

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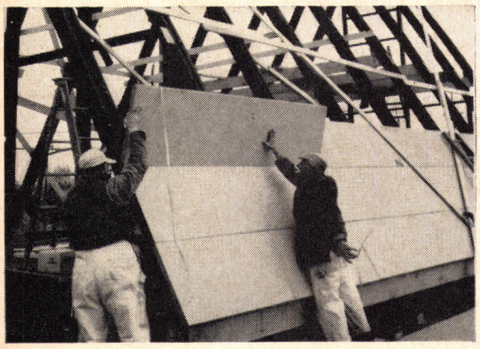

T & G panels, 2′ x 8′, serve as decking and sidewall for this A-frame with 48″ o.c. spans. Interior surface can be factory-coated in white, beige or special color to order—with vapor barrier and vinyl film or white kraft surface.

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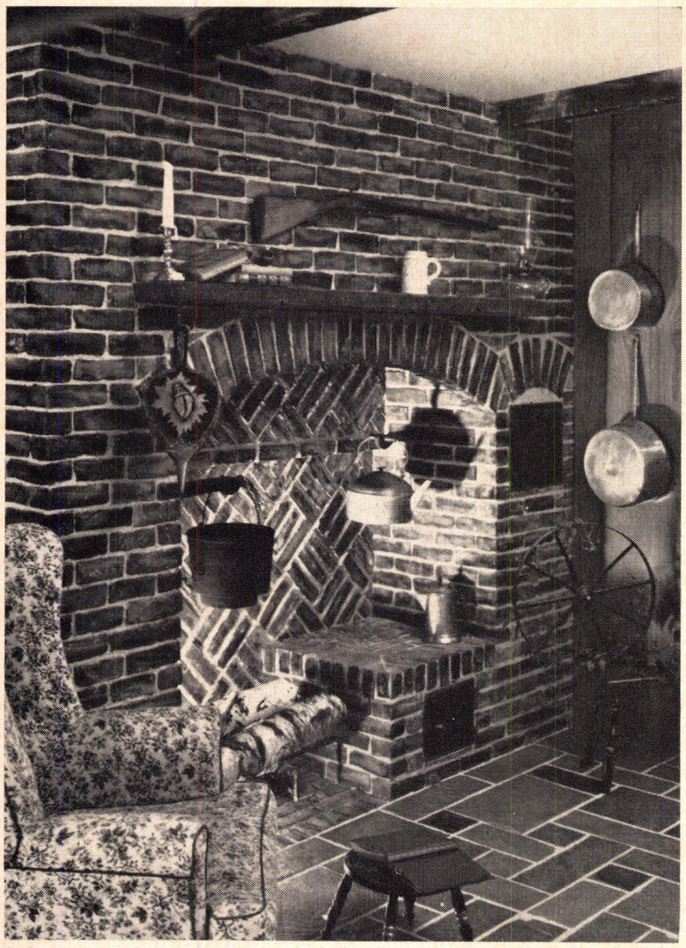
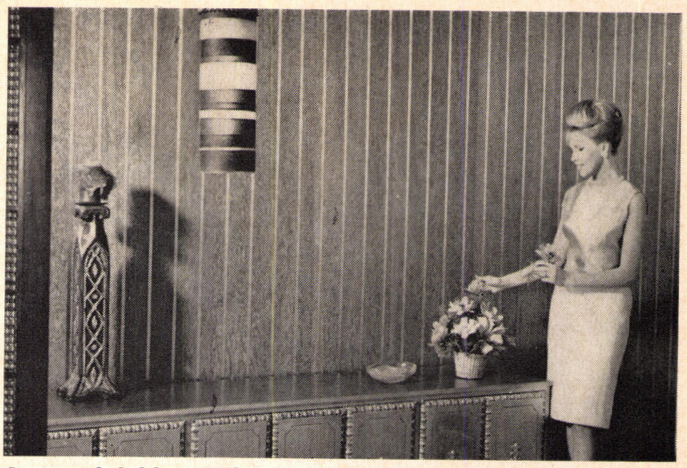
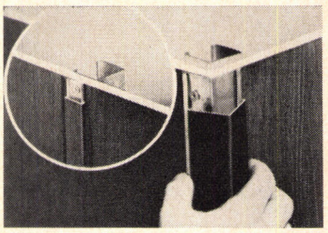
Interior materials



Brick substitute is installed with a mastic that looks like cement when dry. Waterproof bricks are available in four color-fast shades for indoor or outdoor use. Rough and smooth finishes are offered. Dacor Mfg., Worcester, Mass. *Circle 201 on Reader Service card.*



Copper inlaid paneling made of ½" copper strips set in fir plywood comes in 4'x8'x¼" size. The wood has patterns of small perforations and is factory finished in a Sun-Tan shade. Georgia-Pacific, Portland, Ore. *Circle 202 on Reader Service card.*



Battens and corners are made of vinyl-surfaced aluminum in woodgrain patterns to match manufacturer's Durasan line. Snap-on accessories have one-hour fire rating when used with ⅝" Fire Shield panels. National Gypsum, Buffalo.
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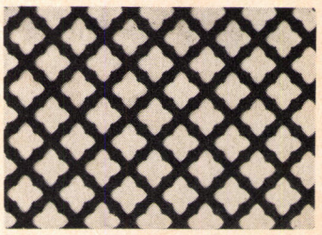

Filigree hardboard has 54% open area. The manufacturer suggests use for closets, louvers, patios, folding screens and room dividers. The Gothic pattern is available in panels 4'x8'x8" thick. Hardboard Fabricators Corp., Newark.
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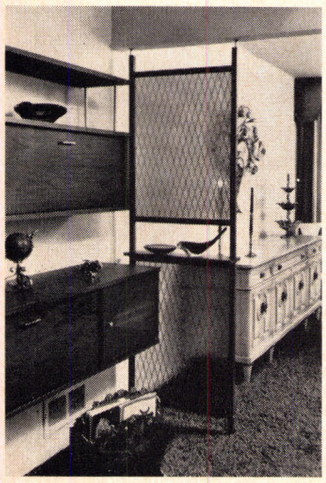
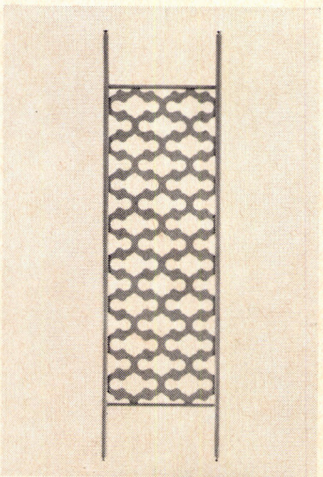


Room dividers have embossed translucent polystyrene insert panels framed in wood mouldings. Two designs are available—one with a circular and one with a diamond-shaped pattern. Both styles come in olive and amber. Panelboard Mfg., Newark.
Circle 205 on Reader Service card



Carved wood panels have sculptured coved edges on both sides. Any size may be cut from the 24"x72"x½" panels because pattern is continuous. The particle board panels are available in two patterns. Angelus Consolidated Inds., Los Angeles.
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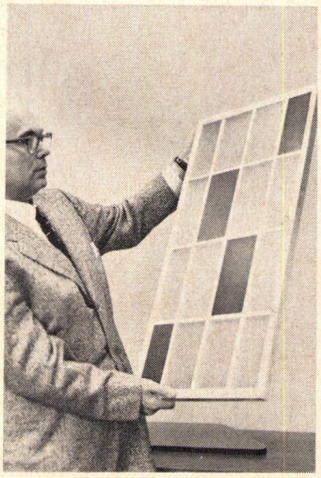

Sandwich-type panels, called Danalite, are made of glass-fiber reinforced acrylic modified polyester. The panels come in thicknesses of ⅝", 1", 1½" and 2". According to the maker, the material is shatter resistant. Dane Corp., Elk Grove, Ill.
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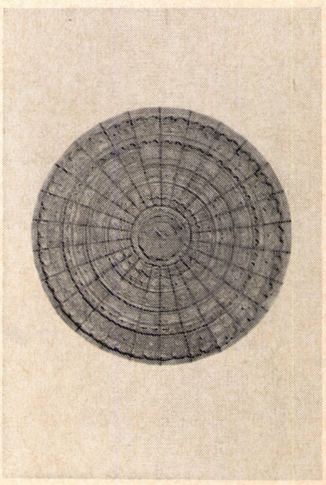
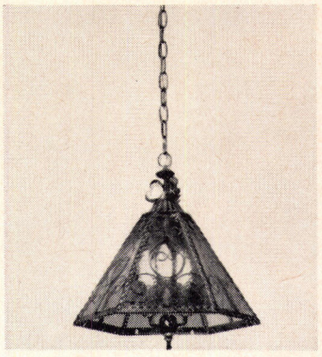


