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No clad line compares with Caradco clad

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Caradco gives vou a lot more window. Feature for feature.

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HOUSING

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NEWS EDITOR
David Garfinkel

ASSOCIATE EDITORS Fran J. Donegan Walter L. Updegrave

ASSISTANT EDITOR Stephen Levin

NEW PRODUCTS EDITOR
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A familiar by-line moves to a new spot

The new spot is our editors' page (p. 132), which will now be the province of Natalie Gerardi, who steps up from managing editor to editor in chief. She succeeds J. Robert Connor, who has moved into the challenging job of developing new products for Business Week.

While Natalies's title may be new, her contributions to this magazine go back to 1971, when she joined our staff

after a career in magazines specializing in international affairs. (She now admits that she took the job as a stopgap during a recession, then quickly found herself "hooked" by our industry.) Over the years, you've seen her byline on such varied articles as "The town that said 'no' to no-growth" (1973); "What's a nice PUD like this doing in Chapter 11" (1973); "Do you belong in the tennis racket?" (1974); "Condominium's very special problems" (1974); "Time-Sharing" (1974 and 1976); "Take a look at a growing new market: Not-so-swinging singles" (1977); "Profit from those old schools nobody wants" (1978) and "Apartments: Is it time to rethink the product?" (1979). More recently, as managing editor, she guided the development of our Kitchen & Bath Showcase issues.

Now she'll be guiding HOUSING as it reports on—and talks to—an industry in the midst of crisis and change. We can't think of a better person to do the job—or a better time to capitalize on her knowledge, enthusiasm and commitment to the industry.

This issue, incidentally, is our fourth Kitchen & Bath Showcase, and we think you'll find it a useful one. Notice, for example, Senior Editor Barbara Behrens Gers's story on the do's and don'ts of designing island kitchens (pp. 84-89), which includes examples of good island kitchens from both architect-designed custom homes and builders' production houses. Also, two outside experts, kitchen designer Craig Hyer and interior designer Carole Eichen, have come up with ideas on how to personalize and merchandise kitchens (pp. 92-94 and 40-41). And New Products Editor Jennifer Wagner has taken a look at "The European Influence: The Evolution of a New American Look" (pp. 66-72). She notes: "European cabinetry, like European cars, is designed for economy of resources, space, building materials and energy—including human energy. Now that Americans are experiencing those same shortages of space, energy and time, the simple but well engineered design has become increasingly appealing."

Also in the Kitchen & Bath Showcase: eight remodeled baths by designer Ann Grasso (pp. 73-83). This story could easily have been called "Remodeled baths for every budget," for it includes one priced at \$2,000 (for the redesign of a bathroom in a production house that was still under construction), another priced at \$3,000 (for a do-it-yourselfer), two priced at \$30,000 and the rest priced in between.

Remodeling on quite a different scale is featured in this issue too: Beginning on page 53 you'll find Managing Editor June Vollman's report on "Four ways to update a shopworn shopping center." Refurbishing older shopping centers is big business these days, for it goes hand-in-hand with the trend toward infill housing and the public's new appreciation of the old and familiar.

One more sign of changing times: Associate Editor Walter Updegrave's discussion of two plans that provide mortgage money for new rental apartments (pp. 62-63). These plans reflect both the industry's creativity in finding ways to cope with today's economic realities and the public's renewed demand for rental units.

—G. ROBERT GRISWOLD

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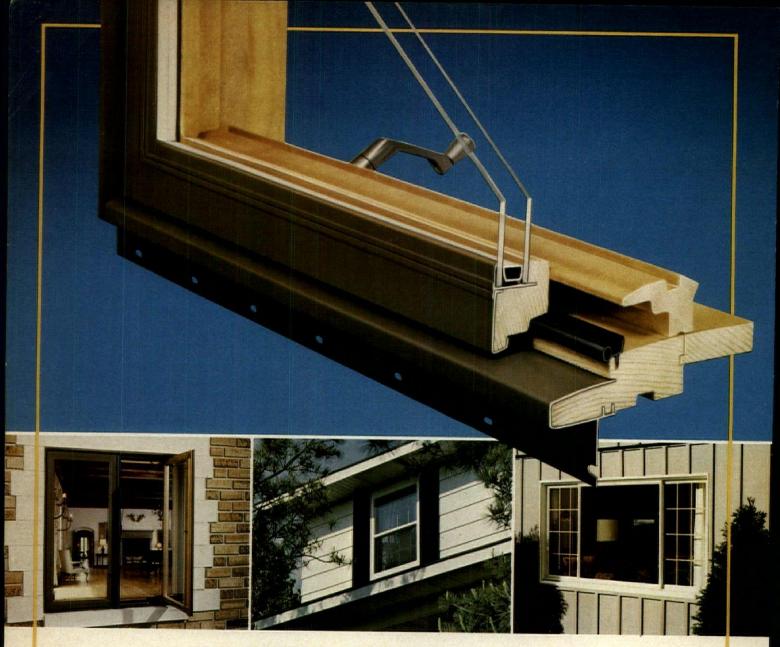
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HOUSING HOTLING

- A Reagan veto could stall the start of HUD appropriations. The fiscal 1982 HUD budget of \$23.6 billion—which gives the department \$7.4 billion less in contract authority than it had in fiscal 1981—was supposed to become available Oct. 1, the first day of the new fiscal year. However, it has been caught in a dispute between President Reagan and Congress. The conflict concerns some \$330 million that Congress added to Veterans Administration health programs, which are part of the same appropriations bill. Reagan threatened to veto the bill, and that could force Congress to back down on the VA increase—although it probably won't change the previously agreed-on HUD authorizations.
- Fannie Mae takes a bite out of All Savers. The chances that the new tax-exempt certificates will help housing as a new mortgage money source (see page 19) were reduced by the Federal National Mortgage Assn.'s decision to offer S&Ls an attractive alternative. Fannie Mae, whose own financial condition has been damaged by rising rates in the primary market, announced that it would issue special one-year mortgage-backed securities that "permit banks and savings and loan associations to profitably invest All Savers deposits in housing." Experts believe the short-term securities, with their greater liquidity, will prove more attractive to the depository institutions than longer-term mortgages. The law requires that 75% of all net new savings generated by All Savers be reinvested in residential or agricultural loans, and the new Fannie Mae securities apparently will qualify.
- In trend-setting California, a good sign from the resale market: Nearly 23% of existing-home sales come less than a month after the house goes on the market, says a new survey of the state's Realtors. And most other sales materialize two to three months later, the survey shows. Below-market financing helps; almost two-thirds of the sales involved the assumption of an existing first mortgage on the house.
- A model state law for residential cooperatives has been proposed by the National Conference of Commissioners on Uniform State Laws (NCCUSL). This proposal closely tracks the group's Uniform Condominium Act, which it adopted four years ago [HoUSING, Dec. '77]. Since then, the act has been passed by the legislatures of Pennsylvania, Minnesota and West Virginia. It is under serious consideration in ten other jurisdictions. The NCCUSL adopted the Model Co-op Act at its annual meeting this year in New Orleans. The new proposal would give most builders more flexibility in building co-ops than they have now, but ironically, its adoption could lead to fewer new co-ops, says NCCUSL Legislative Director John McCabe. Builders in states with strong condo laws—such as Virginia—have been building co-ops to avoid the consumer protection constraints of the condo laws, he says. If those states put the model co-op law on their books, it would remove this "artificial incentive to go for co-ops," claims McCabe.
- Planning a trip to Sears? Add 'mortgages' to your shopping list. The Chicago-based retailing behemoth of Sears, Roebuck and Co., is planning to offer new financial and real estate services later this year, says Edward R. Telling, chairman, president and chief executive. Among the many services planned: issuance of home mortgages and homeowners insurance. Also, Sears will enter the real estate brokerage field, says Telling.
- Now you see it, now you don't! The proposed merger between the nation's largest stick builder (U.S. Home Corp.) and a major prefab manufacturer (Golden West Homes) was scotched a few weeks after the plans were announced [HOUSING, Sept.]. The culprit seems to be a steep decline in stock prices. Isaac Heimbinder, U.S. Home's senior vice president of finance, said that Houston-based U.S. Home was prepared to pay from 1.7 to 2 million shares of stock to buy out Golden West—or about \$45 million worth. But as U.S. Home stock fell, it would have taken more than 2 million shares to add up to a value of \$45 million—and that was more than U.S. Home was willing to pay for the Santa Ana, Calif. mobile manufacturer, said Heimbinder.

HOUSING HOTLI

Communities that don't want to build subsidized housing now have a better chance not to.

The Budget Reconciliation Act, which contains most of this year's major housing legislation, gives towns like Parma, Ohio [HOUSING, Aug. '80] this option: If the town prefers not to take any HUD Community Development Block Grant money, then it doesn't have to draw up a Housing Assistance Plan, which would commit it to building subsidized units. The law takes towns with populations under 50,000 off the hook altogether, and lets larger cities use the housing availability in nearby communities

- It was 5.6%; now it's 5%: The lowest national vacancy rate the Census Bureau ever recorded, and it's only the beginning. Advanced Mortgage Corp. of Detroit, calls it "the tightest rental market-and in some ways the strangest-since World War II." The National Urban Coalition in Washington says more people are paying a greater share of their income on rent than ever before—the number of renters paying 35% or more grew from 5.2 million in 1970 to 7.9 million in 1979. And Advance figures that, because so many renters are locked out of the for-sale market, more than 1.5 million of them who used to live alone have doubled up in the last 14 months.
- The FHA/VA rate climbs to keep in step with the times. The maximum rate on FHA/VA mortgages for new single-family homes has been boosted to a record 171/2%. Although it took 12 years - from 1956 to 1968 - for the basic rate to climb from 5% to just over 6%, it only took three years to rocket from 10% to the current 171/2%.

