Designing houses for shrinking lots p.54
How to cut costs of custom homes p.76
From old estate to mini-PUD p.84

Entry court of patio house in Dallas
Introducing the first and only Convertible Barbecue Range with full-size self clean oven

Dacor's new pyrolytic self-cleaning oven, combined with interchangeable cooking and barbecue modules, is a full size of almost 4 cubic feet. Plenty of front shelf space for a turkey or roast with plenty of room to spare for other dishes.

The beautifully designed oven and range is available as a drop-in...or as a set-in with a drawer base...or a true free-standing unit with side panels. The full width storage drawer provides convenient space for extra modules and griddle and rotisserie accessories.

The Dacor oven/range, which utilizes proven overhead ventilation offers cooktop modules in either energy-saving Econo-Coil or Smoothline glass. Barbecue, griddle and rotisserie accessories are interchangeable with modules.

The convertibility of the Dacor to an indoor barbecue which eliminates the necessity for a separate built-in barbecue will be particularly appealing to your clients who can enjoy the real barbecue flavor all year round, rain or shine.

The Dacor oven and range was the Star of the Show at the NAHB in Dallas. If you missed it, obtain further information...call (800) 423-4160 outside of California or (213) 682-2803 in California.

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Photo: John Rogers

NEXT MONTH
A hard look at the costs of homebuilding . . . Tops in townhouses from around the country . . . New Housing Demand Index for more than 100 markets
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GENERAL ELECTRIC

Circle 4 on reader service card
The high cost of delay

In all the shouting about the damage government regulation is doing to housing, we submit that one particular aspect of the problem has not gotten the emphasis it deserves: the delays that regulation can cause, and the cost of these delays to the builder and—ultimately—to the buyer.

We're certainly not going to be able to eliminate regulation; we live in an age of government. But there is the possibility, through political action, of limiting the unreasonable time lapse of regulatory procedures. And the beneficial results could be enormous.

Not too many years ago, the lead time between a project's submission for approval and the opening of models was, on the average, something like nine months. Today, two years is not unusual, and there are cases of three and even more.

Consider how this increase affects housing costs:

First, there are the direct costs. Interest must be paid for many more months; litigation stretches out over a longer period, so legal fees are higher; and of course the developer has to carry his overhead over a longer non-productive period.

Second, and perhaps more important, there are the costs of risk. Homebuilding has always been a high-risk business; traditionally, the potential rewards have been adequate to justify that risk. But when a builder has his front money at risk not for nine or ten months but for two or three years, the traditional rewards simply do not compensate. Instead of a profit of, say eight or nine per cent, the builder pencils in 15% to 20%—with, we believe, full justification. He is rolling over his capital more slowly, he usually must start fewer houses, and his exposure to potentially disastrous market changes is much, much higher.

It's impossible to generalize accurately on just how much long delays in approval processing actually cost. It has been estimated that as much as 20% to 25% could be cut from the price of today's housing if unnecessary regulatory red tape were eliminated, and it seems reasonable to assume that at least two thirds of that amount can be attributed to delay.

So it's reasonable to postulate that if legal limits were placed on approval time, housing prices in many areas could be slashed from 10% to 15%.

That's a very powerful argument to throw at a municipal, state or even federal government—maybe even powerful enough to get some legislative action.

And it would have some side benefits, too. It would force into the open local governments who were using processing delays as a no-growth weapon; and it would expose the incompetent local bodies who were using delay to mask their incompetency.

There are other expensive bugs in the regulatory process, of course; we'll talk about them another time. But limiting delay is a promising place to start, and we should start—without delay.

—M.C.H. Jr.
We can give you a hand with insulation. Rigid urethane sheathing with aluminum foil facing for residential application is the latest innovation in insulated panels which we helped develop in our application research lab.
we're doing something about the weather

Did you know? We're helping leading manufacturers of insulating materials develop new urethane foam production systems and technology. Through this technical partnership, you benefit from having the most knowledgeable input at every stage of manufacture for urethane-based concepts.

Did you know? Through Mobay's Hennecke Machinery Group, we can design, build, install and service the latest types of machines and equipment to produce intricate insulating concepts, such as urethane panels, sheathing and composite roofing boardstock.

Did you know? Most of today's urethane technology is based on production and process techniques developed by Mobay and Mobay's parent company — who invented polyurethane technology over 30 years ago.

Did you know? A 1" thick urethane board roof insulation supplies the same thermal resistance (R) as 1¾" of glass fiber roof board, 2½" of perlite, or 2¾" of foam glass. The chart illustrates how thick these insulating materials must be to achieve an R-7.14 value. Urethane foam provides more thermal resistance, inch for inch, than any other standard insulation on the market.

Thickness for Equivalent Thermal Resistance (R-7.14)

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<th>Insulation Type</th>
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<tr>
<td>Foam Glass</td>
<td>2¾&quot;</td>
</tr>
<tr>
<td>Perlite</td>
<td>2½&quot;</td>
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<tr>
<td>Glass Fiber Roof</td>
<td>1¾&quot;</td>
</tr>
<tr>
<td>Board</td>
<td>1&quot;</td>
</tr>
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Proportionate values shown graphically are based on current data published by manufacturers of these insulating materials in industry reference manuals, such as Sweet's General Building File.

Urethane foam, like any organic material, will burn if exposed to open flame. Check with your local code authorities before specifying insulation material.

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Circle 7 on reader service card
Braving snow, fog, ice and monstrous travel delays, 58,000 conventioneers jammed the National Association of Homebuilders' 34th annual meeting in Dallas January 21-26.

Prosperous builders thronged the Dallas Convention Center to celebrate what NAHB's vice president and chief economist, Michael Sumichrast, called "a fantastic year."

They stuffed themselves into SRO seminars on cost-cutting, energy conservation and design, and they paid little heed to the warnings of lenders, politicians, government economists and federal housing officials who predicted a murky housing future.

"No issue." With tongue only partly in cheek, Sumichrast told newsmen that "the great issue of this convention is that there is no issue."

"The builders came," remarked one observer, "to drink their whiskey and have fun. They don't want to hear any bad news."

The good news was that private housing starts had closed up 29% for 1977, at 1,986,400, fulfilling the most optimistic estimates of a year ago. The not-so-good news was that 1978 starts are generally expected to drop by 200,000 to 300,000.

Interest rates, the builders were told, will rise slightly due to the international monetary crisis and uncertainty about the Federal Reserve Board's intent. Costs, as usual, will increase even faster than the rate of inflation. And the specter of Big D—disintermediation—was conjured up by economists and lenders. The cloud was so faint, however, that the cheerful builders virtually ignored it.

Optimism. Joel Streich, a custom builder from Flint, Mich., capsulized the conventioneers' sentiments.

"The feeling of confidence is what prevails," Streich said. "What I've got is a feeling of optimism for 1978."

Sam Primack, a Denver single-family and commercial builder with 20,000 homes to his credit, also expressed confidence about the coming year. "And I hope that the replacement for [former Federal Reserve chairman] Arthur Burns will have more compassion for building than his predecessor."

Robert Tilson, a St. Paul, Minn., builder who specializes in homes in the $50,000-$70,000 range, dismissed the warnings of prominent lenders that builders will face a shortage of mortgage money in '78. "We'll have enough money this year," Tilson declared. "But it will be a little less than 1977."

Simons says. Lawrence Simons, a Staten Island builder who sits currently as the HUD assistant secretary in charge of the FHA, did not spoil the party.

"They're entitled to a celebration," he said. "They had a good year. Besides, I can remember what it was like just a few conventions back, when we were doing 800,000 starts."

To illustrate, Simons recalled this incident at the 1974 convention:

"There was a seminar on how to file for Chapter 11. There was a man standing outside the door. 'Why don't you go on in?' I said. 'No,' he replied. 'I'm a lender, and I'm just taking names of guys going in so I'll know to whom not to loan money."

"I remember those days," Simons added. "I remember them when people say this is a quiet, dull convention. I think these guys deserve a party."

News from Washington. Housing Secretary Patricia Harris opened the gala on Sunday and surprised the builders by reviving the moribund Section 235 program for subsidized new houses.

Mrs. Harris said the revised program would:

• Provide for an increase in rent subsidy to allow for a 4% mortgage.
• Reduce the down payments to the 3% statutory minimum.
• Raise mortgage limits to $32,000 for homes for large families—or for homes in "high-cost areas"—and to $44,000 for large family homes in more expensive neighborhoods.

"We are confident," Mrs. Harris declared, "that these changes, combined with improved efficiency in HUD field office processing, will lead to at least 30,000-40,000 reservations in the builders by reviving the moribund Section 235 program for subsidized new houses.

Mrs. Harris and Bob Arquilla cut ribbon to start Convention '78, a gala surpassing even the Houston meeting of '73.
coming year."

Predictions. Unlike some of his Washington colleagues, Rep. Thomas L. Ashley (D., Ohio) waved no red flag of disintermediation or inflation at the builders. He was unabashedly upbeat about the year's housing prospects. At the very least, he sees a rerun of last year's nearly two million housing starts.

Declared Ashley: "Even with slightly higher interest rates, I expect housing demand to continue strong. I see single-family starts reaching 1.6 million units and multifamily starts at around 500,000 units."

Another congressman, Jerry Patterson (D., Calif.), also congratulated the builders—but waved the red flag. Housing costs are rising at such a rate that "we stand the chance of becoming, in the not-too-distant future, a nation of renters instead of homeowners," he warned.

Such a shift, Patterson continued, "could drastically alter housing policy. Just think of the possibilities. What do you think will happen to the deductibility of mortgage interest and real property?"

Senator Edwin "Jake" Garn (R., Utah) also saluted the conventioneers for a great year. And Senate Majority Leader Robert Byrd (D., W.Va.) told the conventioneers that "you've helped make America the realization and fulfillment of mankind's impossible dream."

The balloon. In a vain attempt to prick the builders' balloon, economists, lenders and NAHB spokesmen and bureaucrats issued storm warnings like news bulletins.

Sumichrast himself pointed out that savings inflows to S&Ls had dropped 67% in December from the year before. The drop, he said, came on the heels of a 44% decline in November and a 32.5% decrease in October.

And, Sumichrast warned, S&Ls have been lending at a record rate of $9 billion a month and expect to build up lending commitments of $22 billion for 1978, up from $8 billion last year.

"That is an enormous amount of commitments," Sumichrast cautioned. "They just can't continue lending at that rate when they see their inflows dropping."

Interest rates. Oakley Hunter, the embattled chairman of the Federal National Mortgage Association, agreed with Sumichrast. "With the Fed raising the discount rate to 6.5%, there appears to be a real danger of disintermediation."

If the trend continues, the Fannie Mae head said, "and stretches out over several months as it did in the 1969-70 and 1973-74 episodes, profits will inevitably fall."

Like Sumichrast, Hunter said he was revising his 1978 estimate of housing starts downward from an earlier forecast of 1.8 million.

The Stein view. Economist Herb Stein, who headed the Council of Economic Advisors under President Nixon, saw a less rosy future than the NAHB conventioneers—"I'm more worried about inflation now than I was a couple of months ago"—but he still predicts "more starts than most people—about 1.8 million next year."

Mortgage interest rates, he warned, "will go up a quarter or a half of 1% in some areas."

Leonard Santow, a consultant and advisor for the J. Henry Schroder Banking Corp. of New York—a bank holding company—saw a housing downturn during 1978-79. Starts, he predicted, will bottom out at a rate of 1.4-1.6 million by the second half of next year but will climb again during 1980.

The low man. Jay Janis, a HUD undersecretary, was the low man on forecasts with his prediction of 1.6 million '78 starts. The upsurge in interest rates, he said, "will have some negative effects on homebuilding. But I do not think it's time to panic."

Rising rates, he declared, "may be a temporary aberration in the market."

Two months earlier, Janis had forecast 1.8 million starts for 1978.

'We'll do fine.' As a speaker droned on in the Convention Center's half-empty auditorium near the close of the meeting, a builder who said he was from Arizona dozed in the back row. Upon awakening from his light slumber, he was asked if he shared the experts' uncertainty.

"Nope," he said, "the demand is there and we'll do fine, just fine. Any complaints?"

"Only one. It seems like the more we build, the more it costs us. But we're working on it."

In seconds his eyes closed.

Outside, as the builders streamed to their buses, the cold mist and fog which had enveloped Dallas for four days had lifted. There wasn't a cloud in the sky.

—TOM ALLEN

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Circle 11 on reader service card
NAHB’s directors clap their hands

Just a year ago, the NAHB directors flamed with anger over a variety of issues—common-site picketing, government regulation and the state of a recovering economy. This year, the flame was out and tranquility was the word.

Last year, prosperity was just around the corner; this year it was here. The directors, along with the rest of the Dallas celebrants, enjoyed every minute of it.

Applause as an issue. David Stahl, ending his first year as NAHB’s executive vice president, was applauded politely when he reported to the board’s 1,300 members.

Outgoing President Robert Arquilla was up next. “One of the pleasures of my own year as president,” he noted, “was watching Dave Stahl mature in his new position. He deserves more applause than you just gave him.”

So the directors re-applauded Stahl.

The election. For the first time in several years there was a contested election for the fourth slot—vice president/secretary.

Herman Smith, a Fort Worth builder, garnered over 50% of the vote on the first ballot to nail down a victory over Leonard Sendelsky of New Jersey and Gerard F. Dohm of Wisconsin.

Smith’s victory virtually assures his ascension to the NAHB top spot in four years.

Running unopposed once again, the other three members of the NAHB hierarchy stepped up a rung on the ladder. Ernest A. Becker of Las Vegas, named president at the directors’ fall meeting, took over the reins from Arquilla. Next in line, Vondal S. Gravlee stepped up to first vice president from vice president and treasurer. Gravlee, elected to the board 21 years ago, is president of Gravlee Homes Inc. of Birmingham. Moving into Gravlee’s old slot is Merrill Butler Jr., who was unopposed when he ran for vice president/secretary a year ago. He is a former star halfback at U.S.C. and president of Butler Housing Corp. of Newport Beach, Calif.

“We resolve.” The association’s 1,300 directors urged Congressional adoption of several changes in President Carter’s tax reform proposals. The changes include:

- Elimination of capital gains tax provisions.
- Elimination of a plan to reclassify limited partnerships that have more than 15 partners.
- Repeal of carryover provisions in the 1976 Tax Reform Act for property transferred at death.
- Support for HUD’s effort to expand the Section 8 existing housing program to include “moderate rehabilitation.”
- Defeat of HR 9954. The bill would prevent the HUD secretary from approving any application for rental increases in federally-assisted housing unless such increases were permitted under state and local law.
- Revision of credit underwriting guidelines to take notice of a rise in disposable income resulting from lower utility expenses in new, thermally efficient homes.