Wall sculpture creates a solar landscape effect through use of concentric rows. Available in sizes from 2' to 10' suitable for both exterior and interior use. Several finishes are offered. Arts for Architecture, Garden City Park, N.Y.
Circle 208 on Reader Service card

products continued on p. 116

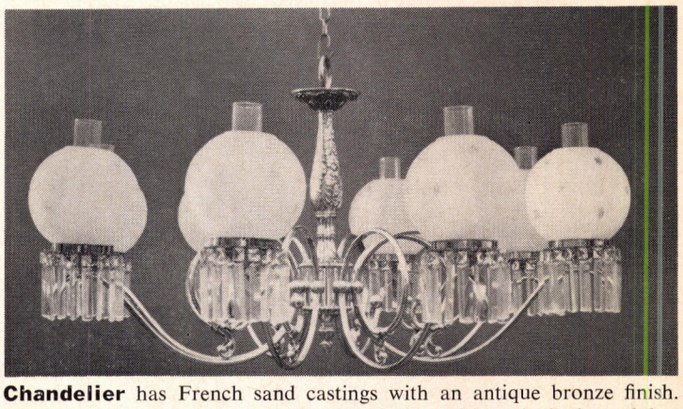
Lighting

Pulldown, called Contempora, has a shade of walnut strips laminated to fiberglas. The fixture includes a plastic diffuser, a three-way switch and polished brass chain. Size: 19″ in diameter, 20″ to 56″ in length. Progress, Philadelphia. *Circle 209 on Reader Service card.*

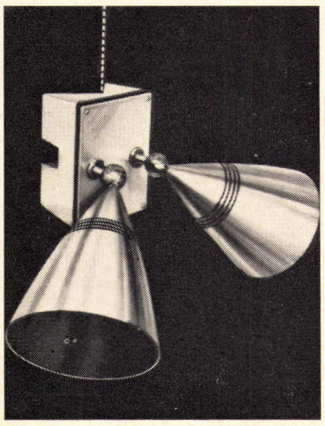


Chain-hung fixture has alternating panels of blue, lilac and amber textured glass set in antique bronze. Metal scroll work covers each of the six panels. Unit accommodates three 40 watt candelabra base lamps. Thomas Inds., Louisville.
Circle 210 on Reader Service card

Hall light is made of cut beveled glass with a polished brass finish. Model #2040 is designed for four light bulbs in candelabra sockets. Unit is 7¾″ in diameter, 15½″ high and has an over-all length of 43″. Artolier, Garfield, N.J.
Circle 211 on Reader Service card



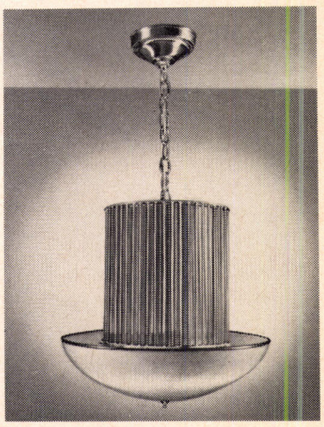
Chandelier has French sand castings with an antique bronze finish. Model LD 22C is made up of eight lamps with etched glass globes above 4″-long Bohemian crystal prisms. Arco Lighting, New York City. *Circle 212 on Reader Service card.*



Corner lights for outdoor use provide two-way lighting. Fixtures are made of die-cast aluminum said to be weatherproof. Series is available with on-off photo-controls for automatic dusk-to-dawn lighting. Stonco Electric, Kenilworth, N.J.
Circle 213 on Reader Service card

Foyer light has eight lightly tinted amber glass panels set in an antique brass frame. Unit has leaf-pattern scroll work at top and bottom. Model M-2806 is 11½″ wide and extends at maximum to 42¼″ from the ceiling. Thomas Inds., Louisville.
Circle 214 on Reader Service card

Post-top luminaires for exterior lighting are available in four styles. An open space between the lamp housing and the ballast directs light downward and allows ease of repair, according to the manufacturer. Landmark Lighting, Southaven, Miss.
Circle 215 on Reader Service card



Insect-killing fixture has vertically spaced electrified steel grids. A glass-fiber catch tray is included. Unit can be mounted in standard ceiling outlets and is said to protect from 800 to 1,000 sq. ft. of area. Gardner, Pompano Beach, Fla.
Circle 216 on Reader Service card

New products continued on p. 120

It's that revolutionary

Paslode Gun-Nailer® drives 7,000 nails per hour!

Touch trip safety is standard equipment

Nails 2,000 square feet of 1″ x 6″ sheathing per hour!

■ One man and a Paslode Gun-Nailer pneumatic nailing tool can readily nail 2,000 square feet of 1″ by 6″ sheathing on 16″ centers per hour. This revolutionary on-the-job speed includes reloading the tool. The speed reduces the cost of nailing, and the Gun-Nailer's power to drive nails hard enough to pull warped boards tight improves the quality of nailing work. Proved dependable in two years of all-weather use. Tool weighs less than 8 pounds.

Write for data and where-to-buy information.

Use the Gun-Nailer® to reduce costs on:

Roof decks • Sheathing • Sub-flooring • Studs • Wood shingles • Siding • Bridging, soffits, form work, etc.

The Gun-Nailer drives regular 8d common or cooler and 6d common or cooler nails, with heads slightly modified to nest in clips. They are acceptable in FHA insured construction as equivalent to regular nails. They are *not* T-nails. It also drives galvanized nails 8d or 6d common; screw nails 2¼″ or 2″ long; short (2⅛″) 10d nails for diaphragm roof and shear wall construction.

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8080 McCormick Blvd., Dept. HH, Skokie, Ill.
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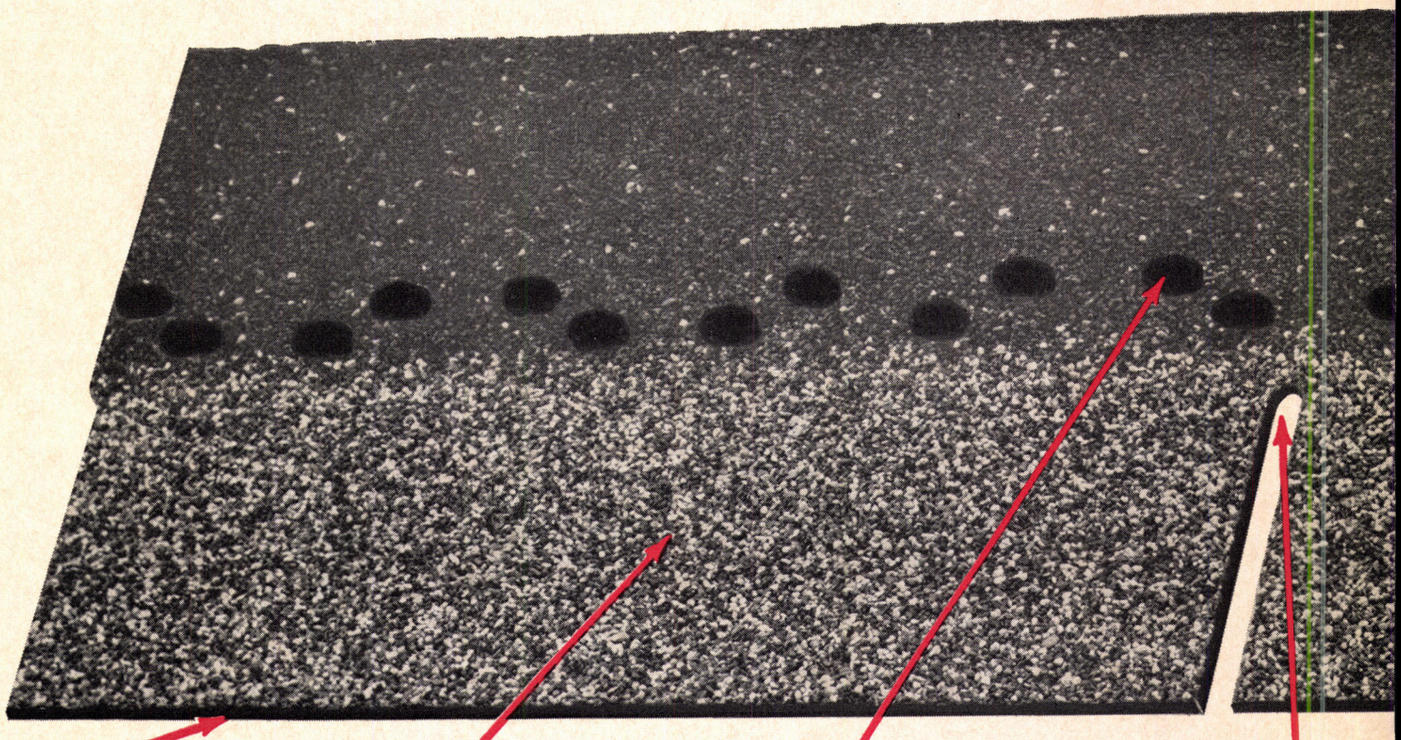
Look to Paslode for power to reduce fastening costs . . . Magnum® *Staplers drive staples up to 2″ long or 1 9/16″ wide •* ***Magnum®*** *T-Nailers drive T-nails or finishing nails up to 2″ long •* ***Mustang*** *Narrow Crown Staplers drive finishing staples up to 1⅛″ long •* ***Pinto*** *air tacker drives 9/32″ crown 30 ga. staples up to ⅝″ long •* ***Clipper*** *tool power-wraps steel clips around wires up to #2 gauge.*

Another "first" from Ruberoid...