SPECIAL REPORT: NAHB FALL DIRECTORS' MEETING

Builders gathered in Boston had but one concern: lethally high interest rates. "The message coming out of here," said Herman Smith, NAHB president, after the fall board of directors' meeting, "is that interest rates must come down-and come down soon. The situation is desperate. From Maine to California, the home building industry has been shut down." The directors passed 22 resolutions, many concerning high rates. For example, two resolutions aimed to make the Federal Reserve Boardwhom many blame for the astronomical rates-less independent and more subject to public pressures. Sen. Lloyd Bentsen (D-Tex.), the Senate champion of the All Savers certificates, acknowledged the industry's plight: "We're facing the ridiculous situation," he told the NAHB board, "where only one family in 20 can afford the mortgage on a \$60,000 house." Bentsen added that the monthly payment today on a median-priced home has reached \$810-a figure far beyond the reach of most potential owners.

Survival strategies were to lay low, but builders' tempers flared high. "All I know is we have to lower that rate to survive," said John Slavin of Pelham, N.H. "We're fighting Wall St. on this-they're making money on us so naturally they're going to keep rates high." Developer Richard Stevens of Coral Springs, Fla. said. "A lot of builders I know have closed up shop; they have to, until the economy changes." Most builders who were doing a good business reported either diversifying or relying on subsidized housing programs. Thomas L. Schroeder of Joplin, Mo. said he has planned to build 30 single-family houses between now and next July-all under FMHA Section 502. However, he noted, "People making between the subsidized-level incomes and, say, \$40,000 a year cannot afford to buy a house. In the non-subsidized market, all we have buying are doctors and other professional people." Even in diversification, builders' options are limited, noted Vondal Gravlee, Birmingham, Ala. builder and former NAHB president. "Builders can't build income-producing properties . . . because the same thing gets in the way-high interest rates. No business can survive when the prime is at 20%."

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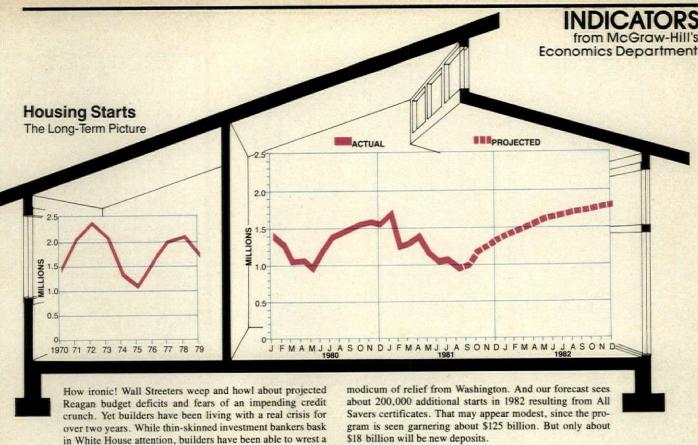
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August was a month of infamy as housing starts sank below the one million rate and single-family starts were at their lowest ebb since the government began keeping statistics in 1959. Starts dropped 10.7% to 937,000 yearly pace: The monthly drop in singlefamily was 16.4% while multifamily held their ground.

While deterioration cut across all regions, the Northeast decline was an outsized 34%. Starts in larger South and West markets slipped by 5% and 6% respectively.

Sadly enough, building permits continued to skid in August also, dropping by 5.5%. Authorizations for single-family units slipped 7%. With mortgage rates reaching still newer heights in early August and deposits gushing out of thrifts, the permits decline augurs another month of abysmal starts.

The housing completion rate resumed its down-slide in July, with a 6% decline. The falloff was greatest in buildings with two-tofour units

July saw a welcome 2.4% rise in sales of single-family homes to an annual rate of 420,000. That snipped the backlog of new homes on the market to 9.1 months at the current pace, still a serious overhang. And ominously, average new-home prices slipped 2.7%. Likewise, the existing home market weakened as sales sank a whopping 5% and average sales prices eroded to boot.

Perhaps a measure of home buyers' distress was a 9% jump in mobile-home shipments, indicating a desperate scramble for affordable housing. Even spending on alterations and repairs has been slumping, off 1.3% in the second quarter. That suggests family budgets are being squeezed to where fixing up the home is something that can be postponed until incomes rise and interest rates come down.

\$18 billion will be new deposits.

		tion Act s of Units/Y	A CONTRACTOR OF THE PARTY OF TH		
	8/81	7/81	8/80	Change From Previous Mo.	Change From Year Ago
Private Housing Starts	937	1,049	1,411	-10.7%	-33.6%
Single Family	591	707	971	-16.4	-39.1
Two-to-Four Unit Bldgs.	84	85	133	- 1.2	-36.8
Other Multifamily	262	257	307	+ 1.9	-14.7
Total Building Permits	863	913	1,355	- 5.5	-36.3
Single Family	491	528	840	- 7.0	-41.5
Two-to-Four Unit Bldgs.	89	97	133	- 8.2	-33.1
Other Multifamily	283	288	382	- 1.7	-25.9
	7/81	6/81	7/80		
Private Housing Completions	1,294	1,375	1,472	- 5.9	-12.1
Single Family	834	875	883	- 4.7	- 5.5
Two-to-Four Unit Bldgs.	110	122	102	- 9.8	+ 7.8
Other Multifamily	350	378	487	- 7.4	-28.1
Private Units under Construction	829	857	856	- 3.3	- 3.2
Single Family	468	483	477	- 3.1	- 1.9
Two-to-Four Unit Bldgs.	59	62	63	- 4.8	- 6.3
Other Multifamily	302	311	316	- 2.9	- 4.4

	Market Activity Annual Rate				ange rom vious	Change From
	7/81	6/81	7/80		riod	Year Ago
New Single-Family Sales(7)	420,000	410,000	625,000	+	2.4	-32.8%
Average Sales Price(7)*	\$83,600	\$85,900	\$76,800		2.7	+ 8.9
Backlog of New Homes(7)	9.1 mo.	9.3 mo.	6.6 mo.		0.2 mo.	+ 2.5 mo.
Existing Home Sales(6)	2,520,000	2,660,000	2,920,000	-	5.3	-13.7%
Average Sales Price(6)*	\$79,100	\$79,900	\$75,700	-	1.0	+ 4.5
Mobile Home Shipments(7)	268,000	246,000	207,000	+	8.9	+29.5
	1981 2nd Qtr.	1981 1st Qtr	1980 2nd Qt			
Spending on Home Repair, Etc. (Billions/year) (7)	\$45.1	\$45.7	\$43.9	-	1.3	+ 2.7

Const		Cost II	ndices		
	8/81	7/81	8/80	Change From Previous Mo.	Change From Year Ago
Producer (Wholesale) Price Index					
All Construction Materials(8)*	290.6	290.2	271.3	+ 0.1%	+ 7.1%
Asphalt Paving (8)	607.1	608.6	491.7	- 0.2	+23.5
Portland Cement (8)	329.4	329.4	313.1	0.0	+ 5.2
Softwood Lumber(8)	347.7	349.0	356.9	- 0.4	- 2.6
Plywood ⁽⁸⁾	245.9	248.1	266.0	- 0.9	- 7.6
Electrical Products(2)	247.9	246.4	230.9	+ 0.6	+ 7.4
Production Index—Construction					
Supplies(4)*	142.9	143.2	134.1	- 0.2	+ 6.6
Construction Employment(000)(8)*	4,265	4,269	4.324	- 0.1	- 1.4
Unemployment Rate—Constr.(8)	16.7%	15.0%	17.3%	+ 1.7	- 0.6
Hourly Constr. Earnings Index(8)	132.0	131.7	122.9	+ 0.3	+ 7.5
	7/81	6/81	7/80		
New Materials Orders (Millions)(7)	\$12,843	\$13,166	\$11,423	3 - 2.6	+12.4
Materials Shipments (Millions)(7)	\$12,702	\$12,696	\$11,540	3 0.0	+10.0