Becker: Girding to kill a labor bill

Like Robert Arquilla before him, the NAHB’s President Ernest A. Becker faces a tough fight in Congress over a labor bill. And the fight, Becker says, “is just beginning.”

Defeat of the Labor Reform Act—S.1883—on the floor of the Senate is the Las Vegas builder’s “number one priority this year.” Only a year ago Arquilla vowed to marshall the NAHB’s forces to oppose common situs picketing. Last spring [HOUSING, May ’77], in a surprise 217-205 vote, housing forces defeated Big Labor in a Democratically controlled Congress.

“I hope we’ll have the same kind of success this year,” Becker says. “But the fight over this dangerous bill should be even tougher than last year.

In fact, we consider the Labor Reform Act to be even more detrimental to our industry than common situs picketing.”

Bill’s impact. The Senate bill, like a similar measure passed by the House last year (H.R. 3410) would, said Becker, make it easier for unions to organize workers employed by small businesses. The legislation, Becker claimed, is aimed particularly at open shop employers in the Sun Belt.

The legislation would amend the Labor Relations Act to provide for faster union representation elections.
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Employers found guilty of unfair labor practices would face such penalties as debarment from federal contract bidding on housing projects.

The legislation, however, prescribes lesser penalties for unions found guilty of illicit labor practices. "The bill implies that one group in the relationship—management in this case—can commit offenses carrying severe penalties," Becker contends. "Congress, as usual, seems to be prejudging management and finding it guilty."

Lobbying. Becker, president of Ernest A. Becker Enterprises of Las Vegas and a 25-year NAHB veteran, said in Dallas that the association's grass-roots lobbying effort is still in its formative stage.

"When Congress went into recess so did we, but we continued our effort outside of Washington," Becker said. Other trade associations, including the National Association of Manufacturers, have joined the NAHB in the fray.

"Time is short," said Becker in his Convention Center headquarters. "I've asked members to call their senators and keep tabs on them and then report back to us so we can keep a vote tally."

Other goals. In addition to concentrating on winning the hearts and minds of U.S. senators, Becker hopes to intensify political activity among builders at the state and local level. His aim: "To fight the no-growth attitude and environmental restrictions which put too many strings on our costs and our product."

Last year's controversial NAHB membership target of 100,000 fell short by just 3,000. Far from discouraging recruitment, Becker hopes to raise the association's total membership to 108,000 by the end of his term.

Like the other 58,000 people who filed happily into the sprawling Dallas Convention Center, Becker was optimistic about housing's future.

"We won't have a record year for starts," Becker predicted. "In fact I see a drop of around 200,000 from last year. I expect an increase in the multi-family area though. I don't expect that we will have as much mortgage money available to us but what we do get will be more than sufficient. I think that developing shortages of things like building materials and insulation will prevent us from repeating last year's great results."

Carter connection. Along with the rest of the NAHB command, Becker was pleasantly surprised by Housing Secretary Patricia Harris' announcement in Dallas that the Section 235 subsidy program was being revived. "I had hoped that the revival would be on a greater scale," he said. "But, on the whole, we're happy with it."

"There'll be an institutional crunch toward the end of the year when the Fed finds that housing institutions like Freddie Mac and Ginnie Mae are undercutting all that it's trying to do to save the dollar. Then comes the showdown . . .

"Come fall, there will be a lot of pressure from OMB (Office of Management and Budget) to stop issuing so much paper. An array of federal credit agencies will line up against housing."

"Interest rates will push up close to what we had in '74. I think it's going to be much worse than anybody says."

The book. The Builders focuses primarily on the financing and construction of urban housing. Mayer treats urban renewal, income mixing, public housing, the sad state of rental housing in urban areas, lenders, taxes and the role of government in urban rehabilitation and decay.

Mayer is the author of several books dealing with a variety of subjects. Included are The Bankers, Madison Ave. USA, New Breed On Wall Street and Wall Street: Men and Money.
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John Woods, President,
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“It’s one way to insure our status as a first rate builder.”


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Red Cedar Shingle & Handsplit Shake Bureau

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clad aluminum outside weather-resistant, easy to install in low-maintenance woodtone, champagne, bone or white.

total-perimeter weatherstripping provides weather-tight seal around whole window.
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CARclad casement windows:
low-maintenance aluminum outside,
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Circle 17 on reader service card
Selling the builder on selling mobiles

The manufactured housing industry made a strong play for the affections of conventional builders and developers at the National Manufactured Housing Show in Louisville in January.

Under the watchful eye of the Manufactured Housing Institute, sponsor of the industry's annual showcase, 1,500 builders and developers registered to have a look at the wares of the manufacturers.

"We figure that, with conventional builders priced out of the [low-cost] market, it is time for them to look into buying mobile homes and setting them up [in subdivisions]," said Danny Ghorbani, vice president of MHI.

Gil M. Weede, president of Lamp-lighter Communities Co., Orlando, Fla., is one builder already enamored of mobile homes.

Weede built lower-cost housing on-site from 1960 through 1967. But in the late 1960s many prospects for his moderate-priced homes were unable to qualify for financing.

The mobile subdivision. After building trailer parks for years to house the military personnel who made up the bulk of his buyers, Weede was ready to try for a more substantial market. In August 1967 he opened a 157-lot subdivision in Jacksonville, Fla. The double-wide mobiles on 50 X 100-foot lots sell from $24,500 to $31,000.

"Our sales rate wasn't too fast at first. Financing had been almost nonexistent," he explained.

And what financing there was for the development when it opened was in the form of installment loans at 13 1/2% to 14% interest.

But now the Veterans Administration is guaranteeing mortgages for Weede's buyers, and Mortgage Guaranty Insurance Corp. of Milwaukee is insuring conventional loans in the development. The VA mortgages typically carry a 9 1/2% interest rate for up to 20 years and $27,500, Weede reported, with no down payment.

Market of young people. With longer-term financing available, the market for Weede's Duclay Forest development has broadened to include young couples grossing about $16,000 a year and empty nesters. The developer sold 56 units last year.

In addition, the acceptance of Duclay Forest enabled Weede to win immediate zoning for similar developments in Albany, Ga. and Lake City, Fla.

Weede attributes what success he's had to the VA's strong backing of mobile homes.

George Alexander, assistant to the director of the VA's loan guaranty service, gladly accepts the role of matchmaker between the manufactured and on-site housing industries.

"Our problem has been with the young Vietnam veteran," Alexander explains. "He is in the low end of the financial spectrum. Our job is to find him a house of his choice that he can afford."

Converging industries. The VA official is convinced that the only way to provide such low-cost housing is through the union of conventional developers and manufactured housing producers.

Walter L. Benning, MHI's president, also believes that such a marriage is inevitable.

"The mobile share of total housing starts was about 18% in 1977," Benning points out. And by 1985 MHI's forecasters expect that share to double.

Benning cites these factors that are broadening mobiles' share of the housing market:

• Growing public acceptance.

How mobile-homers stormed Washington

The Manufactured Housing Institute, whose members produce 70% of the nation's mobile homes, is a force to be reckoned with in Washington these days.

Walter L. Benning's appointment as MHI's president last year has made the industry group's change in direction pretty clear.

According to Vice President Danny Ghorbani of MHI, the association had spent its effort in previous years on local promotional campaigns and a multitude of exhibitions.

Now, with a staff concentrated in its Washington headquarters (the old offices were in Chantilly, Va., more than an hour from Capitol Hill), MHI is raising its voice in the halls of Congress.

Voice of experience. That smooth voice is primarily Benning's. He headed International Telephone & Telegraph's Washington office before coming to the mobile home industry.

Familiar with the ways of Congress, the MHI president was able to get the FHA loan limits for mobiles raised shortly after taking office last February.

From a maximum loan of $12,000 for 12 years, the Housing and Community Development Act of 1977 raised the limits for single-wides to $15,000 and 15 years [H&H, Nov. '77]. And the FHA will now guarantee loans of up to $24,000 and 23 years for double-wides. The old limit had been $15,000 and 15 years.

The institute will work this year for even better financing terms from federal programs, Benning says. And the manufactured housing group will continue its fight against zoning restrictions.

The quest for zoning. The American Bar Association recently sponsored a study of housing practices and discriminatory zoning, and the findings have given Benning ammunition in his campaign with zoning commissions.

"The study suggested that the federal government... discuss zoning practices with various state and county officials and suggest that if they want to accept federal money they should look at really housing Americans," Benning points out. —B.Z.H.
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Kenmore offers variety, too. You can select from our compact, stacking laundry pair; extra large capacity and heavy duty washers; plus your choice of gas and electric dryers.

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Circle 21 on reader service card
• Increasing availability of long-term financing. Benning cited the Bank of America's willingness to write 30-year mortgages for mobile-home owners who have title to their lots and put their units on permanent foundations.

• The fact that double-wides are beginning to appreciate in value in some parts of the country.

A different view. Arthur J. Decio, chairman and chief executive of Skyline Corp., seemed to be playing the unwilling father of the bride when he claimed to be unconcerned about the homebuilding industry's acceptance of mobile homes.

Decio even claimed to be optimistic about Skyline's recreational-vehicle operations, though industry analysts see sagging RV demand as a drag on the entire manufactured-housing industry.

"When the President started talking about his energy program [and possible gasoline price increases], RV sales quit growing," Decio said.

Recreational units make up about 25% of Skyline's sales volume, according to the company chairman, and will continue to contribute about that much to the manufacturer's production.

"The RV industry runs about 10 years behind the mobile-home [sector of the industry]," Decio said. "I expect a reduction in the number of companies with RV operations like there has been in mobile-home producers. There will be fewer RV producers but they'll be stronger."

Expansion. Skyline itself expanded overall operations last year. Decio reported, opening four new plants. Two more were opened last month.

Among the new facilities are two complexes that produce mobiles according to the Building Officials and Code Administrators Building Code rather than HUD standards.

The 400 boca units Skyline produced last year are designed for use in conventional subdivisions and neighborhoods with residential zoning.

So even Skyline, largest of the mobile-home producers, is making itself more attractive to conventional developers. — BEN Z. HERSHBERG

BRIEFS

Showplace housing for American and foreign builders becomes a specialty in Orange County, Calif. More than 300 American and foreign builders toured housing developments there last year with members of the Orange County chapter of the Building Industry Assn. as guides.

An energy crackdown of sorts is decreed in Iowa. No gas hookups to new housing. Iowa Power & Light decrees, unless the homes have storm doors, storm or double-glazed windows, R-30 ceiling insulation and R-11 sidewall insulation. The state's builders have protested to the Iowa Commerce Commission.

An option to buy the Highlands Ranch, a 22,000-acre parcel south of Denver, is taken by Mission Viejo. Plans for the site will be aired after a year of feasibility studies. The firm's other Denver-area development, a 640-acre planned community in Aurora, will have a population of 7,500 when completed and sold out sometime in 1982.

A 69% increase in earnings is posted by Kaufman and Broad for the year ended November 30. Net rose to $15.5 million, or 95 cents a share, from $9.2 million, or 54 cents a share the previous year.

A loss looms for the shareholders of GAC Corp., the land-development successor of Gulf American Corp. of Miami. Trustees say the stockholders will probably lose all of their investment in GAC, now operating under Chapter 10 of the federal bankruptcy code.

A new role for newspapers develops. They are being turned into house insulation. Newsprint consumption mills begin paying $65 to $75 a ton—50% more than last year—for used newspapers that they will sell insulation producers.

Massachusetts eases environmental rules

Legislation to spare developers and contractors unnecessary red tape under the Massachusetts Environmental Protection Act has been signed by Governor Michael S. Dukakis.

The bill amends a 1973 law that requires preparation of an environmental impact report for all projects that might affect the environment.

The new bill requires developers, instead of state agencies, to prepare environmental-impact reports. The bill also directs the state's environmental affairs office to specify ahead of time the issues to be addressed by those preparing a report, so that the report need no longer cover superfluous issues with no bearing on the environment. And the bill accelerates the timetable for environmental-review procedures, reducing time and paperwork for applicants. A deadline is established for legal challenges so as to eliminate protracted court cases.

—PAUL GIGUERE

McGraw-Hill World News, Boston
With all the noise about energy-saving wall insulation, Celotex thought you might appreciate a few quiet facts.
Fact 1.

There are four basic types of wall sheathing.

First come foam boards, which have the highest insulating value. Fiberboard is next. Then comes plywood. Lowest on the list, as far as insulating value is concerned, is gypsum.

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<tr>
<th>COMPARATIVE &quot;R&quot; VALUES OF ½&quot; THICK SHEATHING MATERIALS</th>
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<tr>
<td>THERMAX SHEATHING</td>
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<td>GYPSUM SHEATHING</td>
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Fact 2.

There are three main types of foam products on the market.

Polystyrene, urethane and isocyanurate.

Rather than talk about products made by other companies, we'll tell you about our product.

At Celotex we use an isocyanurate cellular foam plastic which is different from the conventional foam boards. It is Thermax® Sheathing faced on both sides with aluminum foil to obtain the highest possible insulation value. It is also reinforced with glass fibers, so it has superior dimensional stability.

It is, in plain fact, the most efficient insulating product on the market. Celotex has done extensive research and testing of foam products, so you can rely on published information about Thermax and its "R" values. Thermax also comes in different thicknesses, enabling you to use a thinner fiber glass batt, if you wish. Which is a good thing to know now that fibrous glass is in short supply.

Energy-Saving Insulation

Thermax Sheathing by Celotex
Facts 4 through 9.

Thermax Sheathing can also be used in masonry wall systems, under roof shingles in cathedral ceilings, as slab and perimeter insulation and in cavity walls. It is lightweight. Easy to cut. Can be installed quickly by one man. Thermax has FHA acceptance. And it complies with all three major model building codes: BOCA, SBCC, ICBO.

Contact your Celotex representative for additional information.

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Samples of this product are tested periodically by the NAHB Research Foundation, Inc., and determined to meet the average of the manufacturer's stated dimensions and thermal resistance at the stated thickness. Manufacturer represents that this product has been produced to the same standard as samples tested.

Fact 3.

You can get an R-19 wall using 2"x 4" framing.