New Ruberoid



New! 300# weight shingle—new long-life balance of finest quality roofing felt, asphalt saturant, coating and granules. Only SOVEREIGN has this perfect balance of ingredients.

New! Large #9 granules (instead of the ordinary #11) gives greater protection from damaging rays of the sun as well as a look of luxury.

New! Improved self-sealing to provide complete weather protection. Each tab solidly bonded down along its front edge in *12 places.*

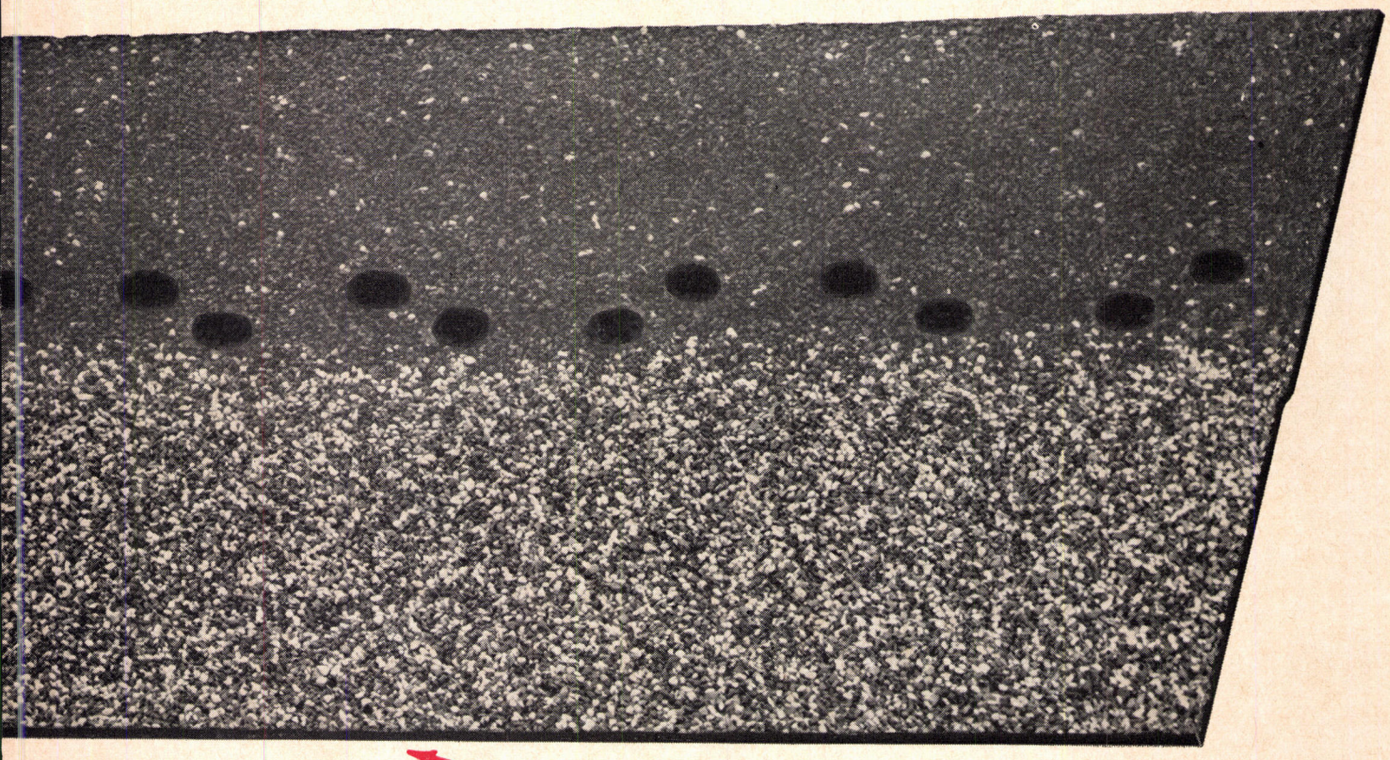
New! 2-tab construction adds to the heavy rugged attractive appearance home owners want.

Made to outperform and outlast ordinary asphalt roofing shingles by years!

Quality sells homes—value sells homes—beauty sells homes—and new SOVEREIGN has them all. Offer home buyers a distinctive appearance at a low asphalt roofing price. SOVEREIGN is virtually trouble-free. No wonder it's the "King of Asphalt Shingles": looks best, performs best. See it today at your Ruberoid dealer—or write to us for details. There's no obligation.

Sovereign®

asphalt shingle with the massive, distinctive look home buyers want!



New! Improved wind resistance tested in laboratory-produced winds that are *greater than hurricane force.*

New! Thicker butt gives a more solid look to roof. *Deeper shadow lines* accent the color, add to appearance.

New! Choice of 6 latest "trend colors" selected by Color Helm, one of the country's leading color experts, for roof beauty. (Ermine White, Oxford Tweed, Sherwood Green, Fawn Beige, Canyon Glow, Windsor Black.)

Now an anti-stick release strip on *back* of each Sovereign shingle...to protect the self-sealing adhesive and prevent sticking in the bundle. The "release" strip doesn't have to be removed. The shingles release from the bundle at once.

25 year WARRANTY

WRITTEN WIND WARRANTY

Underwriters' Laboratories, Inc.
LISTED
ROOFING MATERIAL
WIND RESISTANT
SHINGLES CLASS C
WHEN APPLIED IN ACCORDANCE WITH INSTRUCTIONS INCLUDED WITH THIS ROOFING
B21
1962 STANDARD ISSUE No. C-190,261

SOVEREIGN 25 YEAR WARRANTY. The RUBEROID Co. will maintain SOVEREIGN SHINGLE weathertight for 25 years against manufacturing defects when installed as directed on shingle wrapper. Total cost of repair or replacement not to exceed original shingle cost and to be proportional to years of use.

Notice of defect must be sent to RUBEROID, 733 Third Avenue, New York, N. Y., via registered mail within 30 days of its discovery and no steps taken to repair prior to RUBEROID's written assumption of costs.

WIND WARRANTY. When applied in accordance with the directions on the shingle wrapper the RUBEROID Co. will furnish shingles to replace any blown off by wind for 5 years from time of original installation. Other costs, damages, labor charges, etc., are not included.

RUBEROID

The RUBEROID Co., 733 Third Ave., New York, N.Y. 10017

Not all patio doors can display this selling shield.

safety shield door

HERCULITE® K TEMPERED SAFETY GLASS
PITTSBURGH PLATE GLASS COMPANY

Only safe ones.

And home buyers recognize the shield. Millions of people will see it in PPG's national advertising campaign, appearing May through October in *Reader's Digest, House & Garden* and *Sunset.*

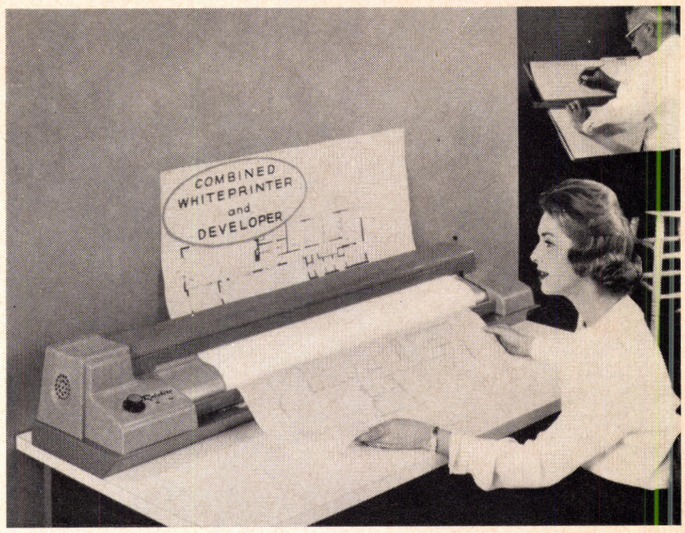
They'll be looking for the shield as a symbol of quality and value in the home you show them.