	Financi	al Activi	ty*		
	7/81	6/81	7/80	Change From Previous Mo	Change From Year Ago
Net New Deposits, S&Ls					
(Millions)(3)	(\$ 5,568)	(\$ 5,759)	\$ 961	\$ 191	\$6,529
Outstanding S&L Mortgages					
(Millions)(3)	\$17,104	\$17,923	\$17,912	- 4.6%	- 4.5%
Mortgage-Backed Securities—					
S&Ls (Millions)(3)	\$30,203	\$29,628	\$23,064	+ 1.9%	+31.0%
Net New Deposits—Mutual					
Savings Banks (Millions)(5)	(\$ 1,900)	(\$ 1,392)	\$ 246	(\$ 508)	(\$2,146)
	8/81	7/81	8/80		
Effective Mortgage Commitmen	nt				
Rate (Convent., 25-yr., 75%)(3)	17.27%	16.96%	12.52%	6 +0.31	+4.75
Atlanta	17.48	16.56	12.39	+0.92	+5.09
Boston	17.57	17.40	12.81	+0.17	+4.76
Chicago	17.64	17.47	12.13	+0.17	+5.51
Dallas/Ft. Worth	16.57	16.52	12.64	+0.05	+3.93
Denver	17.22	17.14	12.26	+0.08	+4.96
Los Angeles	17.36	17.13	12.77	+0.23	+4.59
Miami	17.40	16.98	12.79	+0.42	+4.61
Washington, D.C.	17.41	17.09	12.78	+0.32	+4.63
Ginnie Mae—8% Futures	9/82	3/82	9/81		
Contract— % Yield(1)	16.144	16,218	16.311	074	167

	ral Econ			Change From	Change From
	8/81	7/81	8/80	Previous Mo.	Year Ago
U.S. Industrial Production Inde	×				
(1967 = 100)(4)	152.8	153.4	142.2	- 0.4%	+ 7.5%
Personal Income					
(Billions)(7)	\$2,445.8	\$2,419.0	\$2,179.4	+ 1.1	+12.2
Savings Rate(7)	5.4%	5.4%	6.1%	- 0.0	- 0.7
Total Employment (Millions)(8)	98,944	98,962	97,003	0.0	2.0
Unemployment Rate(8)	7.2%	7.0%	7.6%	+ 0.2	- 0.4
Wholesale Price					
Index (1967 = 100)(8)*	296.2	296.0	273.8	+ 0.1	+ 8.2
Retail Sales (Billions)(8)	\$87.690	\$87.131	\$79.829	+ 0.6	+ 9.8
Domestic New Car Sales					
(millions/year) ⁽⁷⁾	8.162	5.886	6.649	+38.7	+22.8
	7/81	6/81	7/80		
CPI (1967 = 100)	274.4	271.3	247.8	+ 1.1	+10.7
CPI - Home Ownership	358.0	350.4	315.4	+ 2.2	+13.5

Sources: (1) Chicago Board of Trade; (2) Electrical Marketing Newsletter; (3) Federal Home Loan Bank Board; (4) Federal Reserve Board; (5) National Association of Mutual Savings Banks; (6) National Association of Realtors; (7) U.S. Department of Commerce; (8) U.S. Department of Labor. All data seasonally adjusted unless marked by an asterisk (*). In most cases latest figures are preliminary, with revisions shown in next month's table.

A bittersweet benefit to housing's debacle is a moderation in the cost spiral for construction materials and supplies. The wholesale price index for construction goods declined by 0.2% in August after seasonal adjustment, though there was a 0.1% rise before adjustment. Prices for softwood lumber, plywood and asphalt products weakened. But plastic construction goods advanced a hefty 1.3%, reflecting higher resin prices.

Unemployment in construction jumped to 16.7% in August from 15%

Building trades jobs edged down 0.1%. The dearth of jobs injected a sensible note into wage demands, and hourly earnings in construction increased by only 0.3% during August. Over the past 12 months, hourly earnings in construction have risen 7.5%, compared to 9.4% in manufacturing. Industry suppliers are also sharing in the down market as factory orders for construction materials fell by 2.6% in July, prompting a 0.2% reduction in output during August.

Despite all the doom and gloom, forces are gathering to alleviate the pressure on housing finance. To be sure, the outflow of deposits from thrifts in July was horrendous. And mortgage rates posted new records in early August. But the money-rate spiral has slowed. And the latest events point to a resolution of the conflict between the White House and Wall Street.

The President has started to apply his scalpel to the much-cherished military budget. And Congressional supporters of the President have started to cajole and coerce Wall Street to lower rates. More substantively, the Federal Reserve has lowered the critical federal-funds rate a notch and money supply growth has come reasonably in line with the Fed's targets.

Don't expect an abrupt decline in interest rates, but the end to the spiral alone will help housing. In addition, the Administration is toying with some new devices to bring rates down - an outright moratorium on Treasury Department borrowings in the long-term market and the issuance of gold-backed bonds. Not that these gimmicks would permanently lower rates, but at least they might bring some temporary relief.

Again, intermittent signals of weakness are showing up in the economy. In August, industrial production fell by 0.4% and the unemployment rate rose; retail sales managed a paltry 0.6% rise after falling in July. And, in fact, government economists now echo ou forecast of a 0.5% rate of decline in real gros: national product in the third quarter.

Still, there simply is not the kind of weakness around to deflate credit demands and interest rates quickly. Personal income climbed 1.1% in August and domestic auto sales jumped nearly 40% on dealer rebates. Moreover, October marks the first installment of the Reagan tax-cut program. That will lift personal income still faster and further stave off recession. Couple income growth with abating inflation - wholesale prices rose a seasonally adjusted 6.3% in August - and real incomes will be advancing. That promises increased demand for housing, which melds nicely with the influx of All Savers deposits to thrifts. Thus, despite still lofty interest rates, homebuilding will start to recover in the fourth quarter.

Will the tax bill revive housing?

The tax bill signed by President Reagan in August has raised hopes of a deposit bonanza for the nation's thrift institutions. If this happens, it could make more money available-and perhaps lower cost money-for housing in the years ahead.

Two parts of the new law offer promise. Depository institutions get an attractive new instrument in the taxexempt All Savers certificates, which may be sold from Oct. 1 through all of 1982. And tax-deferred retirement accounts stand to gain both in the amount of money deposited and in the number of people who are permitted to set up such accounts starting next

How much money will the tax law affect? Some estimates see \$250 billion flowing into the All Savers certificates (although much of it from existing deposit accounts). And most estimates see at least \$7 billion in new money in the retirement accounts by the end of next year. Beyond that, there's a strong possibility of much greater increases in retirement deposits-which could aid housing.

All Savers excitement. For obvious reason, banks, savings and loans, mutual savings banks and credit unions are focusing attention on the All Savers certificate first. The object of the certificate is to provide the beleagured thrifts, in particular, with a low-cost source of money, most of which in turn would be directed to housing. The gimmick that makes it all work is the tax exemption for up to

\$1,000 per-taxpayer in interest earned on the certificates.

Because of this exemption, persons with adjusted gross incomes of as little as \$21,000 on their tax returns could be better off this year with the new one-year certificates-which pay 70% of the yield on one-year Treasury bills-than with taxable deposits yielding market rates, an analysis by Wells Fargo Bank shows. Since there are more than 20 million households earning at least that much, the certificates could potentially raise a huge pool of

For depository institutions, the beauty of the certificates is that they can attract money at a lower cost. The 12.6% payable on All Savers in October, for example, was well below the nearly 16% being paid in early September on the popular six-month money-market certificates. These certificates now make up about 40% of all deposits held by thrift institutions.

Allan G. Bortel, an analyst with the securities firm of Shearson Loeb Rhoades Inc., estimates that half of the \$208 billion held in six-month money-market certificates at savings and loans could end up shifting into All Savers. That large a shift would save the S&Ls some \$4 billion in their cost of raising money. James W. Christian, chief economist of the U.S. League of Savings Associations, estimates that thrifts will get about half of the \$250 billion he expects to be placed in All Savers certificates. He also expects the certificates to return the industry to a break-even point after having suffered many months of sizable losses.

All Savers certificates are not expected to promote a new savings bonanza. They will probably not generate more than \$50 billion or so in new money for banks and thrifts. Although \$50 billion is a significant amount of money to the thrift industry, what's most important is that All Savers will lower the cost of attracting new money, and direct most of that money toward housing.

Rate uncertainty. It's unclear how much of the savings in the cost of raising funds will be passed along by the thrifts to their mortgage borrowers. Plainly, the thrifts' first priorityas Congress intended - will be to shore up their balance sheets.

But they may feel pressure from the healthier segment of the banking industry to lower mortgage ratesdepending on how much the commercial banks reduce their mortgage rates with their All Savers money. In the estimate of Jack Carlson, chief economist for the National Association of Realtors, the All Savers certificates could bring rates down by as much as three percentage points from where they would be otherwise.

But no matter what happens to mortgage rates, the certificates are bound by law to help housing. Congress stipulated that 75% of the net gain in new savings due to All Savers deposits must go to support housing or agriculture. Continued on page 20

Instrument	Description	Current Law Limit	New Law Limit	Effective Date	Projected Gain In Deposits*
All Savers Certificate	One-year certificate providing tax-free interest	Nonexistent	\$1,000 of interest per taxpayer	Oct.1, 1981— Dec. 31, 1982	\$250 Billion
Individual Retirement Accounts (IRAS)	Tax-deferred interest and principal (now mainly available to persons without pension plans) would be expanded to cover most workers and their spouses	Generally \$1,500 investment annually per wage earner	Generally \$2,000 investment annually per wage earner	Jan. 1, 1982	\$7 Billion
"Keogh" accounts	IRAS for self-employed persons	Generally \$7,500 investment annually per wage earner	Generally \$15,000 investment annually per wage earner	Jan. 1, 1982	

Questions again on formaldehyde in mobiles

Worries about formaldehyde are in the air again. This time the Department of Housing and Urban Development is proposing to regulate the construction of mobile homes, in response to complaints that they may be hazardous to your health.