If you use 3/4" Thermax Sheathing* in a typical wood frame house with exterior wood siding, 3-5/8" fibrous glass insulation, 1/2" gypsum interior wallboard and a 6 mil polyethylene vapor barrier stapled directly to the interior surface of the wood framing, you will achieve a wall system with a winter design insulation value of R-19. In other words, in this application, 3/4" of Thermax gives you an insulating value equivalent to two extra inches of fibrous glass.

Thermax Sheathing meets model building code requirements in this application when 1/2" gypsum wallboard is used on the interior walls.

*THERMAX SHEATHING WILL BURN IF EXPOSED TO A FIRE OF SUFFICIENT HEAT AND INTENSITY.

These are the facts. If we said any more, we'd just be adding to the noise.

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The Celotex Corporation, Tampa, Florida 33622

Circle 25 on reader service card
Washington

300,000 subsidy houses in fiscal '79

Housing Secretary Patricia Harris, battling with the White House, may not have won much new spending authority from President Carter but she is succeeding in swinging HUD's programs over to the financing of new housing starts.

The new budget, Secretary Harris noted, would subsidize 300,000 housing unit starts in fiscal 1979, "one of the highest levels of subsidized housing starts on record." The highest came in 1973, when they hit about 500,000.

Mrs. Harris continues to push HUD's funds and its bureaucracy toward inner-city housing and inner-city development. She proclaims first that the new budget "will help restore America's major urban areas" without, she quickly adds, "sacrificing the needs of small towns and rural America."

$400-million victory. As measured by the yardstick of total "budget authority," Mrs. Harris brought home to HUD from the White House and the Office of Management and Budget $400 million more than OMB originally suggested was sufficient for her department.

Budget authority includes the total estimated cost of subsidizing housing for lower-income families out to the final payoff of the mortgage 30 or 40 years after the housing project is first financed. The OMB gave HUD a $39.3-billion target; Mrs. Harris got $39.7 billion. Her programs will reach an estimated $9.8 billion in fiscal 1979, or 50% more than the $6.1 billion actually spent during fiscal 1977 (largely controlled by the Ford administration), and 11% higher than the current year's estimated spending of $8.8 billion.

Section 235 again. To boost homeownership among poor families, HUD is liberalizing the terms of the Section 235 program, which has been virtually out of business since President Nixon froze it in January 1973.

Under Mrs. Harris' "renewal" effort, HUD estimates 19,000 starts for the year ending September 30 and 27,500 more for fiscal 1979, which begins next October 1.

The cities. The big swing toward stimulating inner-city rental housing shows up all through the new budget:

• About $4 billion in Tandem Plan mortgages will be bought by the Government National Mortgage Assn. (Ginnie Mae), providing 7.5% mortgages for 132,000 new Section 8 multifamily units between now and the end of fiscal 1979. Of the $4 billion, $1 billion is to be allocated to the 300 or so cities that qualify as distressed under the HUD's new action-grant program.

• Under all Section 8 programs, including the Tandem Plan, construction is expected to start on 180,000 new multifamily rental units in fiscal 1979. That's 75,000 more than are estimated for the current year.

• Under the regular public housing program, starts are expected to jump to 55,000 next fiscal year, a 35,000 increase over this year.

• Housing for the elderly, under Section 202, is taking a big jump this year to an estimated 27,900 starts (from 3,414 actual starts in fiscal 1976). For fiscal 1979, the starts are projected at 35,800.

• Urban homesteading is in the budget for $20 million. That will finance activities in 39 cities that have approved about 1,500 homesteaders thus far.

More rehab. Mrs. Harris hopes to double rehab activity, pushing out outlays during fiscal 1979 to $84 million from this year's estimated $43 million. She predicts that some 70,000 units will be put into the rehab pipeline under the Section 8 program to upgrade 39,000 units of rental housing that need "less than substantial repairs" to become eligible for Section 8 subsidies.

Community development block grants stay about level in fiscal 1979 at $3.7 billion plus the $400 million in action grants to be parcelled out to some 300 cities.

The bankruptcy-ridden New Towns program — while it is being operated to minimize government losses — will cost another $52 million in fiscal 1979, down from this year's estimated $138 million.

Payments to subsidized housing will be up another $600 million in fiscal 1979 — to about $4.2 billion — and subsidies to housing for the elderly and handicapped will be up $400 million to $713 million.

Bureaucrats' bonanza. Spending on urban renewal programs — which were frozen by President Nixon five years ago — will be $350 million in fiscal 1979, down sharply from the estimated $600 million this year and the $850 million actually spent in fiscal 1977.

To handle all this action, Mrs. Harris won approval to add 1,410 bureaucrats to HUD's roster. That will bring the total to 17,400.

But on top of that, she's asking Congress for another $10 million to pay for 300 or more experts to consult with a new Urban Extension Service. These experts, HUD says, would be people from state, local, and federal agencies who would help out HUD's "clients" — localities, private developers, housing sponsors, and others who have trouble making the most or best use of HUD programs and funds.

It's a twist on the well-understood concept of using federal funds to pay expert bureaucrats to help state and local bureaucrats try to make federal programs work.

—DON LOOMIS


Big earnings gains

Net income is up 38% for U.S. Home Corp. The builder, which just switched from a fiscal to a calendar year, has reported preliminary net at a record $14,684,000 — equal to $1.33 a share on a record of $433,355,000 — for the 10-month period ending Dec. 31. That's up from total fiscal 1976 earnings of $10,615,000 (97c a share) on $413,511,000.

Another earnings rise is posted by Ryan Homes — its 11th consecutive yearly gain. Net rose 28% to $14,655,000, or $2.23 a share, in 1977. Revenues, fueled by a record $7,950 new-home orders, climbed 36% to $306,895,000. Ryan's year-end backlog of 3,452 homes also set a record.

Standard-Pacific Corp. did very well too. It reported preliminary net of $6,793,926, or $1.87 a share, on revenues of $88,523,301 for 1977 as compared with $4,875,238, or $1.36 a share, on $79,334,485 in 1976. Company offices are in Costa Mesa, Calif.
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Perma-Shield Windows are sheathed in carefree, low-maintenance rigid vinyl that's designed not to rust, pit or corrode. Not to chip, flake, peel or blister.

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And double-pane insulating glass provides a major part of the fuel-saving benefits of single-glazing with storm windows, plus the convenience of no storm window bother.

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Charter Oak Development Company
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Circle 29 on reader service card
HUD shuts off the new-town program

Housing Secretary Patricia Harris has officially “decided to support new-towns-in-town instead of creating new satellite cities” under the 10-year-old new communities program.

But in fact, Mrs. Harris and HUD’s new communities administrator, William White, have officially closed down the 1968 new-town programs—except for trying to keep six new towns alive, that is, and trying to cut the government’s financial losses from seven others that have already gone broke.

Since the program was launched, actual housing units built at the 13 developments have totaled about 7,500. The 13 projects were backed by HUD with $299 million in bond guarantees, and the department has had to pay off $149 million on the seven developments that went broke. With minimum additional help, HUD hopes that its $150-million investment in the six remaining towns can be protected from further losses.

Orders from above. The White House and the Office of Management and Budget have told HUD there are to be no additional new-town subsidies to “new towns in towns,” as Mrs. Harris proposes, until the financial drain of supporting the six continuing new towns is either ended or brought within tolerable levels.

The new policy, according to White and Mrs. Harris, would encourage projects on cleared inner-city sites where development failed under the old urban-renewal program that President Richard Nixon killed off in January 1973.

But, without federally-backed bond guarantees, HUD assistance would be confined to grants still available from various HUD programs, including the new $400-million action-grant program that gives Mrs. Harris some discretion in picking cities for HUD grants to develop inner-city neighborhoods.

Block grants. Other HUD officials point out that, under 1977 housing legislation, cities are authorized to use their community-development block grants to guarantee loans and to pay the principal and interest on guaranteed loans—and they suggest such financing could replace, on a smaller scale, the federal bond guaranties that are no longer available.

The mayors of a number of cities have begun seeking HUD funds under the new program, and HUD teams have already visited some of the sites. Among the cities seeking HUD grants are Baltimore, Boston, Chicago, Detroit, Hartford, Milwaukee, New York City, Sacramento, Columbus, Los Angeles, Toledo, Washington, Atlanta, Macon, Memphis and Nashville. More than 40 project proposals are under review.

Some patch compounds banned

Patching compounds containing free-form asbestos have been banned by the Consumer Product Safety Commission and will be off the market by next June.

The action affects roughly half of all patching compounds on the market, which is estimated as high as $400 million a year.

The ban, originally proposed last July by the CPSC because asbestos dust from the compounds is believed to cause lung cancer, calls for removal of the product from dealer warehouses and shelves within 180 days of the date that the order is published in The Federal Register. Manufacturers must halt production within 30 days of the order. Artificial fireplace emberizing materials containing asbestos were the target of a similar ban.

Fifty companies manufacture patching compounds, with about half of their product going to homebuilders. Another 20% is used in renovations, with only 5% to 8% of the output going to users outside the contracting industry.

Builders asking relief from land-sales law

Homebuilders and real estate agents have appealed to a Senate committee for a halt to practices that they say reflect a misinterpretation of the land-sales regulation law passed in 1968.

The law was intended to halt the fraudulent sale of undeveloped land in one state to a resident of another.

Survivors. With minimum financial help HUD hopes to keep aloft St. Charles, Md.; Maumelle, Ark.; the Woodlands, Texas; South City, N.C.; Harbison, S.C.; and Shenandoah, Ga.

Two projects have been taken over by HUD. The department hopes they can continue under new developers after the write-off of the losses suffered by the original investors and the federal taxpayers who guaranteed their bonds. They are Jonathan, Minn., and Park Forest South, Ill.

And HUD is looking for investors who might buy up the land and other assets at Cedar-Riverside, Minn.; Flower Mound, Texas; Riverton, N.Y.; Gananda, N.Y.; and Newfields, Ohio.

Secretary Harris admitted that the real estate bust of 1974 and 1975 played a large part in the failure of the federal program. Most of the towns that failed were unable to sell lots to builders fast enough to generate the cash flow to carry the heavy interest payments on their bonds.

—DON LOOMIS
New Villager is the first and only vinyl flooring designed from the ground up to meet the exacting requirements of today's residential builders. Villager features another major Congoleum® technological breakthrough with the new exclusive Chromabond formula. Chromabond is a unique formulation that offers you these four tremendous advantages.

**Exceptional stain resistance**

The durable, super-tough vinyl wearlayer, specially formulated for Villager, seals out even the most troublesome spots and spills. Laboratory tests show that compared to other resilient floors, Villager offers greater resistance to stains.

**Superior color integrity**

The exclusive Congoleum Chromabond formula offers special ink pigments which effectively combat discoloration due to alkaline moisture. The rich colors of Villager are protected by the exclusive Chromabond formula.

**Superior mildew resistance**

Laboratory tests show that the exclusive Chromabond formula offers superior resistance to mildew that can cause discoloration in most vinyl floors.

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The exclusive Chromabond formula offers a crystal-clear wear surface which needs no wax to protect its sealed-in beauty. Besides having this easy maintenance feature, the wear surface is extremely durable for residential applications and is 20% greater than minimum F.H.A. requirements.

New Villager is available in two exciting designs, carefully developed for consumer acceptance and builder needs, and in and 12' for seamless installation in most rooms. Barclay Square® combines the simplicity of natural with the elegance of warm and rich colorations. Its crisp grout line and beautiful background are right at home with most any decorating scheme.

Fairlawn™ represents a natural, basic and simple design with terrific depth, brilliant clarity and elegant richness. Its beautiful overall character will complement the most demanding decorator scheme.

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Congoleum does more than make beautiful floors...WE SELL HOMES!

Congoleum provides qualifying builders with a complete and flexible program to assist in selling homes. 1) A unique, attractive flooring selection center for free-standing or wall-mounted use. 2) Model home identification to merchandise Congoleum national acceptance. 3) Comprehensive flooring sample sets. 4) A flooring allowance program, when using Congoleum flooring in model units. 5) Distributor service with the inventory and sales support to serve your needs. Congoleum Corp., 195 Belgrove Dr., Kearny, NJ 07032 (201) 991-1000.
MORTGAGING

U.S. cites Continental Mortgage officers

The Securities and Exchange Commission has just accused a major REIT's officers of enough misdeeds to constitute a virtual lenders' handbook of how not to deal with their builders and shareholders.

The agency's suit, filed in Federal Court in Washington, is against Continental Advisers of Boston, the advisory firm for Continental Mortgage Investors, once the nation's second largest real estate investment trust. The government charges that CA covered up the REIT's deepening financial troubles from 1972 through 1974 to protect its own exorbitant management fees.

The principal defendants are the brothers Monte and Neil Wallace, owners of Continental Advisers, and Durand A. Holladay, a former managing trustee of CMI and ex-president and 20% owner of Continental Advisers. Also named: Theodore C. Miller, one-time managing trustee of the REIT, and S. Davidson Herron Jr., a former trustee. The trust's headquarters are in Coral Gables, Fla.

Price Waterhouse & Co., the REIT's outside auditor until 1975, was also cited by the SEC for accounting violations.

Fees of $30 million. The suit charges that Holladay and the Wallaces "fraudulently conspired to obtain renewal of the [annual] advisory contract and to maintain and increase the exorbitant level of Continental Advisers' fee." Almost $30 million was paid to CA during the cover-up period, the commission says, with most of the money going to the three men.

The SEC sought an injunction to restrain the advisers and asked the court to order the former officers to return fees "wrongfully obtained" from the REIT.

Nosedive. Continental Mortgage is now seeking protection under the bankruptcy code in a Boston federal court [H&H, May '76]. The trust has fallen a long way since the early 1970s, when it listed assets of $825 million. Most of that was in construction and development (C&D) loans for second-home, condo and recreational projects.

When financial problems arose, however, the government says that CMI's advisers not only hid them but aggravated the situation by recommending higher-risk loans. Acting on this advice, the trust doubled its C&D loan volume between 1971 and 1974 to a total of $740 million, thus precipitating a "liquidity crisis."

Accusations. Among the SEC's roll call of complaints against Holladay and the Wallaces is the charge that they concealed anticipated loan losses from CMI shareholders and acted to raise the earnings of both Continental Advisers and the REIT by extending high-risk loans. In addition, they "caused CMI to falsely inflate its earnings . . . materially underestimate revenues . . . and . . . overstate certain asset values . . . ."