Specify HERCULITE® K Tempered Safety Glass in your sliding glass doors. Then you can display this nationally advertised safety shield, too. Get the shield—and safe doors—from your patio door supplier.

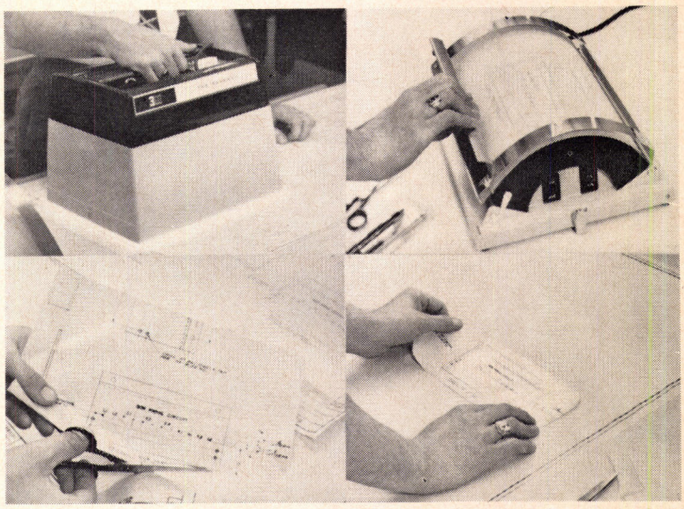
Pittsburgh Plate Glass Company
Pittsburgh, Pennsylvania 15222

PPG makes the glass that makes the difference

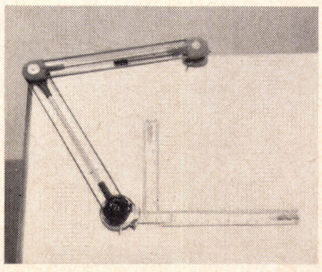
Office equipment



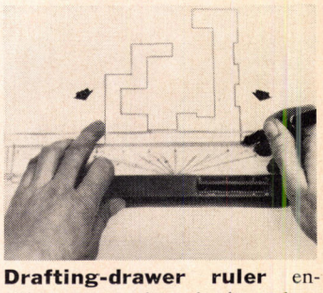
Whiteprinter and developer are combined in one unit. Copier prints 42″-wide drawings to any length. Unit can be table or wall mounted. According to the maker, electronic control provides uniform printing. Rotolite, Stirling, N.J. *Circle 217 on Reader Service card.*



Adhesive-backed translucency film reproduces from original drawing. Imaged portion of translucency is cut out, the back is peeled off and applied to new drawing. Carrying case for developer and unit is included. 3M Co., St. Paul, Minn. *Circle 218 on Reader Service card.*

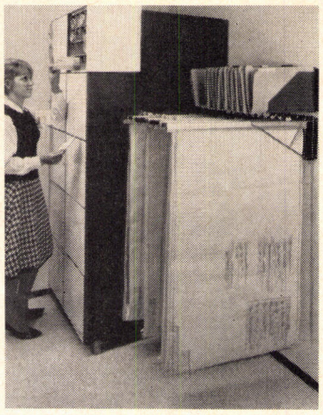


Drafting machine has stainless steel tension bands, adjustable disk brakes and can be raised to a vertical rest position. The drafter is said to be lightweight, dependable and precise. A two-year guarantee is given. C&M Co., Evanston, Ill.
Circle 219 on Reader Service card

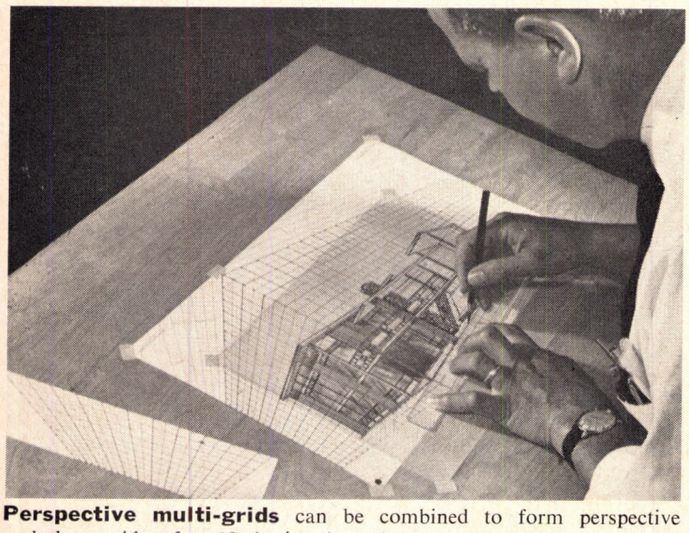


Drafting-drawer ruler enables user to draw horizontal or vertical lines without lifting rule from paper. Lines can be equidistant or varied distances apart. Graduations and indicator scales are clearly marked. Rol-Ruler, Riegelsville, Pa.
Circle 220 on Reader Service card

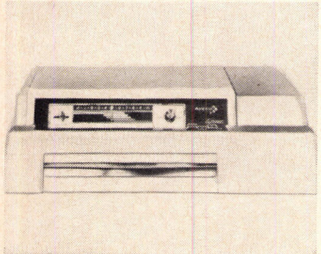
Plastic paper to be used in dry diazo equipment can withstand heavy day-to-day use. According to the manufacturer, if Diazotex is soiled, it can be rinsed and dried without wrinkling, curling or losing strength. Kimberly-Clark, Neenah, Wis.
Circle 221 on Reader Service card



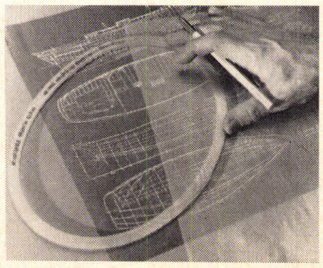
Plan files can hold up to 1,200 sheets. The unit requires 24″ of wall space and uses racks with friction binders. Another model is a rolling stand that moves on casters. Square-tube filing cabinets are also available. Plan Hold, Torrance, Calif.
Circle 222 on Reader Service card



Perspective multi-grids can be combined to form perspective underlay guides for 19 basic views in one-, two- and three-point perspective. Sets of eight panels come in two sizes: 11″ high and 22″ high. Graphicraft, Westport, Conn. *Circle 223 on Reader Service card.*



Photocopier eliminates the handling of developer solution and makes copies in one step, according to the maker. A plastic cartridge provides fresh developer as needed and a light signals proper solution level. American Photocopy, Evanston.
Circle 224 on Reader Service card



Adjustable French curve made of interlocking strips of plastic can be shaped by fingers to guide drawing of smooth, accurate curves. Inside edge of the unit is specially adapted for use with a ruling pen. Hoyle Engineering Co., Barstow, Calif.
Circle 225 on Reader Service card

New products continued on p. 124

Make your windows a selling point with these stars

The PPG TWINDOW® stars make your windows visible—remind home-buying prospects of the advantages of wood windows glazed with PPG TWINDOW® Insulating Glass.

The stars tell your prospects they'll never need storm windows. They'll have less fogging and frosting. Rooms will stay cooler in summer. And warmer in winter—for lower heating bills.