At issue is the suspected danger of formaldehyde-fume emission from plywood and particleboard glues-a phenomenon called "formaldehyde outgassing." Some mobile home buyers have gone to court and won damage cases against such industry giants as

Holt Blomgren is president of the National Manufactured Housing Federation, which represents mobile home dealers. He says that dealers, as well as manufacturers, have been sued by owners complaining of irritation from formaldehyde fumes. "The complaints seem to be increasing," he says.

Federal notice. In response to specific requests it has received from the NMHF, from state officials of Wisconsin and Texas, and from others, HUD published in the Federal Register of Aug. 28 a "Notice of Proposed Rulemaking." This notice asks for suggestions as to whether HUD should start the long process of issuing a regulation on formaldehyde in mobile homes, and if so, what kind of regulation. The deadline for comments is Oct. 27.

The Manufactured Housing Institute, representing mobile home manufacturers, takes issue with the statement in the HUD notice that "some medical evidence exists" showing that the fumes had an adverse effect on a mobile home resident's health.

The Institute also "vehemently opposes" a standard using measurements of formaldehyde in the ambient air in a mobile home to determine whether it is safe to live in. Instead, the association would prefer a standard requiring producers of plywood and other building materials to use low-emission adhesives-if one is adopted at all.

Industry spokesmen acknowledge that one of the problems of mobile homes is that they tend to be more air-tight than site-built houses. But, spokesmen also argue that it is technically difficult to measure concentrations of formaldehyde in a home, once it has been lived in.

-D.O.L.

Tax bill continued from page 19

Snares. There are a couple of snares in the stipulations, however. First, the phrase "net gain" does not refer to every dollar of deposits originating in an All Savers certificate. notes Robert J. Hutchinson, vice president for marketing at Manufacturers Hanover Trust Co. He explains that if a depositor shifts \$10,000 from a sixmonth money-market certificate into an All Savers certificate, the bank would not be required to do any housing-related new lending-because there would be no net gain in savings.

Another snare to be aware of is that "housing" is broadly defined in the new tax law. Second mortgages, homeimprovement loans and Ginnie Mae pass-through securities all count toward the lenders' housing quotasand these might not contribute to new construction.

Nevertheless, most analysts expect All Savers to have a discernible-and beneficial-impact on housing. Michael Sumichrast, chief economist for the National Association of Home Builders, estimates All Savers will stimulate an additional 200,000 starts over the next two years.

Retirement account growth. The impact of new rules on retirement accounts is not as clear as it is with the All Savers certificates. Although initial dollar projections are modest in comparison with those for All Savers gains, many analysts suspect that the retirement accounts could eventually become a major source of funds for housing finance.

"This is the real sleeper in this year's tax bill," says the U.S. League's Christian. "I think the IRAS are going to be big-maybe not this year, but in

"IRA" is short for Individual Retirement Accounts, which were first authorized in 1974. Under the old rules-which expire next Jan. 1-the accounts permit certain individuals to set aside up to \$1,500 per person, or \$1,750 for workers with nonworking spouses. Qualified persons are those without a government-approved retirement plan, or those with an outside income.

Taxes are deferred on both the money set aside and on the interest earned until the individual retires and presumably has a lower tax rate than when he or she was working. Similar accounts, called Keogh accounts, exist for selfemployed persons, and permit contributions of up to \$7,500 a year.

Citibank estimates that 55% of all workers were eligible under the old rules. Many of them presumably had small outside incomes that provided little incentive to open the accounts. But only 8% of those eligible took advantage of the IRA and Keogh provisions. S&L deposits in the retirement accounts amounted to about \$7 billion at the end of last year.

Based on those figures, the Treasury and most other analysts have concluded that another \$7 billion could flow into those accounts when the new rules become effective Jan. 1.

New rules. But past experience isn't a good enough guide to predicting the future of retirement accounts. There are good reasons to expect far more than \$7 billion in new money to flow into the IRAs and Keoghs.

Under the new rules, virtually every

wage earner is eligible to open an IRA and deposit up to \$2,000 a year in it. Workers with a non-working spouse may deposit up to \$2,500. And the ceiling on Keogh contributions will rise to \$15,000-twice the old limit.

Leon Taub, tax and budget analyst at the consulting firm of Chase Econometrics, says he expects much larger participation under the new rules, and not just because they are more liberal. He points out that IRAs are now being offered to a class of taxpayer with more discretionary income and a higher tax bracket. If the participation rate were to rise to 20% for the new group-a figure Taub considers within reason-the retirement accounts could generate \$16 billion a year in new savings money.

Competition. Savings and loans, of course, would have to compete for that money against commercial banks, mutual funds, insurance companies, and a host of other bidders eager to get a piece of the pie. And the success or failure of the S&Ls in that competition would go far toward determining whether or not the money would eventually go to housing, since the thrifts remain the single biggest source of housing investment.

But even if substantial portions of the retirement account money goes into institutions other than S&Ls, the money could still wind up in mortgages. Why? Because retirement account dollars represent long-term money. And, as such, they would be an ideal candidate for investment in longterm assets-such as 30-year mort--G. DAVID WALLACE gages.

McGraw-Hill World News, Washington

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Squall warnings over island development

How new coastline housing is under threat from budgetary storms

The National Association of Home Builders is pitted against a tidal wave of opposition in its drive to save some \$200 million in housing-related subsidies. The federal grant programs support housing development in one of the nation's fastest growing areas-the barrier islands stretching across the coasts of 16 states from Maine to the tip of Texas.

Already, a ban on federal flood insurance for any newly constructed buildings has been set to start Oct. 1, 1983. This ban was an early victory of the anti-development block in Congress, which forced the ban into the budget reconciliation bill President Reagan signed Aug. 13.

The opponents of barrier development argue that flood insurance claims from hurricane and storm damage on the coastal islands have recently cost the Treasury hundreds of millions of dollars. Premiums paid cover only about 25% of the claims paid out. So premiums are being raised.

However, the ultimate goal of the anti-development coalition - an unusual mix of environmentalists, existing property owners, taxpayer groups, budget cutters, and fish-and-wildlife enthusiasts-is to stop \$200 million or so in federal grants to local jurisdictions each year. These grants help build bridges, sewer and water systems and other facilities that make development economically feasible.

Hearings on bills have already been held this year in both the House and Senate. In opening hearings on his "Coastal Barrier Resources Bill," Sen. John Chafee (R.-R.I.) said, "It makes no sense for the federal government to be in the business of subsidizing development in these volatile areas.

The builders see it differently. Says Scott Slesinger, assistant legislative counsel for the NAHB, "This is upside down. Federal money followed the people-not the other way around."

Destructive fury. The affected lowlying islands and sandspits from Maine to the Mexican border are exposed to the destructive fury of the hurricanes and tropical storms that sweep out of the Caribbean on the average of two a year. But this hasn't stopped developers who cater to an affluent market hungry for oceanside recreation and investment. As a result, these regions are among the fastest-growing in the nation-and are being "urbanized" at about twice the national rate.

The availability of federal flood insurance at subsidized rates since

1968 has proved a boon since it has shifted much of the financial risk inherent in coastal real estate from the investor onto the U.S. Treasury.

At present, about 6,000 acres a year are being developed in these hazardous regions, according to Interior Department studies. Rough calculations suggest that translates into at least \$2 billion a year of new construction, based on medium-density zoning.

Short-term stimulus. Environmentalists worry that the flood insurance cutoff date two years hence may have the opposite effect from what was intended.

David Strouss, director of a group of Massachusetts coastal communities, says, "Many of the coastal communities have expressed concern that there will be a boom in development . . . between now and that date."

And Richard Delaney, chairman of the New York-New England coastal task force, says he expects development "to be accelerated" as the insurance cutoff approaches.

But it is not only environmental concerns that are having an impact. The budgetary arguments are being voiced in Congress, and these arguments carry weight.

Rep. Thomas R. Evans, Jr. (R.-R.I.), said while introducing a bill identical to Chafee's, that under present policies, the cost to the government of grants and loans "to develop only half those areas presently not developed, will range from \$4 billion to \$11 billion over the next 20 years.

"These are not one-time costs," Evans said. "Taxpayers' dollars subsidize development, a hurricane wipes an area clean, the government provides assistance to rebuild, and the cycle begins again."

The Chafee-Evans legislation would not affect grants for energy facilities, existing channel improvements, public roads and other military or publicservice facilities. Nor would policies of

Continued on page 24

Representative Examples of Atlantic

State	Number of Islands	Total Acreage	
Alabama	5	28,200	
Connecticut	14	2,362	
Delaware	2	10,100	
Florida	80	467,710	, '\
Georgia	15	165,600	Me.
Louisiana	18	41,120	Vt.)
Maine	9	2,640	
Maryland	2	14,300	N.Y. Mass. (N.H.)
Massachusetts	27	37,600	H.I.+
Mississippi	5	9,500	Conn.
New Hampshire	2	1,100	7
New Jersey	10	48,000	Penn. N.
New York	15	30,310	Md. Del.
North Carolina	23	146,400	000
Rhode Island	6	3,660	2000
South Carolina	35	144,150	1
Texas	16	383,500	7 Va
Virginia	11	68,900	
18 States	295	1,605,152	N.C.
Tex.	Miss.	Ala. Ga.	S.C.