The suit further states that the officers concentrated a large share of CMI's loan holdings with only four or five major borrowers while publicly touting its portfolio as "broadly diversified" and "conservative."

Indeed, says the SEC, loans were made to borrowers who were thinly capitalized, put little of their own money into planned projects, had no takeout commitments for permanent loans, pledged high-risk loans as collateral and, in some cases, didn't really know the real estate business.

The REIT officers were also cited for:

• Putting shaky construction projects that were backed by CMI loans into the hands of workout borrowers who were "unsuccessful," thus further weakening the collateral. These loans, however, continued to be shown as interest-accruing assets.

• Hiding loan losses through "sham transfers of equity kickers." By requiring borrowers to reassign the kickers to CMI, the commission claims, the trust inflated its real-loan value and masked a shortage of collateral.

• Suppressing internal CMI reports that urged that much of the trust's C&D volume be placed on the books as non-accrual (i.e., non-paying) loans.

When the First National Bank of Chicago heard that loans might go non-accrual in '74, it reportedly threatened to kill a $54-million loan CMI was then seeking. However, the commission contends, Monte Wallace "falsely advised" the bank that its information was exaggerated.

Expense padding. The government also says that after 1974, when CMI's liquidity squeezed caused it to reduce the advisory fee to a flat $1.9 million per quarter, the Wallaces, worried about a further fee cut, began to carry the expenses of other companies they owned on the books of Continental Advisers.

This gambit allowed CA to increase its fees by fraud when the trust later limited the advisory fee to monthly operating costs, the SEC says.

Denials. The Wallaces have denied the charges, calling them incorrect and false. Moreover, the brothers claim they bought 400,000 shares of CMI during the period in which they're accused of withholding adverse information from the REIT's investors. They say this indicates "the illogic of charges."

The Wallaces hold that CMI was devastated, not by improper loan policies, but by the combination of the real estate depression of 1973-75 and spiraling interest costs during those years.

—STAN WILSON

City Investing hit by stockholder suit

Another REIT that's under fire is C.I. Realty Investors. The trust, charges one of its stockholders, was set up "primarily as a device" to provide financing for real estate projects in which its parent, City Investing Co. of New York City, and others had an interest.

The suit, filed in a Philadelphia federal court, seeks to recover monies that were "wrongfully paid" by the REIT under an illegal scheme designed to benefit the defendants.

Named in the complaint were City Investing and its subsidiary C.I. Planning Corp., the trust's adviser; Davis Polk & Wardell, its legal counsel; and Peat, Marwick, Mitchell & Co., its auditor. Also: Peter C.R. Huang, chairman of C.I. Realty, and James V. Tomai Jr., president.

A Peat Marwick official called the suit "frivolous."
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It helps you sell your houses before people even step inside.

A beautiful looking roof can help you sell your houses right from the driveway. That's why we design our Bird shingles to do a lot more than keep the rain out. We use colors and textures that show off a roof, adding to the beauty and individuality of your houses. We call our look Roofscape, because it blends in with everything from rugged wilderness to formal shrubbery.

This house is wearing our heavy-weight Architect® 70 shingles. Their random edges and thick texture cast deep shadow lines. And Architect 70’s will look good to your buyers down the road. We make them with two laminated layers of premium asphalt that can't rot, curl or burn like wood. So they give superior protection against wind, weather and fire.

Bird Architect 70's weigh approximately 345 lbs. per square, and they're backed with our 25 year pro-rated warranty. For the whole story on our line of building products, just drop our coupon in the mail.

I'd like more information on Bird asphalt shingles. And tell me about Bird's solid vinyl siding, gutters, shutters and storm doors.

Name__________________________
Company________________________
Address__________________________
City__________________________Country________________________
State__________________________Zip________________________
Phone__________________________

Bird & Son, inc.,
E. Walpole, MA 02032

The best dressed homes wear Bird.
Give your homes energy savings value!
STYROFOAM® brand insulation can cut your homes' heating costs up to 24%.

The tests, conducted by Ohio State University under a grant from Dow Chemical U.S.A., compared energy costs of homes identical except for insulation systems. (Write for test procedures and results.)

Outside the foundation, apply sheets of STYROFOAM brand insulation down to or below the frostline. Applied in this way, real life energy calculations indicate that STYROFOAM brand insulation will cut heat loss an additional 10%.

Analysis indicates that STYROFOAM brand insulating sheathing cuts energy costs by working three extra ways to improve insulation performance:

Cuts conduction heat loss
STYROFOAM brand insulation insulates the entire wall, not just the space between the studs—significantly cutting conduction heat loss.

Reduces air infiltration
Because of its snug-fitting tongue and groove design, STYROFOAM brand insulation can greatly reduce air infiltration. Summer and winter.

You can make your selling job easier—and cut your home buyer's heating bills up to 24%—by using STYROFOAM brand insulation from roofline to frostline.

On frame walls, just substitute STYROFOAM brand insulation for ordinary sheathing. It handles and installs easily and economically. And tests show it can cut heat loss by 14%.

Energy savings sells
Today's home buyers are sold on saving energy. So you can make your selling job easier by offering them lower energy bills. For full information, contact your Dow Representative. Or write: The Dow Chemical Co., STYROFOAM Brand Insulation, Midland, MI 48640.

STYROFOAM® brand insulation is combustible and should be properly installed. A gypsum board interior finish should be used in residential construction. For specific instructions see Dow literature available from your supplier or from Dow.

Some homes will perform better, others not as well. Energy savings will depend on factors such as climate, fuel type, workmanship, house design and living habits of the occupants.

Circle 35 on reader service card
**Small towns up for more housing...**

The Housing and Urban Development Department has just organized a task force to find out—and soon—why the FHA and other divisions of HUD don’t provide more housing for small towns and rural areas.

“It’s been a long-standing complaint that the small towns and rural areas are not on HUD’s agenda,” says Executive Director Clay Cochrane of Rural America, a group representing rural interests. “There is still a gap in rural credit. There is a deeper subsidy available from HUD than we can get from the Federal National Mortgage Assn. (Fannie Mae).”

Congress has been prodding HUD to look into the small towns’ case for years, and it finally wrote such a directive into law. But that directive is producing a report proposing long-term legislation and listing what Washington’s bureaucrats like to call policy options. The report is being worked up by one of HUD’s assistant secretaries, Miss Donna Shalala, and it won’t be ready until next August.

**Hurry-up job.** To get some fast and politically useful answers, Housing Secretary Patricia Harris handed the task-force assignment to the department’s top troubleshooter, Joseph Burstein, and its Atlanta regional administrator, R. Russell Marane.

Burstein says HUD does not yet know how much mortgage insurance and housing-subsidy money reaches the small towns and rural areas. “But my definite impression,” he adds, “is that our low-income programs are not reaching into rural areas.

“We want to find out what we are doing and why we aren’t doing it better—and why the FHA hasn’t been serving those areas the way it should.”

The FHA turf. One reason HUD has not worked into the rural areas involves a long-standing arrangement between the FHA and the Farmers Home Administration to avoid each other’s territory. Farmers Home has 1,800 offices authorized to make housing loans in towns of up to 20,000. HUD has stuck to suburbs and cities.

The Farmers Home programs this year are expected to finance 5,000 new housing units under the agency’s own new rent-subsidy program. The agency will also help finance construction of 30,000 to 35,000 apartment units, most of them for the aged, under loans running up to 50 years.

The agency backed 122,000 single-family mortgages last year. Of the 56,000 with subsidized interest, (an average of 3%), some 40,000 were on new construction. Of the 53,000 unsubsidized loans, about 32,000 were on new construction.

**Koreans to rebuild**

President Park Chung-hee of Korea has ordered the investment of $27 million to rehabilitate the city of Iri, devastated by the explosion of 30 tons of dynamite last November.

Most of the money will be spent with five local construction companies that will build 1,150 apartments around the Iri rail station, where careless handling of candles by workmen set off the blast. It destroyed 70% of the city of 130,000, left 10,000 homeless and killed 59.

Iri is 120 miles south of Seoul.  
—SHIN HO-CHUL

McGraw-Hill World News, Seoul

...and more new homes for the rural poor

Now comes from the Farm Home Administration what could be the ultimate in federally-subsidized homeownership programs.

FmHA’s plan calls for opening up homeownership to rural and small-town families with annual incomes of $1,000—enough to pay maintenance costs. All other costs, including loan principal, interest, taxes, insurance and utilities, would be paid by the federal government.

The proposal, in the works since early ’77, still awaits White House approval.

**Broader coverage.** The new program is designed to extend to rural families the benefits that permit low-income city families to pay only 25% of their income for rent. In this case, though, subsidies will cover families with no income at all, or only enough to pay upkeep, if they are otherwise found to be eligible and in need of housing.

Under existing FmHA homeownership programs, low-income families are subsidized for all but 1% of the mortgage interest cost. Mortgages for these houses, which must be “modest,” have been averaging about $22,000.

**Subsidy recapture.** Included in the package is a measure that allows the government to recapture some of the subsidy payments if a family’s income level rises. Washington would also get part of the profit from a house sale. Commenting on the precedent-setting move, a Department of Agriculture official says: “If this becomes a volume program, it could cost a lot.”

The recapture proposal is similar to one that former National Association of Home Builders President John Hart made during the Ford Administration’s last year.  
—D.L.
Specify Jenn-Air.
The range that's as unique as your kitchen designs.

More and more people are talking about it because they want features like these.

Accessories quickly convert cooktop to an open spit rotisserie or shish kebabber.

Hoodless surface ventilation removes smoke and odor where they start.

Conventional heating elements or ceramic heating elements.

It needs no hood so the overhead space is yours to work with.

Cooktop grill. Drops in place in seconds.

Also has a griddle and deep-fryer available.

Two-way oven. Works in the conventional way, or as a convected Power Oven that cooks faster and cooler with power-driven air. Power Oven cleans itself continuously during use and has accelerated cleaning cycle for heavy-use build-up. Available in free-standing built-in and drop-in models for complete design flexibility.

See the Yellow Pages, the 1977 Sweets File 11.27/Je, or write Jenn-Air Corporation, 3035 Shadeland, Indianapolis, Indiana 46226

The Jenn-Air Grill-Range.

A Magnificent Cooking Instrument
The General Electric Extended Range PTAC Heat Pump offers significant savings on heating bills when compared to electric resistance heating.

These savings will vary depending upon your geographic location and climate. Examples of estimated annual heating savings in various cities are: Atlanta 40%, Los Angeles 55%, Seattle 44%, Boston 27%, Philadelphia 30%, New Orleans 51%.

We call it Extended Range because the Zoneline III® unit operates as a reverse cycle heat pump with defrost down to 35°F. Even lower temperature reverse cycle operation can occur depending upon associated outdoor humidity conditions.

In the heating cycle, Zoneline III® heat pump takes heat from the outdoor air and through the refrigerant system transfers this heat plus the heat of compression (electrical input to compressor) to the indoors.

This reduces operating costs since the heat output can range as high as two or more times the energy input to the system, at standard rating conditions, as compared to resistance heat. At temperatures below the reverse cycle operating range, the unit automatically switches to electric resistance heating.

In the cooling cycle, the various models provide from 6.6 to 7.5 EER. This adds further to energy savings when compared to models of comparable capacity and lower EER.
ZONELINE III® HEAT PUMP FROM GE OVER ORDINARY RESISTANCE HEAT.

ATLANTA 40%  MIAMI 55%  WASHINGTON 33%  CINCINNATI 23%

DALLAS 41%  CLEVELAND 20%  LAS VEGAS 46%  LOS ANGELES 55%

SEATTLE 44%  MEMPHIS 36%  CHARLOTTE 37%  BOSTON 27%

Zoneline III® Extended Range heat pump, because of its electrical energy conservation, ease of installation, simple control features and appearance, provides overall economy for room-by-room or zone control in motels, apartments, office buildings, nursing homes, hospitals and for modernization projects.

GE offers job site product service. We believe packaged terminal air conditioners should be repaired conveniently and quickly, if possible right on the job site. We have a network of Factory Service Centers covering over 800 cities, plus more than 5,000 franchised servicers throughout the 48 contiguous states, Hawaii and D.C. This is General Electric's Customer Care® service.

Additionally, Extended Service Contracts are available in most major metropolitan areas.

For further information about our commercial and multi-family Zoneline heat pumps, and our full line of other through-the-wall heating and cooling systems, call your local General Electric sales representative or write to J. F. West, General Manager, Room Air Conditioner Department, General Electric Company, Appliance Park, Building 6, Room 242, Louisville, Kentucky 40225.

Circle 39 on reader service card
Leisure Technology Corp. splits its northeastern operations. Norman Orchant takes the New York division's presidency and becomes corporate vice president of the parent, which is based in Lakewood, N.J.

Norman Orchant takes the New York division's presidency and becomes corporate vice president of the parent, which is based in Lakewood, N.J. He had been vice president in charge of construction for Leon N. Weiner & Associates in Wilmington, Del., and, before that, construction director for Levitt's Chicago and Long Island operations.

Howard Mandel had already been appointed to head the Leisure Tech's New Jersey division [HOUSING, Feb. '78].

In Punta Gorda, Fla., another president is named. John W. Douglas takes the helm of Punta Gorda Isles Inc. on Florida's west coast. He had been senior vice president in charge of operations since 1973. The presidency had been vacant.

Leisure Tech taps Orchant for N.Y.

In Dallas, Bernard L. Soisson Jr. becomes group executive in charge of the housing division of Wylain Inc., a new post. He was administrative assistant to the chairman. Wylain, a diversified manufacturer, builds modular and conventional houses in 19 states. At Continental Homes Inc. of Indianapolis, Ind., a Wylain division, Edward Flanagan is named vice president of construction. He occupied the same post with Leisure Living Inc. of Wichita, Kans.

Dennis S. Beck is named vice president of Metropolitan Development Corp. of Beverly Hills, Calif. Beck, an attorney, had been one of Met's lawyers.

Mike Mohler is promoted to project director at Irvine Pacific Development Co. He had been an assistant project manager for the parent Irvine.

DEVELOPERS: Gary S. Copson is named assistant general manager of the San Diego division of Avco Community Developers, headquartered in Rancho Bernardo. The developer is a subsidiary of Avco Corp., Greenwich, Conn.

LENDEES: Alvin Hirshen takes over as director of the Federal Home Loan Bank Board's new office of community investment. Now staffing up, Hirshen will soon begin the ticklish task of implementing Chairman Robert McKinney's controversial anti-redlining measures.