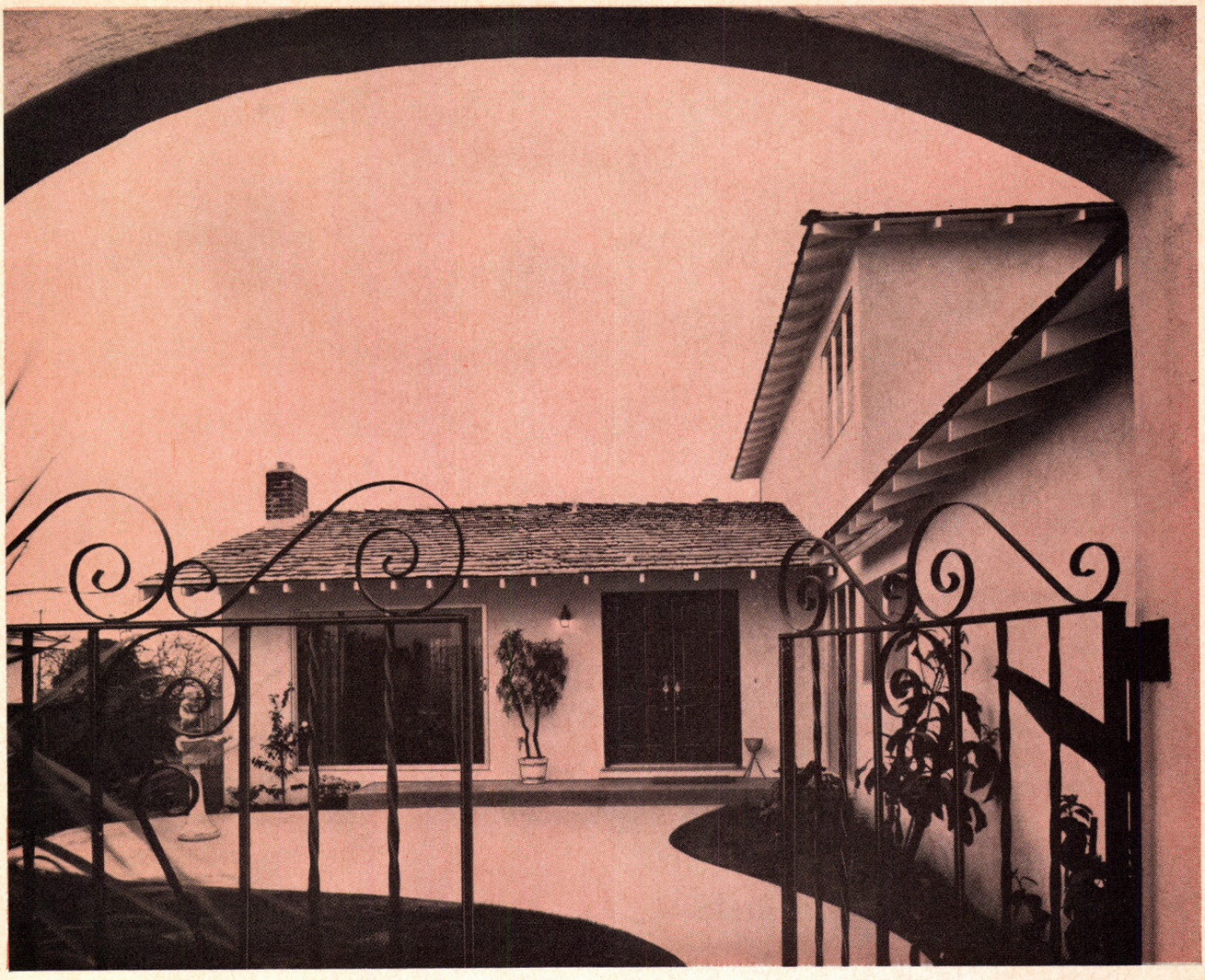
PPG is telling your prospects to look for the stars in your windows in a major advertising campaign from April through October in *Life* and *House Beautiful*.

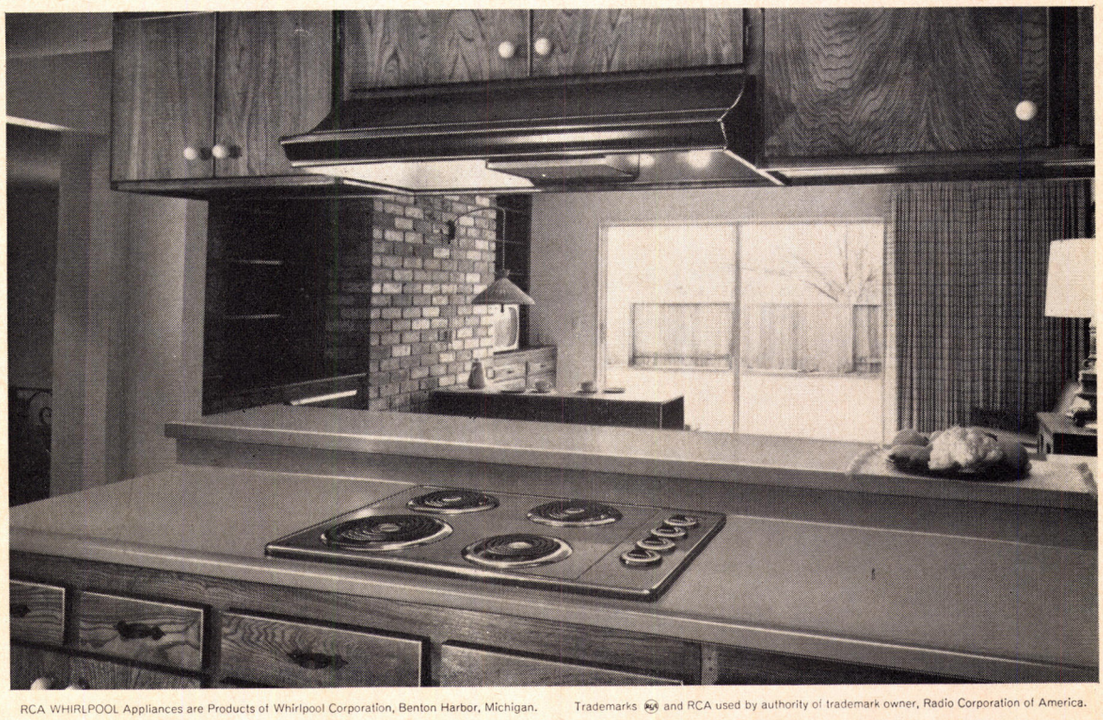
That's why it will pay you to feature TWINDOW® Glass Edge Insulating Glass in wood windows in your homes. Contact your wood window supplier today.

Pittsburgh Plate Glass Company
Pittsburgh, Pennsylvania 15222

PPG makes the glass that makes the difference

Circle 81 on Reader Service Card





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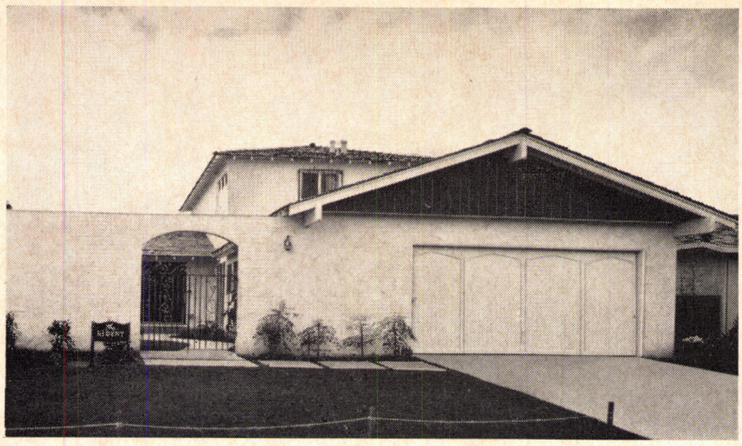
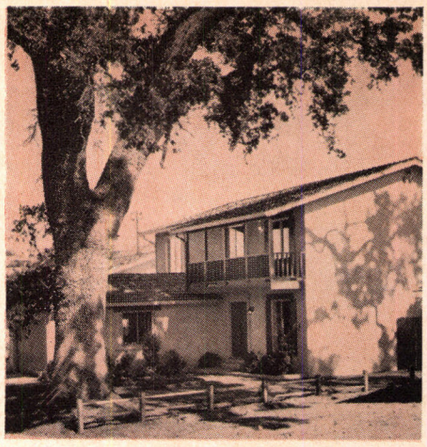
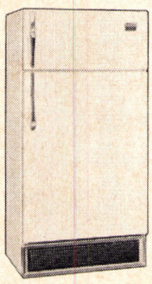


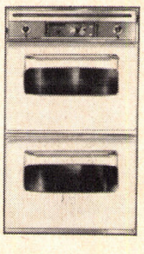


"WHIRLPOOL'S Full-Line Concept gives our homes more appeal and sales flexibility"

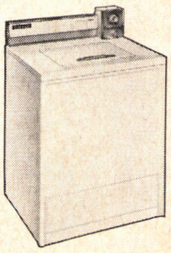
. . . says Jules Duc, Jr., President, Duc & Elliot, San Jose, California

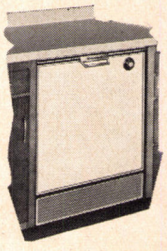
All of the homes and apartments of this very successful California builder have contained from one to six RCA WHIRLPOOL appliances. According to Mr. Duc they've increased the sales value of their units by upgrading the kitchen appliances to meet the consumer demand—like RCA WHIRLPOOL refrigerators with IceMagic® automatic ice makers, built-in double ovens and cooktops, built-in dishwashers that can do an entire day's dishes at once, food disposers with insulated sound shields, automatic washers with self-cleaning filters, plus many other fine appliances.