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the Flood Insurance Administration already in force be affected.

And Evans points out that in the legal sense, the removal of federal aid will not obstruct local efforts to develop barrier islands. "The bill would not pre-empt local government zoning and permitting authorities, nor prevent a private landowner from spending his own money for developing his property as he pleases. But this development should not take place at the expense of the American taxpayer."

Construction safety. Speaking for NAHB, W. Allen Ball, vice president of the company developing Kiawah Island, South Carolina, told a House interior subcommittee that one premise of the bill is "safe construction cannot occur on barrier islands."

This means, he said, that a ban on federal grants and flood insurance would discriminate against property owners on islands that are "stable and less susceptible to environmental dangers, compared to even mainland development."

Another sore point of developers has surfaced on Interior's maps designating which barrier lands are to be ruled "undeveloped" and thus ineligible for flood insurance after October, 1983.

Presumably these maps would also determine which acreage is to be cut off from federal grants, if the Chafee-Evans bills pass.

Interior already has one such set of maps (see illustration, page 22) of 125 separate undeveloped areas totalling 463,621 acres on an estimated beach length of 586.7 miles in 15 states (nei-



Wrecked coastal housing: Should the Treasury still finance storm insurance?

ther New Hampshire nor Maryland have any islands classified as undeveloped). The maps are being reviewed by governors and local officials for comment

In writing the House-Senate report

on the budget reconciliation bill, conferees said that "a coastal barrier or portion thereof shall be treated as undeveloped only if there are few people-made structures, and human activities do not impede geomorphic and ecological processes."

The vagueness of this language guarantees a rush of lobbying since the stakes are millions of dollars of potential profits to be made or lost, depending on whether a prime piece of barrier land is "developed" or "undeveloped."

Reduction. A consultant to the Interior Dept. says if the Chafee-Evans bill gets far enough in Congress, the 464,000 undeveloped acres on Interior's present maps could well be whittled to half. Many congressmen and senators will logroll to get the most they can for their constituents. This is part of the price proponents may have to pay to get the bill passed.

As yet, the Reagan administration has not taken a public position. Sen. Chafee, as chairman of an environment and public works subcommittee, has been seeking Interior Secretary James Watt to testify at hearings Chafee wanted to hold in late September.

— DONALD O. LOOMIS

McGraw-Hill World News, Washington





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Passive solar: It's not exotic anymore

Passive solar is not only alive and well-it's an essential part of doing business for builders and remodelers in the 1980s. That was the gist of what close to 350 people heard at Builders and Remodelers '81, a workshop on passive-solar construction held last month in Portland, Ore.

The sponsors of this second annual meeting-including NAHB, other industry groups, and Western Sun, a Portland-based regional solar information center-put together presentations on such topics as solar design, energy considerations in financing, and selling the passive solar subdivision.

"We knew we were going to draw people who already had the basics and were convinced that solar works," said conference co-chairman Michael Bell, who is also NAHB's program manager for construction. "Our philosophy is that passive solar is a business. Builders include it because it helps them sell houses and makes them a profit."

Passive orientation. Most of those at the workshop were small- and medium-volume builders and remodelers looking for nuts-and-bolts information on passive design and construction. When asked at the opening session, at least half of those present indicated they had built fewer than five passive solar houses.

Peter Wormwood of Amreb Co., Albuquerque, said his firm has built 26 active solar houses and is now thinking about trying its hand at passive. And Jerry Monti of Apollo Construction, Seattle, said he has done some passive-solar retrofit and wanted to expand the techniques to new construction. "The construction details some of the speakers are giving are important," he said.

Here are some highlights of the sessions at the two-day workshop:

Design. Passive-solar homes should look as much like conventional housing as possible, most speakers said. Jim Leach of Downing/Leach, Boulder, Colo. advised builders to choose local techniques and products that have proved popular in the past when they offer a passive-solar house. "In a welldesigned passive solar home, the buyer should feel like he is getting the solar for nothing," he said.

Financing. John Larsen of Far West Federal Savings in Portland said he has noticed a rise in delinquencies recently, notably among loans that are four or five years old. Most were caused by the usual problems-second mortgages and loss of income. However, some can be blamed on a new culprit: high energy costs.

One way to deal with the new problem Larsen said is for lenders to take a house's energy efficiency into consideration when evaluating a mortgage application. If they did, more builders would build energy-efficient homes. Larsen said he's willing to factor in energy efficiency. But if this is to become a nationwide practice, there must be a uniform way of rating a house's energy efficiency so a lender can communicate with the secondary mortgage market.

Woody Leigh, Midland Federal Savings and Loan, Denver, said the builder has to put pressure on the lender to consider passive solar construction as well as educate him on the technology. The lender, in turn, will use the information when selling the loan on the secondary market.

Marketing. Marketing considerations for a solar subdivision should be no different than those for a conventional subdivision. That was the experience of major developers in twelve solar subdivisions, according to a survey taken for Western Sun by Management Marketing Associates Inc. of Portland. It was found that while prospects are interested in solar, they still buy a house based more on its price, design and location, reported Vice President Jamie Mater.

The study's upshot: Builders featuring passive solar should not change their target markets or alter their standard designs too drastically. Mater said, "It's a good idea to get your introduction to the passive solar subdivision on familiar ground." -F.J.D.

The cloth roof makes its debut on Miami mall

Dated shopping centers are turning into prime candidates for renovation (see page 53). One such center, the Mall at 163rd Street, can claim this distinction: When completed next year, the mall will be the first public structure in the nation to be retrofitted with a permanent fabric roof.

The fabric roof is manufactured by Owens-Corning Fiberglas Corp. And According to Anthony Belluschi, the architect in charge, the new roof will reduce the mall's energy costs.

"The transluscent, coated fabric will reflect up to 75% of the sun's radiated heat away from the interior," says Belluschi, vice president of Charles Kober Associates, Los Angeles, "yet it will allow enough natural sunlight in to support the growth of indigenous shrubbery and trees."

He adds that the reflected heat will



reduce air-conditioning loads, while the natural light will lower daytime lighting costs.

The 60,000-sq.-ft. roof, covering 140 shops in a 60'×100' mall, will be fastened to two support rails attached to the two levels of stores (see scale model, above). Support arches will be symetrically spaced along the rails, crossing from one side of the mall to the other, with the fabric stretched and tensioned over arches. -D.G.

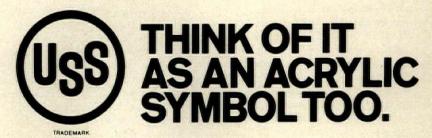


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'Shotgun' rehab weds HBA with utility

It wasn't a shotgun wedding in the traditional sense, for no one forced the marriage. But the opportunity to join hands under one roof just seemed too good to pass up.

Thus began the rehab of a New Orleans "shotgun double," a two-family row house in the inner city Carrollton section. The Remodelers' Council of the HBA of Greater New Orleans originally conceived the project many years ago as a promotion, but it has since been embraced by the local gas/electric utility, by the city's Dixie Federal Savings and Loan, and even by the city itself.

Joseph L. Ford, the HBA member who acted as g.c., said the project was intended to show the public quality, affordable remodeling, with energy

retrofit features highlighted.

This emphasis interested the New Orleans Public Service Inc. (NOPSI), the city's gas and electric utility. As a result, NOPSI will begin a year of energy monitoring, after the house has been open to the public from mid-September to mid-October.

Half the house has been remodeled, with extensive energy improvements, while the other half stayed "as is." During the energy monitoring, test equipment will simulate identical living patterns in both halves of the empty house. Meters will track energy use to gauge the effectiveness of the improvements.

New Orleans architect Bill Glass designed the rehab, and he also modified the elevations. The major exterior change: moving entrances from the front porch to either side, for greater privacy.

Energy features. Most changes were intended to improve energy effi-

ciency. Besides heavy insulation and caulking to plug infiltration gaps, the house features advanced energy-conservation systems. One captures waste heat from the air conditioner and recycles it into the hot water system. The air conditioner itself has a high energy-efficiency rating (EER) of 9.3. The house also has a high-efficiency "recuperative" gas furnace.

Some \$70,000 worth of improvements in materials and labor come to more than the \$60,000 purchase price, says Ford. Costs were covered by several types of contributions. Eight HBA remodelers together contributed \$12,000, and the HBA gave \$12,000 more. Twenty donors threw in wall coverings, countertops, ceiling fans and other materials. Ford values these contributions at about \$23,000.

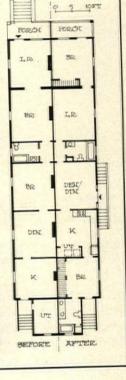
The S&L's contribution: interest-free interim and permanent financing, and below-market financing to the eventual buyer.

And the city's contribution? Curbing its fiscal appetite until the house is sold. "New Orleans was kind enough to abate taxes in the interim," says - DAVID GARFINKEL Ford.



Before and after: Plans and photos show how house was refurbished and how entrances moved from the front to sides. Not shown are extensive energy improvements on one side, which will be tested for efficiency.





Remodeling buoys ceramic tile sales

As in building slumps of the past, homebuilders around the country are turning to alternatives such as remodeling to keep their businesses going. And that upsurge in remodeling has been happily noticed by manufacturers and distributors of ceramic tile, who gathered for the third annual Ceramic Tile Distributors' Assn. (CDTA) convention in Washington, D.C. last month.