Builders Capital Corp. of Santa Monica, Calif., names Neal B. Blair vice president of development. A HUD veteran, Blair was California representative for PMI Mortgage Insurance. Builders Capital, a new subsidiary of builder Ray Watt's Watt Industries, provides initial development and equity financing for small and medium-sized builders.

ARCHITECTS: Richard C. Elliot is named a vice president of Arch + Tekton Inc. of Newport Beach, Calif. He had been a project manager for the architectural and planning firm since 1976. Elliot will head the company's office in Albuquerque, N.M.

ASSOCIATIONS: The NAHB's Washington headquarters strengthens its public relations staff. Louis M. Thompson, assistant White House press secretary during the Ford administration, becomes director of public affairs. He'll take over responsibilities previously handled by Charles McMahon and Stan Baitz, who are retiring. Thompson was top assistant to the Secretary of Defense for Public Affairs at the Pentagon from 1971 to 1974.

After a three-month talent search, the NAHB hires F. Thomas Huheey as staff vice president and publisher of Journal-Scope, the NAHB's official publication. For the last three years he has been chief spokesman and director of operations for the American Meat Institute in Washington, D.C. He succeeds a former newspaperman, Albert B. Manola, who attended the NAHB's Dallas convention and then retired January 31. He had served the association for 19 years.

Arthur W. Johnson is named executive director of the Insulation Contractors Assn., newly formed in Washington. He had been director of energy conservation for the NAHB research foundation.
You’re looking at a beautiful way to sell a house. We’ve got 36 more.

Weldwood Sidings

It’s easy to make a sale with a Weldwood® siding. It’s strong, attractive and durable. But when you build a lot of homes, you need a lot of variety. And Weldwood has the largest variety of plywood sidings around.

When it comes to texture, we wrote the book. You can choose from the look of circular saw marks, adze marks or rough sanding, to name just a few.

You can choose between wood types, too: Douglas Fir, Southern Pine or Cedar. In your choice of factory stains or pre-primed and ready to paint.

We’ve also got a wide range of different styles. From lap to kerf to flat to shallow-grooved or V-grooved, to the look of spaced boards or boards and battens.

It all adds up to the freedom of choice to make each of your homes a unique statement. And that sells.

Look for our plywood sidings along with our smooth and textured hardboard and PF-L® sidings at your local Champion Building Products Dealer. Or, for further information, call your local Champion Building Products Sales Office.

Champion Building Products™
Champion International Corporation

© Champion International Corporation, 1978

Circle 41 on reader service card
Old Ben had the right idea.

Being a practical-minded fellow, Ben Franklin looked for ways to make the stove more efficient in heating. He succeeded.

Today's realities dictate a similar emphasis on efficiency and conservation. MARCO is succeeding.

MARCO manufactures a state-of-the-art heat circulating fireplace (DF-36B and the new DF-46) is measurably 50% more efficient than non-circulating types.

What's more, this MARCO "zero clearance" fireplace carries a number of important features not found on any other fireplace. Such as:

- Installation AFTER complete rough framing. No tabs to prevent header from touching top edge of face trim, thus eliminating the cost of pickup work after installation.
- Full refractory-lined firebox in simulated brick for longer life and the look of masonry.
- Five-position positive seal damper to minimize heat loss.
- Low-profile tapered sides so installer can offset from a corner to an outside chase below the plate line.
- Built-in nailing flanges for positive leveling, securing to framing, and for making fireplace even with finished drywall.

The MARCO DF-36B or the new DF-46 saves you money on installation. Saves home buyers money on heating bills. And everyone knows that a penny saved is a penny earned.
and make something beautiful happen when you build with Miami-Carey

Every prospect makes a beeline for the bathroom and kitchen, and here Miami-Carey helps you to feel proud of what they'll see. Surface and recessed cabinets in the most popular styles, complemented by the latest vanities, accessories and lights. Decorator mirrors to add a touch of luxury to any room. Innovative range hoods, fans, heaters of superb craftsmanship and trend-setting design.

Encourage your prospects to touch the chime button. As they enter they will note the spaciousness of the living room reflected in the graciously-styled decorator mirror... be half-sold even before they get to the kitchen, bathroom, bedrooms... each with something beautiful from Miami-Carey.

Miami-Carey products are visible evidence that you have supplied the best materials available. They can help you to convert lookers into contracts.

FREE CATALOG: Write today for your copy of Miami-Carey's condensed full-line catalog. See how you can build beautifully and profitably!

Miami-Carey products are visible evidence that you have supplied the best materials available. They can help you to convert lookers into contracts.

FREE CATALOG: Write today for your copy of Miami-Carey's condensed full-line catalog. See how you can build beautifully and profitably!
MARKETING

Builder alliance boosts sales

"Together we can attract more traffic than any one of us alone," says Gerald Smilen, president of an association of five builders with adjacent projects in Lauderhill, Fla. "We can afford top-quality advertising talent, and we can offer prospects one-stop shopping."

The five advertise jointly as "The Homes of Inverrary Boulevard West." Their model complexes are only 300 ft. apart. And they’ve sold a total of 190 single-family houses since July.

"A real estate broker brought us together," says Smilen. "There was a tract of land up for sale, and no one builder could afford to buy it all. Then the owner decided to sell in groups of about 50 lots, and the five of us split it up."

The covenant. "We decided to cooperate in part because a nearby project priced in the $60s had its sales ruined when low-end houses were built next door," says Smilen. "No one wanted that to happen to him."

So the five signed a covenant that none of them would build a house smaller than 1,500 sq. ft., although zoning would have permitted it.

Advertising was another common concern. "We thought if we could attract traffic, we’d all do well," he says. "So we hired an ad agency, and we divide equally the expense of running newspaper ads. Once a week we meet to discuss promotion ideas and sales.

Unexpected benefits. In the course of conversation, the five builders often discovered common complaints. What’s more, they’ve found that, as a group, they can do something about them. For example:

- Security. All suffered thefts of material from building sites. They now share a security guard, an expense no one builder could shoulder.
- High building materials prices. The five found they could use the leverage of the association to get a better deal from suppliers.
- Subcontractors. The builders started out with separate subs; now they’re sharing them. "If one guy runs into trouble with, say, his plumber, another one of us usually has a good man to recommend," says Smilen.

Product potpourri. By chance, each builder’s houses appeal to different tastes. One has a Tudor-style model, for example; others feature the popular California style or traditional Florida-style elevations (photos above). Prices range from about $60,000 to the $80s.

When sales first opened, buyers were mostly young couples. Now, with the winter sales season underway, many of the buyers are retired or semi-retired people from the north who aren’t attracted by condominium living.

All five builders have bought more lots close by and plan to continue to cooperate. — B.B.G.

WHO THE FIVE BUILDERS ARE

Fisher Hall Homes (84 lots). Principals: Gene Fisher and Frank Hall.
Glenview Builders Inc. (48 lots). President: Tom Maccari.
Smilen Homes Inc. (48 lots). President: Gerald Smilen.
Z&M Construction Corp. (50 lots). Officers: Dave and Andy Zuckerman.

Land-sale abuses laid to HUD

Some advice for land buyers: Read all of the fine print in property reports.

Why? Mainly because the Office of Interstate Land Sale Registration, an arm of the Department of Housing and Urban Development, isn’t doing much to protect consumers from land fraud. In fact, according to a new 500-page study, government watchdogs have failed to ride herd on even the most freewheeling lot-sale companies.

Passing out the poor marks is INFORM, a consumer-interest group in New York that has probed the industry’s sales practices in two earlier studies [H&H, Dec. ’76, Sept. ’77].

Disclosure laxity. The chief complaint this time around is lax laws.

For example: Companies that sell lots interstate must file property reports with HUD’s land-sales office. But disclosure rules are so loose, says INFORM, that a seller can easily mask a worthless property in the report.

Criticism of states. State agencies took some heat, too. Of the six states studied by the consumer group, Colorado provides the least consumer protection, while Arizona and New Mexico lag in controlling the environmental impact of subdivisions. Conditions in California, Florida and New York are also examined.

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Top off your plans with Sierra
The Ultimate Roof—from Flintkote

A Sierra Roof has a bold, textured beauty that gives a distinctive accent to any structure. What’s more, this 340 pound asphalt heavyweight offers your customers the kind of plus value they can readily appreciate.

Sierra Shingles carry a UL Class “C” Fire Rating and a UL Wind Resistant Label. They’re virtually indestructible, so tough we back them with a 25-year limited warranty." In every way—the most for the money!

Specifying Sierra Shingles is a smart move for you, too. It means a happy customer, your greatest asset. And this top-of-the-line sale means extra money in your pocket as well.

Whether you are planning new homes or commercial buildings, or remodeling old ones, it makes good sense to sell up to Sierra. Get in touch with your Flintkote distributor, or mail the coupon today!

THE FLINTKOTE COMPANY • 480 Central Ave., E. Rutherford, N.J. 07073

Certificate available upon request
When it comes to the place where salesmen do the most selling, the kitchen usually wins—hands down! To most people, it's still the most important room. And when a kitchen is filled with the kind of ideas and appliances like the one shown above, it can help make your selling job a lot easier. It's fully-equipped with Hotpoint appliances in exciting new Almond...just one of the fresh, new go-with-anything colors we call The New Naturals.™

Hotpoint's design experts can help your kitchens stand out. Our Certified Kitchen Designers can recommend plans that can not only improve your kitchens' functional design, but save you money in the bargain. Our complete Kitchen Planning Package includes blueprints, color scheme, and a full-color perspective rendering of your layout. Result: your kitchens can have that coordinated custom look.

Quality appliances up and down the line. Today, you've got to take a harder look than ever at what you're getting for your money. That's why it makes more sense than ever to do business with Hotpoint. We're a single source supplier of quality dependable appliances. Appliances with the kind of convenience features buyers want—and are willing to pay for. And, Hotpoint is a nationally advertised name people know. A name that can act like an extra salesman for you.

Hotpoint salesmen think like you do. Your local Hotpoint builder representative knows...
can do for your kitchens.
things we do for you, too.

your business. And your market. He'll not only help you choose appliances, he'll put his experience and that of our contract sales operation to work for you. In short, he'll do everything possible to make sure things go smoothly, from initial planning right up to final installation.

**Hotpoint service is a selling point, not a sore point.** It's called Customer Care Service—a network of factory service centers in over 800 cities, plus thousands of franchised service people across America. It helps build buyer and tenant confidence and takes service problems off your shoulders.

If you'd like to know more about all the benefits of dealing with a single source supplier, get in touch with your Hotpoint builder representative. You'll like what he can do for you.

We hustle for your business. And it shows.

**Hotpoint**
A Quality Product of General Electric Company

Circle 47 on reader service card
New ad campaign kindles condo sales

Sales jumped from one or two a month to ten a month when Kaufman and Broad Homes started a new newspaper ad campaign for Greenbrook, a 521-unit project in Stoughton, Mass.

The old ads (see sample right) stressed terms; new ones (far right) emphasize value and the fact that Greenbrook is a nice place to live.

Here’s why they’re resulting in improved sales:

• They’re drawing better qualified traffic. “Seventy-five to 80% of prospects qualify now versus only about 40% before,” says division manager Gerald Diglio. “Buyers with good incomes were scared off by the $299-a-month pitch—they thought the other buyers might not be their kind of people.”

• They’re selling people on the product. “Other reasons for buying (i.e., low monthly payments) are really secondary,” says Diglio.

Greenbrook’s two- and three-bedroom units are currently priced between $39,500 and $46,000. Since the project opened in 1973, 348 have been sold.

— B.B.G.

Old ad makes a point of $289.62 carrying charges (including principal, interest and mortgage insurance).

New ad emphasizes potential for appreciation because of “right location, right design, quality construction.”

TOWN PLANNING

Planners’ dream: New Alaskan capital

When two San Francisco firms got word that their joint entry had won a competition to design a new capital city for the state of Alaska, it was a planner’s dream come true.

The architects and urban designers, Bull Field Volkman Stockwell, and the planning consultants, Sedway-Cooke, were chosen by the Alaska Capital Planning Commission from five finalists in an invitational contest. The commission had a list of 160 recommended firms, selected 11 of those for interviews, and paid the final five to submit design concepts before naming the winner.

The grand prize for the San Francisco team was a contract for $120,000 to do preliminary design for a brand new city of 37,000 in an area now inhabited by bear and moose. Work is being awarded in staged contracts.

“Exciting challenge.” “It couldn’t be a more exciting challenge,” says John Field.

The city will be at Willow, 70 miles north of Anchorage and 800 miles north of Juneau. Construction could start in 1980, with completion in 1994. Alaskans voted two years ago to move the capital from Juneau to a new location near where more than half the population lives.

The design team not only had to consider the climate, where temperatures vary from 90 degrees in summer to minus 40 degrees in winter, but sociological factors as well. Most Alaskans love nature and outdoor recreation and are rugged individualists. But views, color and a sense of community are needed to help ward off the depression and a sense of isolation.

The city plan. The team has opted for a plan that provides maximum protection from the elements, a mixed-use town center, and corridors that let in the sun and emphasize views of 20,230-ft. Mount McKinley, the highest point in North America. The city will perch on an elevated plain, from which rises a ridge that will be the town center. To walk the town end to end will take only 15 minutes.

Design calls for a linear town, with a main street running along the ridge. “Generally the buildings will probably be no more than five or six stories,” explains Field. “Many will be only two stories, to admit the sun.”

Special materials. The architects expect to use steel-frame buildings, which can be erected fast in the short summer building season. Sidings probably will be wood or some specially-developed laminated material, which should work well in the climate and add color to offset “visual deprivation” during the harsh winters.

Within the town center will be a 200-unit legislators’ apartment hotel, 425 apartments and 300 townhouses. Outside the central area there will be district centers and neighborhood centers or “micro-neighborhoods,” with space primarily for conventional single-family houses, patio and cluster single-family houses, and mobile homes, but with some provision for more density. About 1,000 families will live in each basic neighborhood unit, which will be centered around an elementary school and a convenience general store.

Much of the new town will be built with federal and state money. There is no final estimate of the cost.

— JENNESS KEENE

McGraw Hill World News, San Francisco
It was a great year for people who depend on RIMCO windows.

In 1977 RIMCO distributors got good delivery. RIMCO builders and remodelers finished what they started. And RIMCO owners got windows they'll be happy with from now on.