In 1958 when the Duc & Elliot Co. was formed they decided to build—not just homes—but fine communities. Today, 8 subdivisions, 5,000 homes and 800 apartments later, Jules Duc is convinced it was the best idea they ever had. In fact, that's the name of the firm: Duc & Elliot Builders of Fine Communities. Some building innovations that have helped sell their homes so fast have been: sunken family rooms overlooking a garden, free decorator service, Spanish designs with adobe-walled courtyards, dramatic use of stone and cathedral-stained glass, courtyard entrances and more.





Like other successful builders, why don't you find out how Whirlpool's Full-Line Concept can save you time and paper work. You deal with one man, sign one order and receive undivided attention. Call your distributor today.

FULL-LINE CONCEPT

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gas and electric appliances

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This is IT...Home Building's World's Fair of 1965. Make your plans *now* to be here when the big 22nd Annual Convention of the National Association of Home Builders puts on display the sweetest array of home building materials, equipment and services you ever laid your eyes on.

See, what's "new under the sun" from over 450 exhibitors. Rub elbows with 30,000 live wire representatives of every phase of the home building industry — builders, architects, engineers, dealers and distributors. Participate in any of a wide range of thought-provoking programs on every phase of the home building industry. All this in five big days... from December 5-9.

For advance registration and hotel accommodations...contact your local Home Builders association or write:

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National Association of HOME BUILDERS Annual CONVENTION EXPOSITION Chicago December 5-9 1965
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Make your Reservations *NOW*
22nd Annual
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December 5-9
McCormick Place
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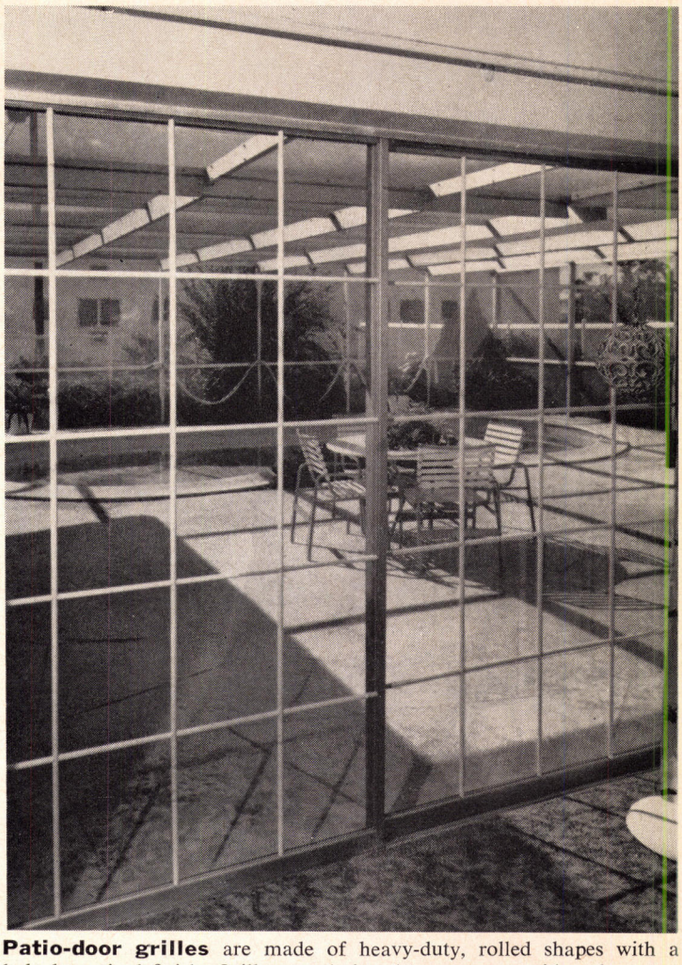
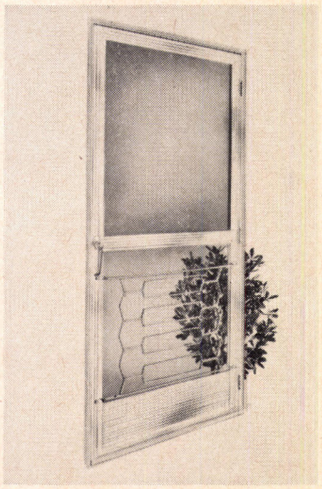
Doors and windows

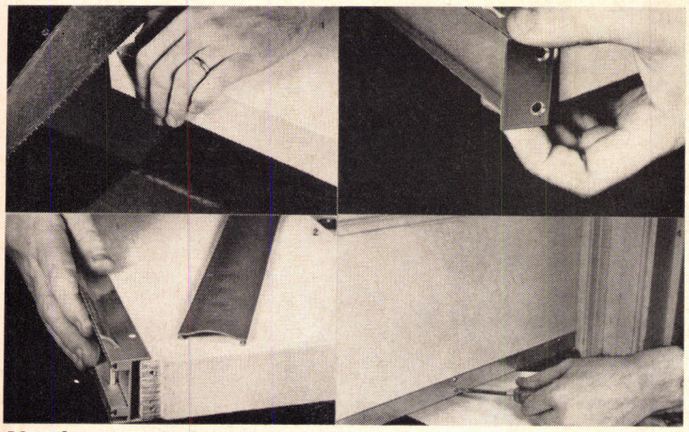


Patio-door grilles are made of heavy-duty, rolled shapes with a baked-on vinyl finish. Grilles are designed to prevent accidental contact with glass. White or aluminum finish is available. Crossly Window Corp., Miami, Fla. *Circle 226 on Reader Service card.*

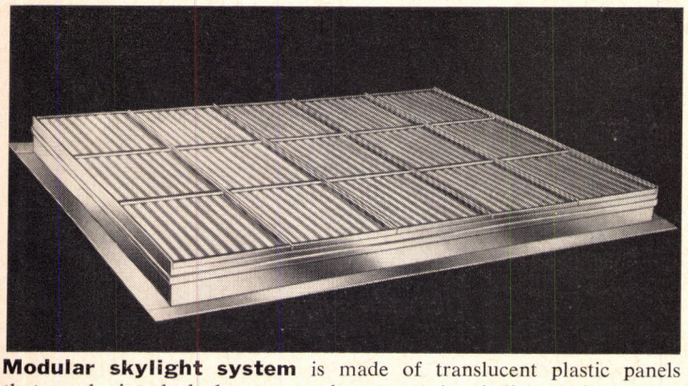
Bi-fold doors have mirror panels for full-length viewing. Panels mount as left and right center modules on all of manufacturer's bi-fold doors. Sizes available range from 2'x6'8" to 8'x6'8". Roberts Consolidated Inds., City of Industry, Calif. *Circle 227 on Reader Service card*



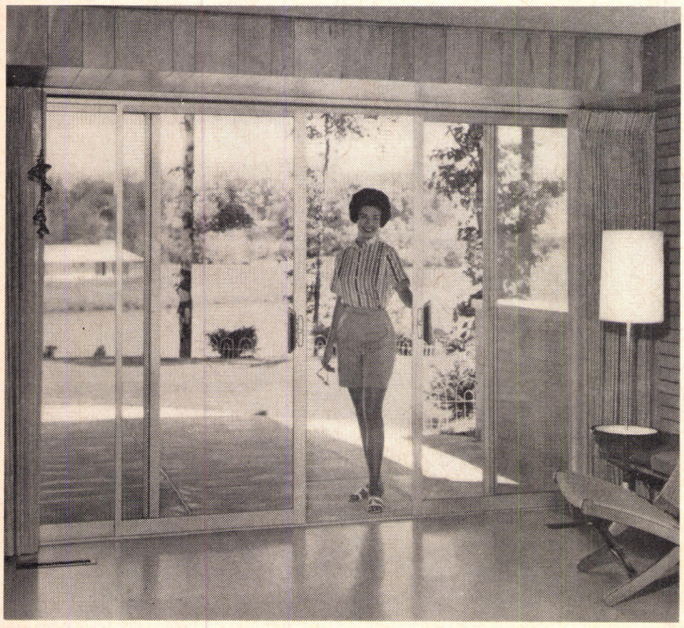
Aluminum screen door is prehung. Available in two permanently bonded finishes that will never stain, pit or discolor, the manufacturer says. Screen doors have three oilite hinges and better corner locks. American Screen Prods., Chatsworth, Ill. *Circle 228 on Reader Service card*



Aluminum and vinyl threshold seal is available in four models. Made of a heavy-gauge extruded aluminum frame, replaceable vinyl insert and two end caps, device can be adjusted to threshold irregularities. Central Metal Strip, Chicago. *Circle 229 on Reader Service card.*

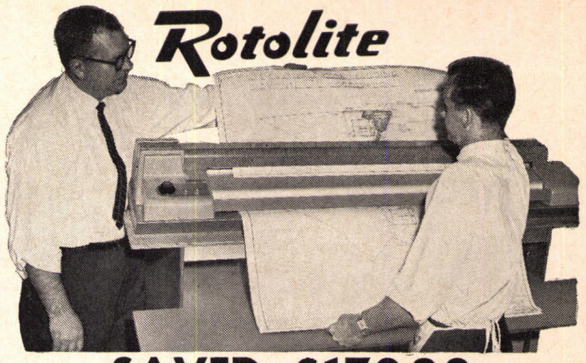


Modular skylight system is made of translucent plastic panels that can be interlocked to create almost any size skylight desired. Units have a 5" projection above roof line and come preassembled and waterproofed. Plastikool, Miami, Fla. *Circle 230 on Reader Service card.*



Aluminum sliding glass door has a standard 30-minute anodized finish and an insect screen. Series 100 can be adjusted after installation and has fixed and sliding panels that can be reversed. Sun Valley Inds., Atlanta, Ga. *Circle 231 on Reader Service card.*

New literature starts on p. 126



SAVED $170.28 on One Copying Job . . .