The growth of the convention to twice last year's size is only one indication that the tile industry is riding high on the remodeling wave.

For example, Fred H. Blackwood of Beaver Distributors in Farmington Hills, Mich.-ex-president of the CTDA-says that in Detroit "residential construction is off 86%. But remodeling and commercial construction are picking our business up. And there's simply a lot more tile used in what is being constructed."

Exhibitors acknowledge that tile is enjoying an across-the-board boom in popularity in new construction and remodeling alike. American Olean's Preston L. McLaurin commented that "the biggest change I've seen this year is that tile is coming out of the bathroom, and into the kitchen, foyer, living room, even the bedroom."

Homeowners' plans to stay in their present homes are leading them to more conservative choices of the colors and styles, say exhibitors. Peter Johnson of Summitville Tile, Summitville, Ohio reports that "the earthtones are it, the bread-'n-butter colors. Because tile is so permanent, no one wants to take a chance with a purple floor." Thus, exhibitors displayed fewer patterned tiles this year, noting that they are harder to match with furnishings.

The general tone of the CTDA convention was optimistic. "Sure," concluded McLaurin, "the downturn in residential construction has affected us. But just as in building, if you're depending upon one faction of the market, you're in trouble." -J.A.W.

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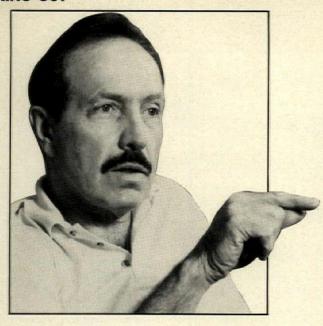
But they don't offer you the energy-saving and quality advantages that make your homes easier to sell. For more information, see Sweet's Catalog, or call your KitchenAid Distributor.

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Bureaucrats are to blame for the high cost of housing

Today's inflated price tags come more from inequitable zoning and over-regulation than the cost of money, land and materials

Some 15 years after building a small garden apartment project in Phoenix in 1949, Robert Lusk had pyramided a specialization in multifamily, for-sale housing into a six-state operation. Having introduced the co-op apartment concept to St. Louis, Tucson, Indianapolis and Albuquerque, in 1965 Lusk consolidated his operations in the Northeast.

Since then Lusk Corp., Stanford, Conn., has concentrated on for-sale townhouses and apartments in New York and Connecticut. Present jobs include three communities in New York State-a 300unit condo in Lewisboro, built under inclusionary zoning [HOUSING, July]; a 143-unit condo in Ossining; and 85 townhouses in Eastchester.

Soaring interest rates, inflated land values and accelerated costs for materials and labor have traditionally been cited as the prime reasons for the astronomical rise in house prices in recent years.

While these economic factors have indeed risen significantly, they pale in comparison to the worst offenders of all-over-regulation of the building process and inequitable zoning.

This widespread bureaucratic tampering results in the unnecessary expenditure of millions of dollars by the industry every year. It is directly responsible for house prices that are double what buyers should be paying.

Twenty years ago, the industry could provide new homes for 50% of our population. Today, fewer than 10% can qualify for a new house. This decrease cannot be entirely attributed to inflation. To a large degree, it is the fault of municipal authorities who, for political or popular considerations, seek to control the amount of housing built in their communities.

When we went into business 30 years ago, roughly 70 cents out of every sales dollar was allocated for hard costs—costs for materials, labor and other factors directly related to construction. By 1970, those costs had dropped to only 55% of the sales dollar. Today, for every dollar that the homebuyer is charged, only 35 cents actually goes into the construction of his house. And there is no evidence that we've yet reached bottom.

Where is the rest of the buyer's dollar going? Sadly, to cover mandated expenses for such things as environmental impact studies, redesign and re-redesign of plans submitted to planning or zoning boards, excessive land development regulations and controls, legal counsel to help gain approvals from a tangled morass of governmental agencies, and carrying charges resulting from long delays in the construction process.

It is not uncommon today for builders to carry land as long as ten years before approvals are obtained from all the regulatory bodies that have been imposed upon the housing industry. Using a conservative interest rate of 15% annually on a \$1 million land purchase, \$1.5 million would be added to a builder's developmental costs over a ten-year approval period.

So instead of apportioning \$1 million in land costs among his units, a builder must allocate \$2.5 million if he is forced to spend ten years getting approvals. That's \$1.5 million his buyers absorb in higher prices, with nothing tangible received in return!

Unfortunately, that's only part of the picture. The costs of environmental impact studies required by almost every planning board today can run anywhere from \$100,000 to \$200,000.

Repeated changes in design-often inconsequential details—can cost tens of thousands more in extra engineering and architectural fees. The need for legal specialists qualified to cope with the vagaries of governmental agencies can boost builder costs astronomically. And, of course, with the cost of housing greatly inflated (even without these extras) a builder must spend more than he normally would on advertising and public relations to attract an understandably resistant public-money that also is inevitably reflected in the final prices.

This is not to say that the building process should be free from all regulation. Obviously, we need sound codes and reasonable subdivision standards to protect buyers and the community from unscrupulous developers.

But today's excessive housing prices aren't due to efforts to insure quality construction. Rather, they are caused by a short-sighted, "no-growth" attitude on the part of zoning and planning officials who are encouraged to pursue a strategy of harassment by residents concerned with the alleged over-development of their community.

These residents, who always want to be the last to move into their towns, apparently wish to bring about long delays in the hope that builders will be forced to abandon their efforts. And, such efforts have caused a number of developments to fail in midstream.

But in the desire to "protect" their communities from any new development, these residents are perpetrating an injustice on the home-buying public. For their no-growth policies deny housing to people who badly need it. They are crippling an industry that has the potential of contributing substantially to our nation's economic recov-

"Building 2,166 units in six years has demanded a cabinet manufacturer that can keep pace.

ndianapolis, Indiana

Scheirich has done it with quality cabinets and on-time delivery." Cloverleaf Properties

With all the rental units we've been building, we've needed not only good-looking cabinets, but well-constructed cabinets as well. And just as important, we've needed them on the dates we've specified. With Scheirich cabinets and their distributor, Phil Trimpe Associates here in Indianapolis, we've had both.

"I've looked at a lot of cabinets and Scheirich's Gardencourt line is the best cabinet for our units. Why? Because we've had very few callbacks, and that's something I can't say about other cabinet suppliers we had before Scheirich.

"And with the number of units we build, the cabinets have had to be there. Scheirich and Trimpe have never let us down.

"The advantages of Scheirich haven't stopped

with the construction end of things either. The Gardencourt cabinets have a vinyl covering that we've found really protects and maintains the cabinet finish long after the apartments have been rented, not to mention during construction.

"Quite frankly, I believe the good looks of Scheirich cabinets have really helped rent the apartments for us. And that's what it's all about, isn't it.'





One of the leading multi-family development firms in the Midwest, Cloverleaf Properties specializes in the construction of well-built middle-income rental units. Most complexes are in Indiana, but Cloverleaf also has built developments in Missouri, Illinois, West Virginia. Florida and North Dakota. Units range in size from one and two bedroom apartments to two, three and four bedroom townhouses. Currently four projects are under construction totaling 275 units with Scheirich cabinetry used throughout

ery. And they are tying up funds for other projects badly in need of financing at a time of very tight money.

To better comprehend the negative effect of municipal harassment on the construction process, let's consider a condominium community recently developed by our company.

It took no less than eight years from our purchase of the land to obtain the necessary approvals from local and state agencies for our zoning change, our site plan, our environmental impact statement, our architectural designs and our amenities package. This added over \$1 million in carrying charges to our eventual pricing structure: In the early years we were paying 9% interest for option renewals on the land; later we were charged three points above prime (12%-24%) to carry the property.

But that's only the beginning. For instance, we were required by the local planners to prepare a comprehensive 600-page environmental impact study that added approximately \$200,000 more to our costs. In compiling this document ourselves-we'd have spent another \$100,000 using a research consultant-we uncovered two disheartening surprises:

• At least half of the material that went into our report had already been published-in U.S. soil conservation reports, traffic and school impact studies and in the environmental statements of other builders in the area.

· We had to retain an army of special consultants to work on this study. They included an ecologist, a lake expert, a botanist, a traffic engineer, a property appraiser and a demographic specialist.

Moreover, we were forced to spend \$200,000 to retain four legal firms to shepherd our plans through. Included: a lawyer who specialized in environmental law, another expert at preparing the prospectus for the Attorney General, a third familiar with local regulatory procedures, and a fourth adept at obtaining approvals from state regulatory agencies.

An additional \$250,000 of developmental money went for extra architectural and engineering fees because local planners asked us to submit redrawn plans at least 20 times.

Some of the required changes were trivial. One state agency couldn't find the location of a paper towel dispenser in the pool-house shower room, hence rejected the plans causing further costly delays. In another instance, the planners requested a resubmission for relocating mail boxes a few feet from where we had placed them. And each

submission had to be redrawn at a cost of \$20 an hour.

But the expense wasn't only in architectural and engineering fees. Each submission took two to four months to get through the local planners. Their own "experts" had to review our drawings. Time had to be allowed for publication of notices for public hearings. And during each delay, we had to meet all those monthly payments simply for carrying the land.