For over 100 years we've been very good in providing a broad line of case­ments, casement bows, single- and double-hung, sliders and vent windows. And an outstanding line of wood patio doors with 1" double glazing.

But RIMCO doesn't just deliver windows, we deliver value. Tight, time-defying materials and construction. Highly-saleable operating features (like Tilt-out double-hung units), clean design, and the unmatched energy-saving qualities of wood and multiple glazing. All at prices that might make you think the price list was a couple of years out-of-date.

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SINGLE-FAMILY HOW-TO

SMART PLANNING FOR HOUSES ON SHRINKING LOTS

They're shrinking because land and development costs are skyrocketing everywhere and reducing lot size is often the only way to hold those costs down.

They’re also shrinking because there’s a growing market for houses on smaller lots. Many singles, professional couples, single-parent families and empty nesters prefer reduced-maintenance single-family to attached housing.

But whatever market you aim for, you have to maintain the detached-house characteristics that buyers are looking for, even as lots get narrower. That means rethinking siting and house design. Specifically:

It takes smart planning to provide the privacy buyers want at densities higher than they’re used to. (The five projects in this article, for example, range from 3.5 to 20 units per acre.)

It takes smart planning to offer usable outdoor living areas on small lots—and yard space is an important marketing tool.

Finally, it takes smart planning to give tightly spaced houses individuality and to keep the streetscape attractive.

It’s far from impossible, however.

Builders in markets as different as Texas and New Jersey, Ohio and Florida, are coming up with imaginative plans for higher-density projects. On the next 20 pages you’ll read about some of their ideas.

— BARBARA BEHRENS GERS and NATALIE GERARDI
Zig-zag lot lines enhance outdoor style of life

They create space for garden entries, like the one shown on page 54. They open an area for back and side yards. And they give the zero-lot-line houses at Arbor Green, Pembroke Lakes, Fla. four exposures.

But providing outdoor living space on lots only 43'6" wide was not the only reason for the zig-zag lot line. Builder Bill Spear of Spear Associates was also faced with a zoning problem: He wanted to build zero-lot-line houses, but the 14.2-acre site was zoned for townhouses.

By zig-zagging the lot line between units, then building a connecting wall along it, legal requirements were satisfied without sacrificing any usable outdoor space.

What's more, the lot-line walls buffer backyards from the street. Similarly, fences and windowless walls shield neighbors from each other. This degree of privacy makes maximum use of outdoor areas possible. And, says Spear, "the indoor/outdoor flow of activity in our houses is a big selling point."

The living rooms, kitchens and dining rooms all feature sliding glass doors that open them to the outside. To make access to outdoor space even easier, there are pass-throughs to the patios from every kitchen (see floor plans page 58-59).

Moreover, the yards are intended...
to be used as intensively as one would normally use indoor living area. In his models, Spear shows decks, barbecues, pools, etc. that make the most of the available square footage.

"The impression is of one large, open living area," says Spear. And that makes the moderate-size (1,260 to 1,880 sq. ft.) houses and lots (average 5,466 sq. ft.) seem more spacious.

Buyers are mostly young professional couples and divorced singles with children. "I didn’t realize the strength of the single-parent market," says Spear, "but, like our other buyers, they are a group to which low maintenance is very important."

Interlocking lots are set along curved roads (left). This helps prevent a row-house look at 6.68 d.u./acre. Another help: varied rooflines and setbacks (see photo above left). Unit at far left in photo is project’s smallest, with 1,260 sq. ft. (floor plan next page). Two-story house pictured is the best seller. Its two-story-high living room is shown above. Interior is by Peg Gorsen of Peg Gorsen Interiors, Miami Beach, Fla.
Here's how houses fit the zig-zag lots

"As the lot shifts in one direction, the house shifts in the other," says builder Bill Spear.

A side wall of the front section of each house is on a lot line (at the left side of the plans shown below). Then the lot line zig-zags for ten feet. After that, a rear side wall at the unit’s other side is on a lot line (at the right in the plans below).

Space for private entries is provided at one side; side yards are created at the other. There are windows on all sides, although not along the lot line.

A connecting wall was built along the zig-zag so units could fit under townhouse zoning. Its angles create storage areas for each house.

All the interlocking lots are 43' 6" wide, and any floor plan fits any lot. Differences in length and/or height are used to vary square footage and to add interest to the streetscape.

The twist: Houses at Weatherstone in Dublin, Ohio, were sited before lot lines were drawn.
The reason: Builder Bob Webb wanted to provide maximum privacy for $110,000-plus houses on 5,000 to 6,000-sq.-ft. lots. And the terrain didn’t help.
"There wasn’t a twig on the site," he says, "and it’s completely flat.”
So Webb took the floor plans he wanted to use to landscape architect James Bassett of Lima, Ohio. Bassett planned the placement of units to provide as much natural privacy as possible—e.g. so that the windowless garage wall of one house shields another’s entry—and then drew in lot lines that bent as necessary to provide outdoor living space (site plan below).
Bassett’s job was simplified by PUD zoning—Weatherstone’s four 18-unit clusters are part of Muirfield, a 1,600-acre planned unit development just north of Columbus.
“We could do anything we wanted with setbacks and sideyards,” says Webb. The varied setbacks also improve the streetscape.
“A row of garages looks pretty sterile,” says Webb. “By creating walled entry courtyards and motor courts, we avoided that. We also tried to get away from an overdose of driveway surface, so some driveways are of brick or exposed aggregate.”

Entry court (left) works with European look builder adopted. This style, unusual for Ohio houses, has two advantages: 1) it suits the tightly spaced cluster plan and 2) it allows for more variation in rooflines than standard Ohio colonial elevations. Stone walls and wood fences were used where needed to provide additional privacy (left and right). Young trees added by Webb to the barren site will also shield dwellings as they mature.
Cul-de-sac of model homes (left) includes each of five basic floor plans. The model complex is in the first of four 18-unit clusters that will make up the 22-acre project. (Density is 3.7 d.u./acre.)

Note the irregularly shaped lots, which were drawn to fit the placement of the dwellings. Some houses have outdoor activity areas at the side, others have them at the rear. All, however, feature minimal lawn area—buyers don't want to have to mow grass.
Time-tested plans were developed four years ago for a Bob Webb Builders condo project. They proved so successful that he rehired architect Trott & Bean of Columbus to enlarge its original plans and adapt them to detached design. The two-story, three- and four-bedroom plans appeal to mature families who are moving out of larger houses in older neighborhoods of Columbus. Children are usually in high school or college. These affluent buyers often pay much more than the basic house prices listed for each plan. Webb will customize almost anything inside his houses, and most buyers ask for extra cabinetry, paneling or other improvements. Note the unexpected bay window in the garage of plan E. It adds more interest to the wall which always faces the street.
Pared-down lots leave more room for green space

Developer Seymour Weinstein sited 68 single-family houses on 14 acres at Pepperwood in Dade County, Fla. Yet, by shaving lot size to 60' × 70', he saved stands of trees that run in greenbelts around the zero-lot-line houses.

There are several benefits:

- People will pay higher prices ($72,000 to $79,000) for the houses because of the lush vegetation—there aren't many wooded sites as close to commercial and business districts.
- The small lots are just right for buyers looking for close-in housing. They're singles, professional couples and empty nesters who don't want to be burdened with maintenance.
- The greenbelts provide privacy and the illusion of large lots in spite of a 4.85 d.u./acre density. Many backyards or sideyards abut the common areas (site plan next page).

The proof of the appeal of the land plan: The houses sold out in 27 days—without models or advertising.

"We just put up a couple of signs on the corner," says Weinstein, who is president of Catalina Builders of Florida Inc.

Getting the project started wasn't as easy as selling it, however. It's the first to be built in Dade County under RU1 cluster zoning.

"Everyone was unfamiliar with zero-lot-line housing," says Weinstein. "It took us six months after we got the zoning to get the project platted and get utilities, telephone and water worked out—and that's only because we handcarried the papers from department to department to expedite things. Half that time would have been normal."

The houses are around cul-de-sacs designed by land planner Henderson and Rosenberg of Miami to preserve the best of the natural vegetation. The arrangement also gives a feeling of low density.

"Each cul-de-sac seems like its own private community," says Weinstein.

Each cluster consists of from four to eleven units, in combinations of one and two-story elevations. The houses, which range from 1,988 sq. ft. to 2,262 sq. ft., typify zero-lot-line design. For example, windowless side walls are compensated for by large expanses of glass at the side and/or the rear. Architect Charles Sieger of Miami also included clerestory windows and atriums, which open up the entries and add window space in master bedrooms (floor plans page 67).
Greenbelts (green in plan at left) snake between and behind units. Common area, which is maintained by a homeowners' association, includes bicycle paths, walkways, tennis courts and a pool. Maintenance fee is about $40 a month. Project is buffer from busy streets by a 6' redwood fence around the 14-acre site.

Best seller of three floor plans is a 2,171-sq.-ft., three-bedroom plan (far right, top). Forty buyers chose this unit (14 each of the other two were sold). It features a dramatic step-down entry overlooking garden atrium. Wraparound wood deck with built-in barbecue is standard. Options offered include garage to family room conversion. A floating loft can be added in the two-story living room of the 2,262-sq.-ft. plan at near right. Builder Weinstein allows customizing, including changes in interior partitioning such as converting from three bedrooms to two. Buyers have spent up to $23,000 to custom-tailor their houses. The three-bedroom houses with 2 or 2½ baths are big enough for families, but only a few buyers have children.
Pool and patio (above) take up most space behind units. Shown is the backyard of 2,113-sq.-ft. house, with three sets of sliding glass doors (floor plan p. 70). Living room at bottom right is in a 2,032-sq.-ft. unit (floor plan p. 71). Interior is by Carole Eichen Interiors, Fullerton, Calif. Site (below) was planned by architect Richardson, Nagy, Martin.
California styling opens up houses on walled lots

"You could easily get a boxed-in feeling if it weren't for the volume ceilings and skylights, the broken-up rooflines and the pool," says Craig Germain, president of Gardner & Williams Inc., builder of Villas Las Colinas in Dallas.

Every house in the 27-unit project is surrounded by a poured-in-place concrete wall that extends well above eye level. The walls provide seclusion for sunbathers and swimmers (every house has a 12' x 18' pool). They also increase security, important because the project is close to the airport and many buyers are frequent travelers.

But putting up walls also was a potential problem. Lots are 7,200 sq. ft. — small compared with the 13,000 sq. ft. that's average for single-family houses in Las Colinas, the 3,500-acre planned unit development where the villas are built. The effect of enclosing them could be claustrophobic, especially since, as Germain says, "Texans like wide open spaces." That's particularly true when house prices go from $111,000 to $126,000.

The solution was to create a feeling of openness from the inside out. To do that, California-based architect Walter Richardson of Richardson, Nagy, Martin used these devices: cathedral ceilings (photo below left); generous amounts of glass (even some of the bathrooms are window-walled); skylights; and entry courtyards that are almost like atriums (see cover photo).

Furthermore, from the outside, varied rooflines and irregular facades relieve the unbroken plane of the walls. Details like exposed rafters and brick chimneys (photo above left) also add visual interest.

The houses, which range from 1,850 to 2,239 sq. ft., are intended for empty nesters, young professionals and singles, and they're being built in various locations within the PUD.

These 27, for instance, are on a 7.5-acre plot on the top of a hill (site plan far left). The site called for higher-than-normal density for expensive houses (3.5 d.u./acre) for two reasons: flattening the hilltop increased land costs and the plot wasn't big enough for a neighborhood of large-lot single-family houses.
Fastest seller is 2,032-sq.-ft. house at right. Its living room, with sliding glass doors to pool area, is pictured on page 69. A two-bedroom model, it features three full baths, two with dressing rooms and skylights over the tubs.

Mid-priced house (top left) is a 2,113-sq.-ft. plan. Its bathrooms have windowed tub areas overlooking the sideyard garden. This would not be practical for families with children, but is appropriate for Villas Las Colinas' empty nesters and professional couples. The entry of this plan is shown on the cover.

Smallest unit, with 1,850 sq. ft., is shown at bottom left. Its entry is dramatized by a large skylight. The den, a feature of four of five plans offered, can be used as a home office, TV room or hobby room.

Next-to-largest plan is at bottom right (largest plan is not shown). Three-bedroom house has 2,143 sq. ft. Greenhouse adds interest to entry area and provides for a window in the master bath.
The homes, which range from 1,200 to 1,600 sq. ft., are completely detached except for some architectural elements that tie them together visually. They are patio homes with decks of more than 500 sq. ft. rather than yards, and they are sited so that all have excellent views from the main living areas and maximum privacy on the decks.

The ten homes occupy an urban renewal site in Perth Amboy, N.J. that had lain vacant for 15 years because it was so small—.49 acres—and steep that no one wanted to bother with it.

To builder Barry Rosengarten, however, it was an opportunity.

First, it was that rarity, buildable waterfront land. With a marina and yacht club directly in front and a view of a wooded section of New

And how smart can you get?

Here's a 40-unit project on less than half an acre
York's Staten Island across the bay, its outlook was more typical of a New England seaport than an old New Jersey industrial town.

Further, Rosengarten was a Perth Amboy native who had stayed in the area building expensive custom and semi-custom homes; he wanted to do something for his hometown. He believed that good middle-income housing could influence people to stay in the city and even attract some back from the suburbs.

He succeeded beyond all expectations. Although the site was in a dingy neighborhood, the project, known as Bayside Terrace, appealed not only to the middle-income but to the upper-income market.

Buyers include two doctors, a lawyer, two architects, the city controller, the city tax collector, a businessman, a tugboat captain and an electronics specialist. Most are childless, either young marrieds or empty nesters. Two are bachelors. And there is only one child in the ten units.

Prices ranged from $46,990 for the two-bedroom model and $54,990 for the three-bedroom model when the project opened. Final prices were $5,000 higher. However, the buyers loaded their homes with extras, ranging from such standard options as fireplaces, central air conditioning, finished basements and enclosed lanai areas to a complete solar heating and hot water system that added $8,500 to the price of a two-bedroom unit. The project sold out from plans at an average price of over $60,000.

The existence of such a strong luxury market for what was, despite the scenic views, a marginal neighborhood came as a surprise even to Rosengarten. He had been so concerned about holding down costs that even the three-bedroom units have only 1½ baths.