Gerald Heulitt, architect in Pompton Lakes, N. J. required 750 prints for a set of plans. Sheets were 24" x 36". Using the Rotolite Diazo-Jet, his direct costs were as follows:

3 packs paper	$62.16
12 hrs. labor @ $2.63	31.56
Ammonia	1.00
Electricity	1.00
Total cost	$99.72

If sent outside at 6¢ per sq. ft. the job would cost $270.

Summary: Cost if done by an outside shop	$270.00
Cost in his own shop	99.72
Savings on this one job	$170.28

Three jobs like this and he has almost saved the cost of his Diazo-Jet.

He also uses the Rotolite for all his office forms such as job sheets, applications, time sheets, certificates, etc.

Four years ago he started with an Economy Model Rotolite. During that time he tried other machines but they did not meet his standards for speed or ruggedness.

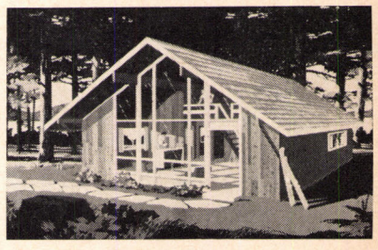
Prices start at $129.50.

WRITE FOR FREE CATALOG and PRICES OF 7 MODELS

ROTOLITE SALES CORP., 328 Essex St., Stirling, N. J. AJ-10

Circle 82 on Reader Service Card

TOPS FOR LEISURE HOMES



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NEW LITERATURE

For copies of free literature, circle the indicated number on the Reader Service card, page 111.

FOLDING DOOR HARDWARE. 12-page booklet describes tracks and shows typical installations. Specifications are included and accessories shown. Kennatrack, Canton, Ohio. *(Circle 301 on Reader Service card)*

FOAM JOINT FILLER. Specification sheet gives design, installation suggestions and application information about Rodofoam PVC joint filler. Electrovert, New York City. *(Circle 302 on Reader Service card)*

WOODWORK AND MOULDINGS. 8-page booklet illustrates use of patterned lumber for interiors. Western Wood Products Assn., Portland Ore. *(Circle 303 on Reader Service card)*

TUB KIT. Specification sheet pictures kit for wall areas above recessed bathtubs. Components of the kit are listed and available colors noted. Panelboard Mfg., Newark. *(Circle 304 on Reader Service card)*

WALL BRACKETS. Catalog shows over 90 indoor lighting styles. New hardware and materials discussed. Habitat, New York City. *(Circle 305 on Reader Service card)*

DISHWASHERS. 6-page brochure describes built-in washer and discusses features. Ten-year guarantee explained. Thermador, Los Angeles. *(Circle 306 on Reader Service card)*

LAVATORIES. 4-page folder describes self-rimming countertop lavatories. Advantages of fixtures discussed. Mansfield Sanitary, Perrysville, Ohio. *(Circle 307 on Reader Service card)*

SALES IDEAS FOR CONTRACTORS. 20-page manual outlines techniques for increasing sales, cutting selling costs and expanding operations. For copy: send $1 to Advertising Dept., Slant/Fin Corp., 130-15 89th Road, Richmond Hill, N.Y.

ALUMINUM LOUVERS AND VENTILATORS. 8-page catalog gives data on rectangular louvers, foundation vents, cupolas, roof louvers and others. Philip Carey, Cincinnati, Ohio. *(Circle 308 on Reader Service card)*

BATHROOM FIXTURES. 16-page catalog is condensed version of master catalog. Photographs and descriptions of products are included. Eljer, Pittsburgh. *(Circle 309 on Reader Service card)*

MOBILE-HOME HEATING. 16-page catalog gives specifications and descriptions of furnaces, air conditioners and water heaters. Coleman, Wichita. *(Circle 310 on Reader Service card)*

ALUMINUM CONDUCTOR. 4-page brochure describes properties, advantages and installation of KAFLEX for residential wiring. Kaiser Aluminum, Oakland, Calif. *(Circle 311 on Reader Service card)*

DURABLE CONCRETE. Sheet, listing do's and don'ts, discusses air content, concrete strength, water content, finishing and curing. Master Builders, Cleveland, Ohio. *(Circle 312 on Reader Service card)*

CAST-IRON BOILERS. 4-page brochure has specifications, drawings and descriptions of boilers available for medium and large residences. Hydrotherm, Northvale, N.J. *(Circle 313 on Reader Service card)*

BATHROOM FANS. 8-page catalog discusses four new fans. Wall and ceiling heaters and other fans also covered. Broan, Hartford, Wis. *(Circle 314 on Reader Service card)*

FILIGREE HARDBOARD PANELS. Folder shows decorative uses of hardboard including ceilings, sliding doors and built-in grilles. Masonite, Chicago. *(Circle 315 on Reader Service card)*

WALL COVERINGS. 4-page booklet shows 26 patterns available in Style Index, Volume Two. Murals & Wallcoverings Inc., Garden City Park, N.Y. *(Circle 316 on Reader Service card)*

UNDERLAYMENT. 4-page folder describes application procedures. Installation of underlayment over various bases is discussed. Masonite, Chicago. *(Circle 317 on Reader Service card)*

HOUSING FACTS. 200-page book entitled *H&H Housing Facts and Trends* contains tables and graphs covering current trends in housing economics, labor, materials and structural design. For copy: send $15 to Research Dept., House & Home, McGraw-Hill Inc. 330 W. 42nd St., New York, N.Y. 10036.

ELECTRIC HEATING. 4-page brochure entitled "Why more people don't have electric heating and cooling in their homes" answers questions about ducted system. Manufacturer's equipment also described. Armstrong Furnace Co., Columbus, Ohio. *(Circle 318 on Reader Service card)*

SHINGLES AND HANDSPLIT SHAKES. 4-page specification guide summarizes grades, sizes and shipping weights of rebutted-and-rejointed shingles, grooved sidewall shakes and handsplit shakes. Red Cedar Shingle & Handsplit Shake Bureau, Seattle. *(Circle 319 on Reader Service card)*

INCINERATORS. Booklet entitled "Apartment House Incinerators (Flue-Fed)" gives results of a technical study. Design criteria are included. For copy: send $2 to National Academy of Sciences, 2101 Constitution Ave., Washington, D.C. 20411.