Some of the requests were reasonable. In one instance, we were asked to provide more turn-around space at the end of our cul-de-sacs; in another, to move the parking area closer to the units so it would be easier for residents to reach their cars.

The condo units eventually came on the market at \$50,000 to \$140,000. We estimate that if it weren't for the above mentioned and other extra expenses, they would have been priced from \$25,000 to \$70,000.



'Today, for every dollar that the homebuyer is charged, only 35 cents actually goes into the construction of his house.3

The bottom line, therefore, was a virtual doubling of the sales price. And that's without considering the impact of an inflation of approximately 8% on hard housing costs during the periodjust the simple fact that \$35 of building costs had been translated into \$100 of selling price (instead of \$50) because of over-regulation.

Unfortunately, our experience is by no means unique. Builders throughout the country are being forced to charge outrageous house prices for the same reasons. Instead of paying \$2,000 peracre for land and then being allowed to develop at their own pace, they are charged \$40,000 to \$80,000 per-acre for zoned land, or \$10,000 per-acre for land that might be zonable if they are willing to spend and struggle for seven to ten years.

Must this situation continue? Not necessarily, for there are measures to control-if not eliminate-over-regulation readily at hand. And they can be instituted without losing safeguards over the quality of the product.

One suggestion is to establish statewide codes or even a national planning code. This would prevent local planners from imposing unnecessary requirements, which are really aimed at appeasing those responsible for electing or appointing them to office.

One might argue that varying local conditions would rule against this. But that argument is used more to obstruct the construction process than to reflect reality. It is just one more subterfuge to create costly delays in the hope that the builder will abandon his efforts.

There are differences, of course, that would, for example, require more insulation and deeper foundations in colder areas than in warmer ones. But such considerations can be addressed with minimal difficulty.

Another suggestion is a federal or state law requiring municipalities to set aside a percentage of their undeveloped land for "moderate" zoningsay, 15% for one-third-acre, singlefamily detached and 10% for multifamily built at six-to-eight per acre. This would still leave 75% of the undeveloped land in a community for the currently all-pervasive "snob" zoning of one acre or more, which is found in all too many suburban communities. If towns would do that, home prices would plummet substantially.

And perhaps we should take another look at the advantage of "sunset legislation" for all building regulations except the building code itself. This would mandate a review of each regulation covering subdivision development-five years after it's enactedby a commission composed of state officials, builders and local municipal representatives. If the review determines that any regulation is excessive, it should be eliminated. If it's found valid, the public should at least be told what the regulation will add to home prices in the area.

But whatever suggestions we consider, we must find a way to take control of housing away from those who promote excessive regulation under the guise of "protecting" the community. It is a fight not for builders alone, but for everyone involved in the business of meeting America's housing needs.



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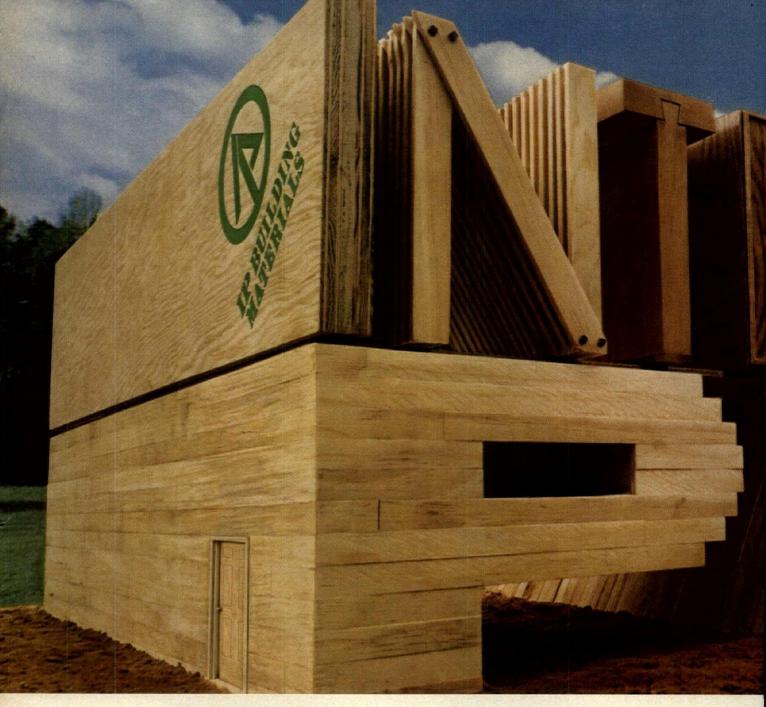
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Louisiana and Maine in 1979, and Mississippi and New Hampshire in 1980. Add also modernization and expansion projects for wood prod-ucts facilities in Oregon and Louisiana. All of this gives IP the capacity to produce more than 900 million square feet of plywood and 900 million board feet of lumber a year.

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CAROLE EICHEN Carole Eichen Interiors Fullerton, Calif.

In model kitchens: Keep it personal

hoppers spend a lot of time evaluating the kitchens in your models. And that gives you a great opportunity to prove your houses are designed especially for people just like them.

Taking advantage of that opportunity isn't as simple as it may sound; it takes a lot more than good layout and appliance selection-although these are essential. You have to merchandise the kitchen wisely as wellmaking it come alive with color, texture and, above all, accessories. The "at-home" feeling prospects get in such a kitchen puts them in a buying frame of mind.

Unfortunately, there's no easy recipe for kitchen merchandising. The list of ingredients varies depending on where you build and whom you're building for. To give you some ideas, however, five examples of kitchens personalized in different ways are shown at right.

The single-minded kitchen.

Don't get "kitchen-y" if you're selling to bachelor buyers. Not only will cute "apples-and-oranges" wallpaper turn off a single man, but chances are the model he's inspecting is a small one with an open floor plan. So color schemes and materials used in the kitchen should harmonize with the look of the adjacent living/dining room.

This is why the bachelor's kitchen shown (No. 1; this page) is brown and beige. And it's warm and inviting thanks to accessories. Note the teapot on the stove-always a homey touch—and the cannisters and cooking utensils on the count-

The breakfast bar is set for two: The single prospect would rather be reminded of meals he'll be sharing

with guests instead of the quick cup of coffee and a doughnut he'll be grabbing for himself in the morning. (By the way, when you use place settings on a breakfast bar or on a table in a nook, don't set the dining room table. People don't use both at the same time and the lack of realism will bother prospects-even if they can't put their finger on exactly what is it is that seems wrong.)

The wok set. A young couple purchasing their first home probably won't be able to afford much of a kitchen-but that doesn't mean you can't dress up the space. Take a look at kitchen number 2 shown at the bottom of this page, for example. It's small, but suggests cheerful activity.

We accessorized it with a wok and

a vegetable cutting board because young buyers are often health-food conscious and up on the latest cooking styles. And because they can't afford ceramic-tile countertops and don't have the space for a butcherblock-topped island, we specified a plastic laminate countertop with the look of wood, which adds a warm tone to the room.

Family differences. Don't take anything for granted when you're merchandising for the family market: Just because prospects all have children doesn't mean they all have the same tastes or lifestyles. The kitchens pictured on the facing page show what I mean-you see three distinctive looks, but the prospective buyers are all families.



1. Bachelor's kitchen (above) is neutral, but warm. Project: Millstream. Builder: Shaffer Development, Project director: Janice Kennedy.

2. Condo kitchen (below) caters to young couples' cooking preferences. Project: Ridgewood. Builder: Ridgewood Development.



The first (No. 3) is for a young family with a moderate income. It's light and cheerful, with informal cooking-pot wallpaper, and splashy print curtains. The greenhouse window holds a few plants, but not so many that the sun can't shine in.

The sheet flooring is light colored and in a simple pattern: Busy patterns on the floor make it difficult for you - and the buyer - to decorate the rest of the kitchen. A geometric design in white or off-white is a good bet. If you do decide on a multi-colored flooring, don't use patterned wallcoverings. Otherwise, visual confusion will result.

Kitchen number 4 has a somewhat more formal look, as befits an affluent established family. The wallpaper is a traditional birds-and-flowers print, flooring is brick and countertops are ceramic tile.

Most important, however, is the way this room is accessorized. The prospective buyers in this case are a very home-centered family. The wife doesn't work outside the house and her kitchen shows the special pains she takes in caring for her husband and children. Note the fussy, oldfashioned caps on the jam jars, the eggs next to the sink and the baskets filled with loaves of bread. (These loaves are real-they've been sprayed with a preservative. It's much more effective than using "plastic" food.)

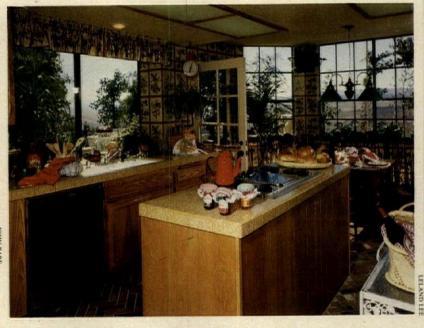
Contrast this look with that of the sophisticate's kitchen (No. 5) pictured at the bottom of the pagewhich is in a different model at the same project. In this family the wife has a career and the couple is somewhat more status- and diet-conscious, as evidenced by the bottle of Perrier displayed on the counter instead of bread and jam.