Rosengarten was not the only one who was concerned: The local banks would not provide adequate construction financing until he could produce firm sales. Ironically, this conservative attitude cost him money, for he was locked into selling prices at a time of rapidly rising costs. There were also some unexpected costs, because test borings did not show how much underground rubble there was from buildings that had been demolished years before, and it was necessary for some of the foundation walls to go down as far as 16 or 17 ft.
Staggered siting was necessary both to provide views from the back units and to deal with a hilly site (site plan left and side section below right). The ground rises 18 ft. in the 107 ft. between the waterfront street and the street behind. In addition, it rises 5 ft. between the side street and the last unit.

Placing zero-lot-line houses on such a site involved some precise engineering. However, the hill did make it easy to provide excellent views from the back units. They are sited so that their main windows overlook the deck areas between the front units (see site plan left). And because they are so much higher than the front units, they have good views even where the front decks have been enclosed.
Two plans, a 1,200-sq.-ft. two-bedroom plan and a 1,600-sq.-ft. three-bedroom plan, were tailored to the site.

The ground level of the smaller A unit (plan right), for example, is mainly a garage and a utility room. In the larger B unit, (plan far right), however, it represents expansion space, for the back is at grade. Thus plumbing has been roughed in for a second full bath.

Because of the water views, the A plan has been oriented toward the front and the B plan toward the back. Notice the window arrangement in the B plan.

Both plans have sunken living rooms with 10-ft. ceilings, making them seem larger, and the kitchen and dining areas are raised so that they too have water views. And both plans have only 1 ½ baths, with the full bath compartmentalized. This was done to save money, for the builder did not expect to attract such a high-income market. He found no buyer resistance to the 1 ½ baths, but future B units will have 2½ baths.

Rosengarten has acquired an adjoining parcel of land and has begun building four more units. Prices will be higher: $59,900 for the two-bedroom plan and $69,990 for the three-bedroom plan.

The architect for Bayside Terrace was John Chester of Matawan, N.J.
From a builder-architect team, here's...

How to cut the cost of
custom homes like these

Producing contemporary one-of-a-kind homes at a saving of $10 per sq. ft. is a specialty of contractor Soerensen Homes Inc. and the architectural firm of Clark Harris Tribble and Li, both of Charlotte, N.C. The big saving is possible because the architect-builder team has evolved a design/construction system that simplifies both planning and building. This system, developed over the last several years, is the subject of the next six pages.—JUNE R. VOLLMAN
Many of the cost-saving techniques and materials that spec builders use are incorporated in this design/construction system. For example:

- With minor exceptions, designs are based on a 4' module.
- Conventional 2 x 4 framing is used.
- The homes have continuous concrete block foundations with crawl spaces.
- Such familiar building materials as standard wood casement windows and builder trims and finishes are specified.

And, most significantly, all but a few rooms are repeatable components. This minimizes the design/production process and so reduces the architectural fee. And it gives subs familiar elements on which to base bids.

Some savings come from dropping frills

The team began to evolve the cost-cutting program when the architectural firm called in builder/consultant Jon Soerensen to figure out why bids for the home shown on the facing page were coming in much higher than expected.

"The plans called for a lot of expensive details and frills," Soerensen says. "So contractors were building in a 'fudge factor' to cover anything that might go wrong during construction."

Soerensen convinced architect Gerald Li that some details—chair railing and crown molding, for example—could be eliminated. "Li told me he'd actually always wanted them to disappear—especially in contemporary designs," Soerensen says.

The builder also convinced the prospective homeowners that they didn't need such expensive items as black fixtures in all of their bathrooms. "I pointed out that we could save $700 or $800 by using white fixtures in the children's baths," he says.

Since the architect and owners were receptive to his cost-cutting, Soerensen agreed to build on a cost-plus-fee basis. The fee covered on-site supervision, subbing out the work and helping to make cost-cutting decisions as the job progressed. (The builder says his fee for working on one of these money-saving jobs typically is 7% to 9% of the total cost.)

More savings derive from repeatable rooms

By the time the team got to its third job, the system had reached a point at which most rooms could be standardized. A 4' module could be used without destroying the one-of-a-kind design.

To customize the houses, the team emphasizes glass areas, ceiling heights, built-ins and add-on features. (For more details on this part of the program, see pages 80 to 83.) Standardizing room sizes is only one of the methods the team uses to cut the architectural workload.

The subs draw up their own schematics

Architectural drawings for a custom home can run to some 30 pages. In this program six or seven pages is the norm.

"If you work with savvy subs, the architect doesn't have to spell out every detail," Soerensen says. "We give our mechanical and framing subs the floor plans and elevations, tell them how we want the house to work, and ask them to show us how they'll do it."

Soerensen says this eliminates a lot of duplicate effort. "At first glance, details for a contemporary design often look complicated. So the subs tend to bid too high. When that happens, the sub must redraw the details to show how he can save money, while meeting the same standards. Our technique gets us the lowest price right from the start."

Owners go shopping with the architect

Selecting the finish package for a custom home is usually a three-step procedure.

Step one: the architect and prospective owners visit showrooms, see items they like better than those they selected from the catalogs, and the architect must make changes.

"That happens with about 80% of the custom jobs," Soerensen says. "So we eliminate step one. We take the prospective owners directly to showrooms; they see what's available and they pick out what they want."

The builder warns that this cost-saving program isn't fail-safe, however.

It won't work, he says, unless the architect, builder and customer operate as a close-knit team. "You can't have the architect/owner-vs-builder arguments that occur during many custom jobs," he says. "Each of the principals must have faith in the others."

And Soerensen wouldn't use the system to build traditional-style custom homes—especially in his area.

"Here, the traditional custom home is nothing more than a blown-up spec house where better materials are used," he says.

TO NEXT PAGE
"We standardize, standardize, standardize... but we don't end up with standardized houses"

The houses are put together with like-sized living rooms, dining rooms, master bedrooms, studies and kitchens. But, as these floor plans indicate, the similarity among the houses ends at that point.

Each house has a distinctive circulation pattern, varied corridor and stair treatments, and diverse configurations for the outdoor living areas.

"We customize the layouts so that they reflect the owners' life styles and we position the components—rooms, decks and terraces—to suit the sites," explains architect Gerald Li.

Of primary importance, he says is the custom treatment for the public spaces inside the house. In these areas, the one-of-a-kind look is reinforced through changing levels, by connecting rooms through broad openings rather than standard narrow doorways, and by using built-in cabinetry to demarcate spaces between the rooms. (Examples of the effect of these varied treatments are shown on pages 82-83.)

Diverse roofline treatments and differing siding materials add a distinctive note to the exteriors, as the photos above show.
'We reinforce the custom image with distinctive detailing'

Special attention is paid to everything from the way glass areas are treated to the size and shape of the openings that separate rooms. Such detailing makes each home’s interior distinctive—even when rooms are identical in size, shape and ceiling height, as is the case with the two living rooms shown here.

In the photo at the bottom of the page, for example, the demarcation between the living room and adjoining dining room is a change in levels plus a low wall that incorporates niches for stereo equipment and other items (Plan B, preceding page). The wide-open plan reflects the casual, relaxed life style of the owners of the house. And it also helps to flood the living room with sunlight from the dining-room end of the plan.

In contrast, the living room shown at top (Plan A, page 80) has a more closed, formal look because it’s separated from the adjoining greenhouse (above right) by a full wall. Nevertheless, it has a bright, airy feeling—partially because of the transom-like windows near the ceiling and partially because a tall, broad opening punctuates the wall leading to the greenhouse.
Money-saver devised by the builder-architect team: the glass system used for greenhouses and glass-roofed corridors like the one shown above. "Insulated glass systems fashioned of extruded aluminum were too expensive for our cost-cutting program," says Soerensen. "So we designed our own system, using flashing and wood (see diagrams), which brought the cost down 30% to 40%." So far, the builder adds, none of the installations have leaked.
Every city has those old mansions that can no longer be supported as single-family dwellings because of high taxes and prohibitive maintenance and fuel costs.

Even though these elegant houses are solidly built and are designed with features often impossible to duplicate, developers who buy them usually rip them down to make way for new housing.

But they didn't in Virginia Beach.

By renovating this 43-year-old Georgian mansion and its garage, and then building new housing around them, the developers turned the 1.7-acre estate into what amounts to a small-scale PUD.

For Architect E. Bradford Tazewell Jr. of Norfolk and his two partners* mixed three types of housing into the 18 condominium units:

- The three-story mansion was converted into four multi-level apartments.
- The garage became a two-story detached house.
- And 12 new townhouses and a new detached house were built to render the project economically viable.

All but three units have been sold and, says Tazewell, "we're confident those will go by summer." Most sales were to affluent empty nesters at prices from $42,500 to $123,500. Two-thirds of all purchases were made at $87,000 and up.

Tazewell has provided scant recreational amenities for buyers, preferring to keep common charges as low as possible (they range from $32 to $125 a month).

"And besides," he adds, "there are plenty of recreational facilities nearby—including a country club across the street."

Tazewell's costs were about $1.4 million. His partners bought the estate in 1974 for $260,350. Remodeling cost $140,000 and new construction $645,000. And $100,000 more went into landscaping and drainage.

The site is two blocks off the oceanfront in a quiet one-family district, but Tazewell had no difficulty winning multifamily zoning.

"The planning commission was delighted to find somebody willing to preserve a landmark," he explains.

For a closer look at Tazewell's pocket PUD, see the next three pages. —JOEL G. CAHN

*Stockbroker Willard R. Ashburn Jr. and retailer William W. McClanann Jr., both of Virginia Beach. They bought the estate on spec. Tazewell joined, and the three formed TAM Associates to develop the site.
Harmonizing design is reflected in these views of the Virginia Beach project. The renovated mansion appears at the left in the photos above and at left. The new townhouses are shown at right in the same two photos and again in the photo below. The townhouses mirror the older architecture in their facades, their asbestos shingles that resemble slate, and their matching trim colors. The circular drive (above) was repaved with Albemarle greenstone. The concrete walkways have brick divider strips.
Pocket PUD mixes three housing types

On the 1.7-acre site, the developers turned a 31-room mansion into four apartments (A), converted a garage to a house (B), and built another house (C) and 12 townhouses (D). Architect: Williams & Tazewell.

Artful plan carves mansion into four apartments

And, as the plans above show, each unit is distinctly different. The largest apartment is a three-floor unit with five bedrooms and 3,659 sq. ft. It sold for $123,500. The smallest is a 978-sq.-ft. basement flat, which went for $42,500. The others offer 1,913 and 2,978 sq. ft., and sold for $99,500 and $112,000. The 11,000-sq.-ft. structure was built in 1935 at an estimated cost of $500,000.
Costly details were saved in the mansion

One bath, for example, retains a Louis XVI-type vanity (above right). Another has a recessed tub alcove surfaced with smoked-glass mirrors. Marble fireplaces were saved along with moldings and cornices, crystal chandeliers and a winding staircase, oak flooring and steel beams.

The developer installed new baths and kitchen, put in a new HVAC unit and upgraded plumbing and wiring.
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The toilet is 18” high, enabling a person to shift easily from the wheelchair onto the seat. Available in two models, the toilet comes with a tank for residential use, and with a flushometer for institutional use.

The lavatory is wall mounted, which allows the wheelchair to slide underneath it. The sink features lever-type fittings that require only a simple pushing motion, and has an extra-wide, extra-deep bowl.

Universal-Rundle, New Castle, PA. Circle 200 on reader service card
Bath fixtures are shown in room setting (facing page). Shower stall interior is spacious enough to accommodate a wheelchair (far and near left). Wall-mounted bench can be flipped down by the handicapped person, who slides from the chair onto the bench. A grab bar is located inside the stall.

Portable ramp (above left) allows handicapped person to enter the shower stall easily in a wheelchair. The ramp—which comes with the package—is removed when the shower is to be used by a non-handicapped person (above).

Wall-mounted lavatory (left) is hung at a height of 33''—high enough to permit the wheelchair to slide underneath it. The sink, which is made of vitreous china, features a high single-faucet spout.
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Water-saving toilet, the "Brentwood" (above), uses less than 3½ gals. of water per flush. Low silhouette unit with an elongated bowl is made of stain-resistant vitreous china. It is available in nine decorative colors, including brown, beige and black. Colton, Los Angeles, CA. Circle 205 on reader service card

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Traditional medicine cabinet, the "Concord" (above), can be surface or recess mounted. The door, constructed of solid oak, can be installed to open on right or left side. Heads Up, Santa Ana, CA. Circle 210 on reader service card

Antique-style medicine cabinet (above) features roll-top doors, spacious storage and adjustable shelves. Mirrored, moisture-resistant unit comes in white oak or dark walnut finishes. Benecke, Columbus, MS. Circle 211 on reader service card

Hand-held shower massage (left) offers regular shower, combination regular/massage and full pulsating massage selections. Unit may be wall-mounted or connected to a diverter valve. Ondine, City of Industry, CA. Circle 212 on reader service card

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Adjustable shower head (left) automatically regulates the flow of water. Self-cleaning unit, which can adjust spray from fine to coarse, is available in seven different colors. Baron, Scottsdale, AZ. Circle 208 on reader service card

Five-piece bath surround, the "Marblelux" (above), is formed of acrylic. Unit, which can be adjusted to fit a wide range of tub sizes, features a wide vanity shelf and a soap dish. Formco, Cincinnati, OH. Circle 209 on reader service card

Wall-mounted shower head (left) features a volume control which reduces the water flow from full volume to a trickle. The unit comes in all-chrome or black with chrome trim. Alsons, Covina, CA. Circle 213 on reader service card

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Floral print carpet with a contemporary look, “Classic Theme” (above), is a leaf-and-petal pattern in shades and tones of one color. Saxony plush floorcovering is tufted of nylon and treated with “Scotchgard” carpet protector. Mohawk, Amsterdam, NY. Circle 223 on reader service card

Sheet vinyl flooring “Fleur de Chine” (above), has an oriental-design motif which can be used with both traditional and contemporary interiors. Flooring, with urethane coating, is easy to maintain. Flooring pattern comes in 6’ and 12’ widths. GAF, New York City. Circle 224 on reader service card

Two-level loop carpet (right), made from continuous filament nylon, is suitable for residential applications. “Charade” pattern is treated with “Scotchgard” carpet protector. The carpet is space dyed and is available in ten decorative colorways. Howard, Atlanta, GA. Circle 225 on reader service card