ALUMINUM. 12-page booklet discusses results of a survey of consumers about aluminum siding. Reasons for purchases, dissatisfaction and dealer selection included. Alcoa, Pittsburgh. *(Circle 320 on Reader Service card)*

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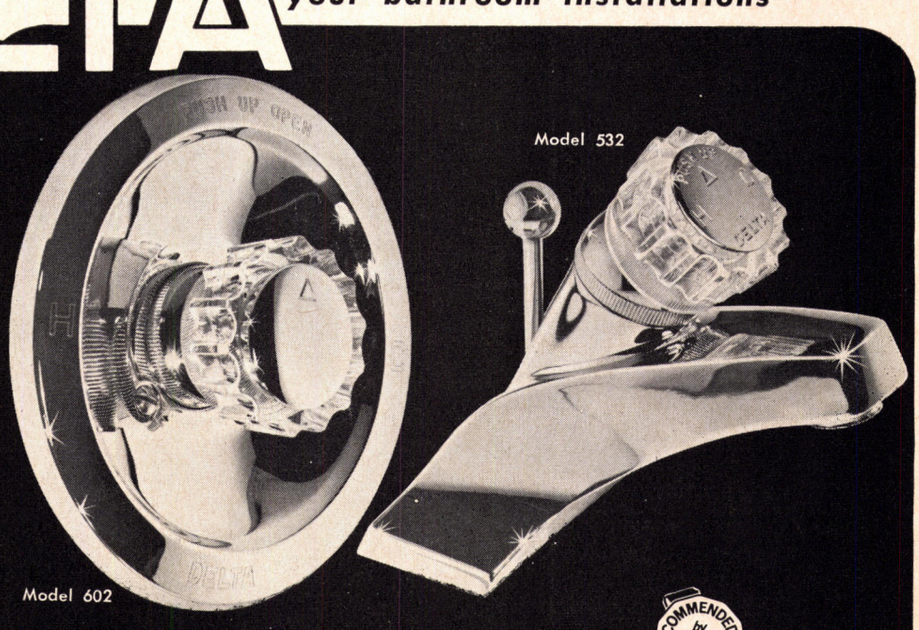

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PRODUCTION MANAGER
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McGraw Hill, Inc.
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New York, N.Y. 10036
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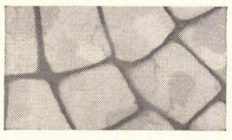
Tracino Corlon gives you the luxury appeal of a sheet vinyl floor at about the cost of embossed linoleum

and the best-known name in building materials, too!

It costs very little extra to give your homes the luxury of a sheet vinyl floor. And it's the most wanted resilient flooring in America today. Tracino Corlon costs only a little more than vinyl-asbestos tile, but it adds much more in sales appeal. And, if you're using embossed linoleum, you'll find the cost is about the same.

Tracino Mosaic actual size



Tracino Tuscan actual size

Three popular design effects Tracino Vinyl Corlon gives you, and your prospects, a choice of three striking design effects: Marble (shown opposite), Mosaic, and Tuscan (above). All are available in several different colorings, all are subtly textured. And because Tracino comes in long rolls, 6′ wide, you get a floor with a minimum of seams — the kind of resilient floor new home prospects know is easiest to keep clean.

Use anywhere Tracino Corlon has Armstrong's exclusive Hydrocord Back. This means you can safely install it over any concrete subfloor above, on, or below grade — except where excessive alkali or hydrostatic pressure makes using any resilient floor unwise.

Show this emblem When you use Tracino Vinyl Corlon, or any Armstrong floor, display this emblem in your model homes. It calls attention to quality and puts the best-known name in building materials to work for you.

Advertising support Armstrong floors are promoted by the heaviest advertising campaign of any building materials manufacturer. This season, an estimated 25 million viewers are seeing color commercials for Armstrong floors every Wednesday evening on two new ABC-TV color shows . . . **Gidget** and **The Big Valley.** And full-color pages in 26 top magazines promote Armstrong floors to the best prospects for the homes you sell — month after month throughout the year.

Watch **Gidget** and **The Big Valley** in color Wednesday evenings on ABC-TV

To help sell your homes Your Armstrong Architect-Builder-Contractor Representative can help you get the most sales value out of Armstrong floors — and the Armstrong name. For information, write Armstrong, 310 Sixth St., Lancaster, Penna.

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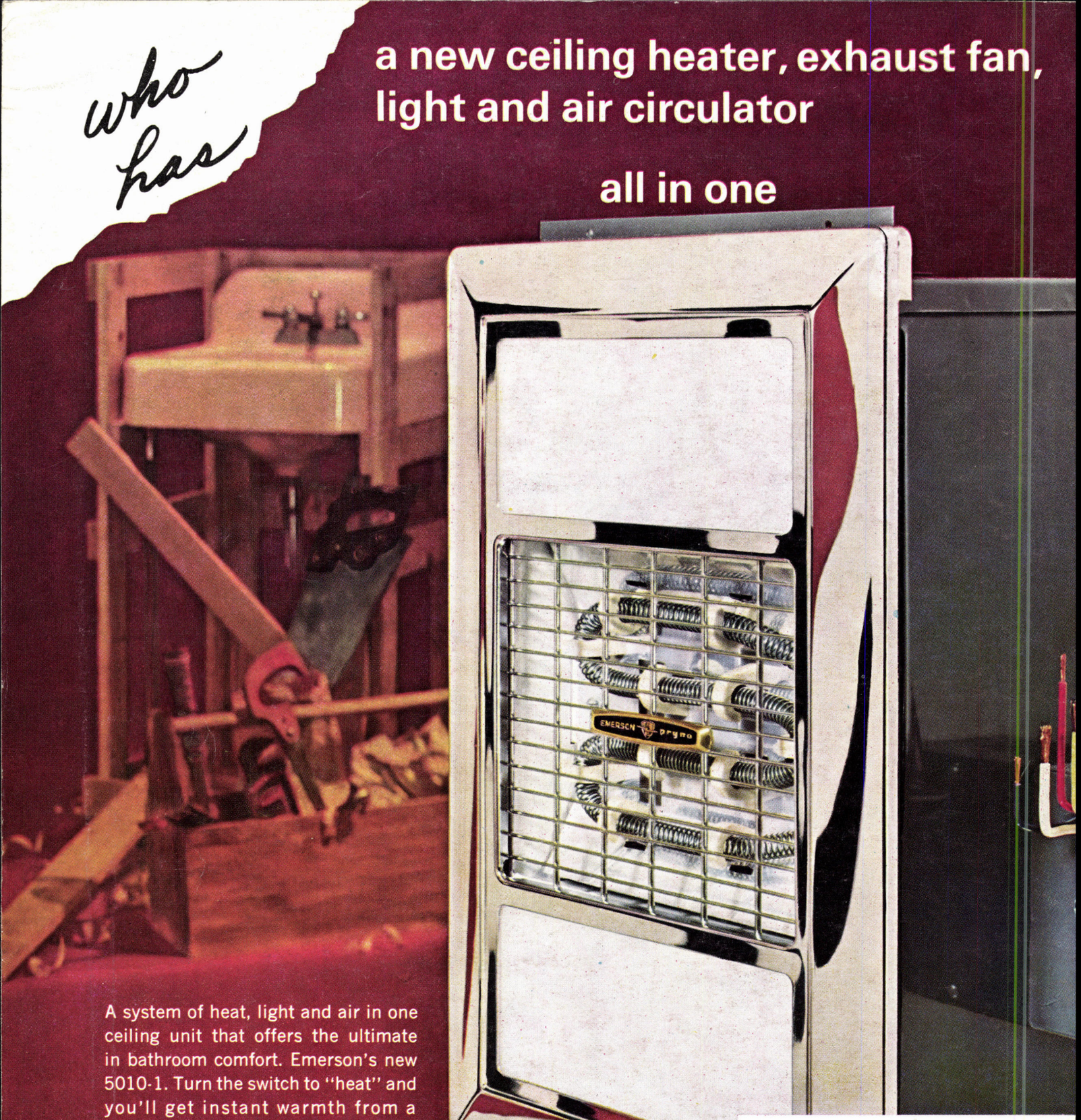
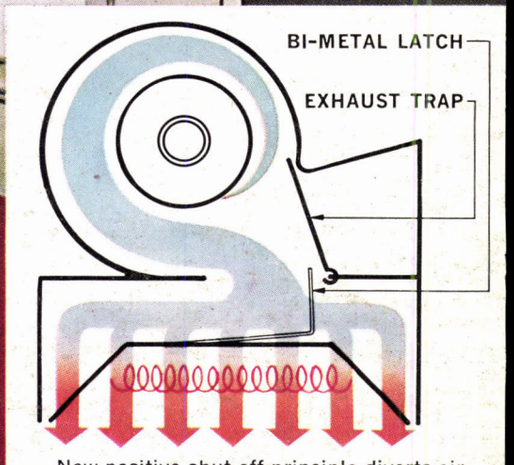
a new ceiling heater, exhaust fan, light and air circulator all in one



A system of heat, light and air in one ceiling unit that offers the ultimate in bathroom comfort. Emerson's new 5010-1. Turn the switch to "heat" and you'll get instant warmth from a chrome-nickel coil and alzak aluminum reflector (a 1,500-watt unit). Switch to "light" and two recessed fixtures bathe your bathroom in soft cosmetic lighting. A noiseless blower gently circulates the air on "heat", or exhausts it at 50 CFM. (This new principle of diverting exhaust air provides fan-forced warm air as well as radiant heat. See insert.) Put the 5010-1 in your next model house. Or our 5004-1, a 3-lamp infra-red unit with exhaust fan. Two of the hottest in our line.



New positive shut-off principle diverts air to provide fan-forced warm air plus radiant heat.

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