Kiln-dried Tasmanian oak flooring “Gal­leon” (above), is shown in miscellaneous lengths. The boards are precision cut, with end-to-end jointing. Sides are tongued and grooved. Flooring can be nailed or glued to a variety of types of existing subfloors. Australian Trade, New York City. Circle 227 on reader service card

Contemporary level-loop printed carpet (above), in an American Indian motif, is tufted of nylon. This soil-resistant, easy-to-maintain “Indian Art” geometric print floorcovering is treated with “Scotchgard” carpet protector and 3M static control. Chandelle, Dalton, GA. Circle 228 on reader service card

Cushioned sheet vinyl flooring, “Woodcrest” (above), has the look of a natural-grain parquet floor. Finished with “Dura Polish” wear layer, resilient flooring is easy to maintain. It can be installed on or below grade, and has a two-year, vapor-barrier warranty. Mannington, Salem, NJ. Circle 226 on reader service card

Oak parquet flooring (above) comes in 11” unfinished squares. Tongue-and-groove flooring blocks are web backed, square edged and butt jointed. Squares are also available prefinished in natural or antique brown with a “Dura Seal” finish. Wood Mosaic, Louisville, KY. Circle 229 on reader service card
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Saxony plush carpet, “Honeymoon” (above), is tufted of continuous-filament heat-set Monsanto 10-denier nylon. The easy-to-maintain floorcovering is offered in 18 colors in a 12' width. The carpet retails for approximately $11.95 a sq. yd. Masland, Carlisle, PA. Circle 219 on reader service card

“Trinatta” plank flooring (above) is made of a resilient polyurethane material that simulates the grain and coloration of wood planks. Flooring is available in 5’ lengths in varying widths and seven shades. Easy-to-maintain flooring is resistant to stains and burns. 3M, St. Paul, MN. Circle 220 on reader service card

Cut pile carpeting, “Satin Image” (above), is constructed of nylon and polyester. The autoclave heat-set, 2-ply floorcovering is sheared to produce a pinpoint, smooth finish. Carpet has a polypropylene synthetic primary and a jute secondary backing. Trend, Rome, GA. Circle 221 on reader service card

Geometric-printed carpet (above) is tufted of continuous-filament 3-ply Antron nylon. Floorcovering is static-protected with a built-in soil-hiding property. Carpet is available in a level-loop texture but may be customized by controlled shearing. Lees, Valley Forge, PA. Circle 222 on reader service card
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To supplement your library of 1,000 home designs, the Custom Home Plans Club will provide you with a steady flow of 5 new home design ideas each month for the next 12 months. Illustrated in full color renderings—and complete with detailed floor plans—your five fresh designs-of-the-month can easily be added to your basic binder of 1,000 homes.

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A full set of working drawings with collateral floor plans and a list of building materials will be available on both the original 1,000 home designs and the 60 new designs you will receive during the coming year.

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Members of the Custom Home Plans Club are entitled to receive a total of 12 sets of professional working drawings without charge.

These building plans may be ordered in any combination desired: 12 sets of drawings for 12 different homes; 4 sets for 3 different homes; or any other way you prefer them.

Beyond the initial 12 sets available as part of the Club
and get 1,000 home designs now the next 12 months plus 12 sets or homes of your choice.

membership fee, members may obtain additional working drawings at a 35% discount off published prices which range from $25 to $50 for single sets and from $50 to $75 for four-set packages—depending largely on the square-footage of single-family homes and the number of units for multi-family dwellings.

Drawn to FHA and VA general standards, these blue line prints—size 36" x 20"—are easy to read on a white background. Depending on the size and complexity of the house design, plan sets may include as many as nine sheets. Notes and drawings indicate location and types of materials to be used. With complete freedom of choice, Club members may order their 12 sets of detailed working drawings at any time during the 12-month membership period.


itemized lists of building materials for accurate bids and reliable cost estimates

To eliminate the time-consuming task of taking off material requirements from each set of plans ordered, the Custom Home Plans Club automatically provides members with itemized lists of building materials needed to obtain reliable bids, to make accurate cost estimates, and to order building materials from suppliers. The lists include the size and quantity of all millwork such as doors, lumber and built-ins, framing lumber, roofing, flooring, wallboard, masonry, concrete, reinforcing, insulation, beams, finishing materials, and more.

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Application for membership

Enclosed is a check for $360 for a full year of membership in the Custom Home Plans Club. For this I am to receive immediately a binder containing 1,000 home designs, plus a portfolio of 5 new designs each month for the next 12 months.

My membership also entitles me to a total of 12 sets of professional working drawings and a list of building materials for Club homes of my choice. These sets of working drawings may be ordered in any combination I desire: 12 sets for 12 different homes, 4 sets for 3 different homes, or any other way I prefer them. Beyond these 12 sets included in my membership fee, I will be able to buy additional sets at a 35% discount off published prices during my membership period.

If after receiving my first set of working drawings I am less than completely satisfied, I am entitled to a refund in full—and no hassle—simply by returning the binder of 1,000 designs and the working drawings in good condition.

Make check payable to Custom Home Plans Club.
Insulating sheathing, Thermax™ (above), is faced on both sides with aluminum foil. Sheathing is available in different thicknesses—1⁄4″ has an insulating value of R-19. Celotex, Tampa, FL. Circle 230 on reader service card.

Insulation board, (right) consists of a 1⁄2″-thick cellular isocyanurate core reinforced with fiber glass. The sheet is sandwiched between reflective aluminum foil facings. Reynolds Metals, New York City. Circle 231 on reader service card.

“Outdoor Wood” (above) is a pressure-treated lumber impervious to rot and termites. The naturally weather-resistant Wolmanized™ wood is suitable for patio and decking applications. Koppers, Pittsburgh, PA. Circle 234 on reader service card.

Proper Vent™ (right) assures proper air ventilation from soffit to attic. The rigid, lightweight device provides a 16-sq.-in. air space at the cornice and plate line. WaynRoy, Minneapolis, MN. Circle 235 on reader service card.

Easy-to-install skylight (left) comes fully assembled and framed. A curved flange prevents water from dripping into the opening. Operable unit provides natural ventilation. Ventarama, Port Washington, NY. Circle 232 on reader service card.

Metal lath (left) is backed with a polyethylene film so that lath and film barrier go up simultaneously. The lath can act as a base for machine-applied plaster in non-load-bearing walls. USG, Chicago. Circle 236 on reader service card.

Lightweight “Prime-Cor-X” acrylic sheet (above) can be used for residential and commercial glazing. Sheets are high-impact grade acrylic resin extruded into a ribbed, twin-walled construction. DuPont, Wilmington, DE. Circle 233 on reader service card.

Lightweight insulating sheathing (above) is made of expanded polystyrene. The material can be placed behind conventional exterior siding, increasing the insulation value of wall system. Drew Foam, Houston, TX. Circle 237 on reader service card.
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Insulating blanket for pools (above) is made of blue polyethylene laminated over black scrim. Available in a wide range of sizes, the covering can be cut to fit any contour pool. CaTel, Monrovia, CA. Circle 238 on reader service card

“Cardio-fitness Treadmill” (right) has an oversized walking area. Unit, with speeds up to 10 mph, features a motorized grade-elevating mechanism that can lift unit to a 25° angle. MacLevy, Elmhurst, NY. Circle 239 on reader service card

Platform tennis court (below) can be easily assembled on a slightly raised concrete or asphalt pad. Prefitted unit includes superstructure and ground anchors. NAR, Bridgeport, CT. Circle 240 on reader service card

Wooden swing set (above) is assembled with parallel and overhead ladders. The model features a sling swing, a ring trapeze bar and a wooden horse. Swing Design, Framingham, MA. Circle 241 on reader service card

Lifeguard stand (left) features an aluminum seat and backrest, and a steel shelf for personal belongings. The 167-lb. steel unit measures 2’8” wide, 3’ long and 7’3” high. Mexico Forge, Reedsville, PA. Circle 242 on reader service card

Physical fitness unit (right) combines the “Mach I” exerciser and the “Hi-Lo Pulley” attachment. Unit features an eight-position arm adapted for over 20 exercises. Marcy, Glendale, CA. Circle 243 on reader service card

Aluminum play structure, “Futureworld” (below), requires 40’ × 50’ of space. A series of platforms, towers, slides and ladders is offered in this easy-to-assemble unit. Playscape, Long Island City, NY. Circle 244 on reader service card
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Most hardboard door faces are like Tweedledee and Tweedledum: it's hard to tell one from another. But you'll know Legacy when you see it. Because Legacy's wood grain isn't just lines on the surface; its pattern is deeply embossed. You see a grain rich in natural highlights and you can feel the texture as well. So Legacy faced doors are more than doors. They're a dramatic accent piece for every room.

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Portable woodworking unit (above) consists of a chop saw, a table saw and a jointer. Tool is available in two electrical models so that it can be hooked into any currency. Amersagg, Monsey, NY. Circle 253 on reader service card.

Air impact wrench (above) has a 5/4" nominal bolt size. The wrench bolt is available in 5/4" and 1"-square drives, and 5/4" quick change drives. Wrenches feature steel clutch housings. Black & Decker, Towson, MD. Circle 254 on reader service card.

Lightweight line level (above) gives an accurate reading when no flat surface is available. The level features hooks which easily attach to a horizontally extended line. Great Neck, Mineola, NY. Circle 255 on reader service card.

Concrete trowel (above) features an adjustable guard ring. Two sections of the ring can be raised above normal ring positions, to allow precision finishing to within 1/8" of wall. M-B-W, Slinger, WS. Circle 258 on reader service card.

Sub-component assembly machine (right) is equipped with three pneumatic nailers, which can drive 15 different nails. Compression clamps hold the wood members together. Pasadena, Skokie, IL. Circle 259 on reader service card.

Transparent shield (right) offers protection from flying debris in cutting and grinding applications. Guard features two 60-lb. pull magnets and flexible steel arms for support. Vimco, Holland, NY. Circle 257 on reader service card.

Compact tractor, "Model 950" (below), is powered by a 3-cylinder, 27 hp engine. Vehicle has an 8-speed transmission with 2-lever control, and a differential lock that engages on the go. John Deere, Moline, IL. Circle 261 on reader service card.

Riding trencher, "Model 200" (above), is powered by an air-cooled 23 hp engine. Four-wheel drive vehicle is capable of digging a trench from 4 1/2" to 12" wide, and to depths of 5'. Midmark, Minster, OH. Circle 256 on reader service card.

Power trowel (right) is a 36" model with a 5 hp engine. The unit, which is offered with three or four blades, is especially suited for small and medium-sized jobs. Goldblatt, Kansas City, KS. Circle 257 on reader service card.
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Unit is equipped with a 7 1/2 hp, 3-phase motor, and has a 2 hp brake motor. The saw features an adjustable carriage stop. Ray's, Gardena, CA. Circle 249 on reader service card

Internal concrete vibrator (left), which can accommodate six interchangeable heads and shaft lengths, is suitable for a wide variety of projects.

Chrome moly steel heads range from 3/8" to 1 1/2" in diameter. Multiquip, Long Beach, CA. Circle 250 on reader service card

“Fleethoe 30” (above) combines a backhoe and prime mover in one unit. Four-wheel-drive vehicle is capable of digging a trench to 91' depths. Backfill blade angles 35° right or left. Davis, Wichita, KS. Circle 251 on reader service card

Long-reach backhoe (above), on a three-point hitch unit, has a reach of 14 1/2' and a digging depth of 12 1/2'. The backhoe is equipped with a 4' boom cylinder. Grizzly, Jacksonville, IL. Circle 252 on reader service card

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BUILDING AMERICA

Circle 125 on reader service card

housing 3/78
Accessories to enhance your model homes

Wood fireplace mantels are illustrated in a black-and-white brochure. The pamphlet depicts more than 25 styles of handcrafted, ready-to-install wood mantels for factory-built metal fireplaces or built-in masonry fireplaces. A diagram shows how to take measurements for proper mantel fit. Wood mantle/bookcase combinations as well as a mantel/bookcase selection are included. For a copy of "Wood Mantel Pieces," send $5.00 to Readybuilt Products Co., 1701 McHenry Street, Baltimore, Md. 21223.

"Decorating with Photographic Art" shows how a personal, individualized look can be achieved with the aid of photographic art. The booklet offers suggestions which can be used in decorating model homes. Full-color room settings enhanced by photos are presented in this 20-page publication. For your free copy, write Eastman Kodak, 343 State St., Rochester, N.Y. 14650. Re: Dept. 412L-520.

Oriental design rugs, reproduced from famous antique rugs and rare tapestries, are illustrated in a full-color catalog. Over 15 of the all-wool rugs are described, complete with sizes. To obtain a copy of the catalog, send $2.00 to Couristan, 919 Third Ave., New York City 10022.

Genuine Italian marble tiles are depicted in a set of three pamphlets. The tiles can be used in entrance foyers, fireplaces, dining rooms, bathrooms and walls. Their versatility is illustrated through full-color photographs. A color chart is also included. Bufalini, New York City. Circle 304 on reader service card.

Wall paneling ideas for family rooms, living rooms, kitchens and bedrooms are presented in a series of four full-color brochures. Each features complete room settings decorated with complementary wall paneling. Georgia-Pacific, Portland, OR. Circle 305 on reader service card.

Contemporary clock catalog depicts a wide range of wall, desk and floor clocks. The 32-page, full-color booklet features institutional models, built-in clocks and Plexiglas and wood grandfather units. Included in the catalog is an unusual contemporary regulator with ebony case, polished chrome door frame and glass front and side panels. Price list is also included. Howard Miller, Zeeland, MI. Circle 301 on reader service card.

Mirrors are presented in a full-color catalog. Included are wall mirrors in a wide range of sizes, shapes and finishes, as well as console sets, bi-fold mirror doors and sliding mirror doors. Dimensions are specified for each unit pictured. Binswanger, Memphis, TN. Circle 302 on reader service card.

Cast iron spiral staircases are featured in an illustrated brochure. Three different styles are depicted, along with treads in an intricate Victorian pattern. Specifications and instructions for the erection of the staircase are included, complete with detailed diagrams. Six other cast iron accessories, including a queen stove, are illustrated and described. Steptoe & Wife, Toronto, ON, Canada. Circle 303 on reader service card.

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## ADVERTISERS INDEX

Pre-filed catalogs of manufacturers, listed are available in the Sween's Catalog File as follows:

G General Building (green)  
E Engineering (brown)  
I Industrial Construction (blue)  
L Light Construction (yellow)  
D Interior (white)

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- **Air Vent, Inc.** 19, 20  
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