To create a contemporary "designer" look in this kitchen, we used wallpaper in a striking geometric pattern and displayed cacti instead of the typical leafy plants.

Note that none of these kitchens is so "far-out" that any prospect would feel he's on the wrong planet: Although you're aiming your models at different markets, you don't want to discourage shoppers from choosing any one of them.



3. Cheerful, casual look suits young parents (above). Project: Canyon Hills. Builder: Ridgewood Development. Project director: Janice Kennedy.



4. Charming kitchen (above) sets the scene for family meals. Project: Falcon Hill. Builder: The Meister Co. Project director: Janice Kennedy.



5. Snob appeal is one reason Perrier and imported teas are displayed in a kitchen for a high-earning family (left). Project: Falcon Hill. Builder: The Meister Co. Project director: Margo Hazlett.

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HOUSE CALLS

Is creative financing becoming



Paul G. McKinley, Arnold & Wright, Gainesville, Fla. I have become familiar with creative financing through its use by other builders in my community. My firm is involved in commercial construction, so I've had little direct contact with these new financing techniques. However, from what I hear, creative financing is now the only game in town.

There's very little money available in this community to provide even conventional mortgages. Fortunately there's still very strong demand for housing, particularly from

people who have been transferred here by large business firms. So creative financing in this community is becoming a by-product of necessity.

From what I've seen, I'd say that creative financing has actually become less difficult. That's because people here are becoming more familiar with it. After all, the buyers are ones you've got to convince.

Prentise Beebe, Beebe Construction Co. Inc., Omaha, Nebraska. In my operation, most sales are made through local real estate brokers. They have used just about everything in the book, from leased-land arrangements to roll-over mortgages. As a rule, I prefer to use conventional mortgages. But in times as bad as these, I'm willing to try anything that may work.

My main gripe about creative financing is that most of the public is unfamiliar with it. Because of this few people are willing to try these new techniques.

Despite my preferences, I think that the use of creative financing is inevitable. Prices have grown so far beyond most people's budgets that this may be their only route to owning a home. Unfortunately, I don't believe that creative financing alone can solve the larger problem of affordability.

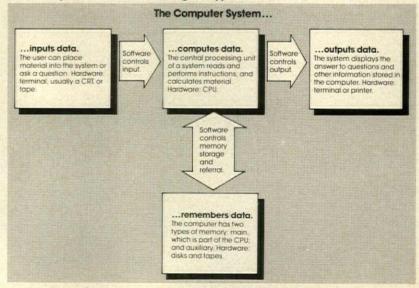
P. E. Bennett, Bennett Construction, Amarillo, Texas. In our part of the country, little creative financing is being used right now. However, some people are starting to show an interest. A few local banks, for example, are now offering mortgages that start at a lower rate in the first year, and go to a standard rate.

I, myself, am becoming more interested in using some of these new financing techniques. The way I see it, when conventional mortgages are up to 161/4%, as they have recently in my area, practically anything will help.

My main difficulty with creative financing is its unfamiliarity among buyers. You generally have to spend more time explaining how the new instruments work and what they will do. All of these new acronyms—GPM, VRM, and so on—are like Greek to the public. So communication is especially important.

Correction

The diagram entitled "The Computer System . . . "appearing on page 83 of our September issue was incorrect. The boxes labeled "remembers data" and "outputs data" were inadvertently reversed. The correct diagram appears below.



more difficult?

Judi Carroll, Ramos-Jensen, San Marcos, Calif. My firm is very interested in creative financing. In fact, we've developed a new financial device of our own.



The device is called a "mortgage payment subsidy program." It's similar to a buy-down, except that we changed the name to make it sound more consumer oriented. Specifically, we offer to subsidize buyers' mortgage payments by sending them a monthly check of up to 3% of their monthly payment for up to three years.

Unfortunately, we've had some problems. We've found that our particular market, which is mostly emptynesters, doesn't feel secure with any new financing technique. Apparently they want the certainty that comes with a conventional 30-year mortgage, regardless of the rates. So we're looking now for other financial strategies that will more directly serve our buyers' needs. Creative financing just doesn't solve the problem if it doesn't mesh with a prospects' psychology.

Martin Zeitlin, Martin Construction Co., Nashville, Tenn. For our firm creative financing has been the only solution to our financial difficulties. We've put to-



gether several different kinds of creative financing packages, and the results so far have been tremendous.

Our first such deal was arranged nearly two years ago at a time when none of the local banks were making mortgage loans at all. We convinced one bank to give us commitments for several RRMs This arrangement helped us sell a lot of houses and clear away a lot of inventory. It also set a precedent for other banks in the community, which soon followed suit in granting creative-finance loans. All in all, our arrangement ended up benefiting all the builders-and new-home prospects-in the community.

The most difficult thing about creative financing is finding new sources of money. But we don't wait for the lender to come to us. We create the package first-then we go out and sell it to the banks.



Back when I invented the single-handle washerless faucet, people thought it was the best faucet ever.

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thing left is dependability. And just one cartridge fits all Moen single-handle faucets.

Moen assures you of even greater dependability with fully cast brass waterways, triple-chrome plating, live-water testing and unique features like our non-clogging cone screen aerator.

Moen by Moen is economical, too. My exclusive Flow-Rator™ aerator saves water automatically by limiting flow to 2.5 gallons per minute, regardless of water pressure. And your customers will love the soft, splashless stream.

And, as you'd expect from the best, you get other features ordinary faucets don't have.

Like safe, gradual temperature adjustment. And Moen's "Temperature Memory,"™ which lets you select the water temperature before you turn the faucet on.

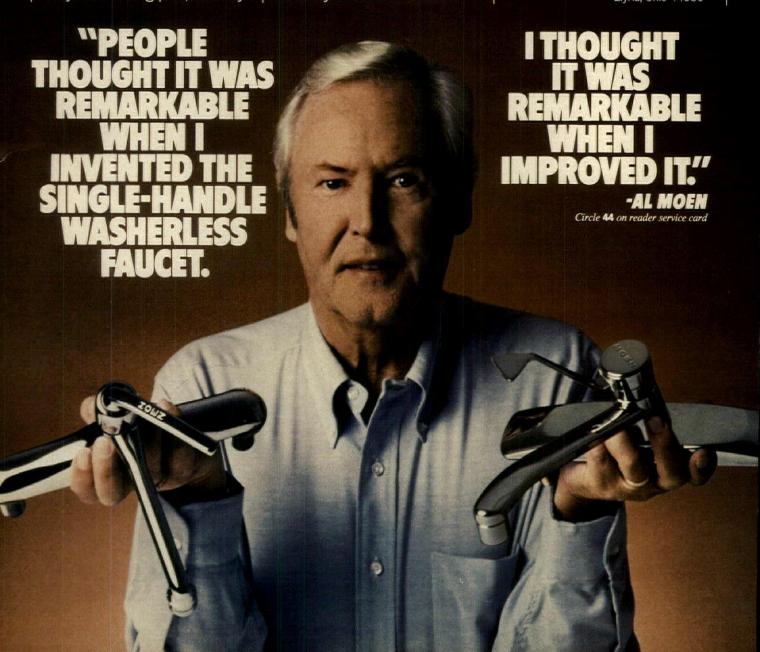
Look to the best for selection, too. There's a Moen for kitchen, lavatory and shower, with options for every need.

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HOUSING DENAND (® LOCAL DENAND) (B) Fourth quarter, 1981

Here's one time California-based economist Al Gobar wishes he had been wrong about a prediction. For when he gave the cheerful news of an improved demand picture for the housing industry last quarter—the first such glad tidings since mid 1980—he also issued builders a warning: High prices and out-of-sight interest rates could prevent most SMSAS (Standard Metropolitan Statistical Areas) from reaching the level of economic recovery needed to support improving demand.

This fourth-quarter update of the Housing Demand Index proves, unfortunately, that the warning was justified. The improvements of the last quarter were not sustained. Overall, the demand forecast is cloudy again and, as Gobar predicted, high prices and interest rates are to blame. Atlanta, Boise, San Diego, Seattle—these and other areas experienced a resurgence of demand in the previous index, only to slip backwards this time. Explains Gobar "Sustained high interest rates tend to abort recoveries in housing demand."

In the last report some markets were coming off periods of economic growth, which was expected to rejuvenate ailing demand. But housing prices in markets with strong economic growth tended to be high. This, coupled with high interest rates, makes it difficult to exploit whatever demand exists. There were a few bright spots—Flint and Lansing took a turn for the better; Las Vegas is now on a roll; and, Dayton's demand picture is looking up for the first time in over 18 months. But the overwhelming number of downward-pointing red triangles on the next three pages tells the story: The industry has a long road back to its pre-recession picture of health.

On the bright side, Gobar notes that builders were better prepared for the current recession than they were for the recession of 1974-75 in that they entered this one with lower inventories. Getting burned in 1974-75 made a more cautious homebuilder for 1980-81. But, back to gloom and doom, Gobar warns that time is running out for even the most cautious and farseeing builders. Those who aren't moving inventory are stuck with high carrying costs. Those who are selling via interest-rate-buydown schemes face eroding profits. Real relief hinges on rates going down.

Is that likely to happen soon? Don't count on it, says Gobar, even though the current spread between interest rates and the rate of inflation suggests there's room for rates to begin the eagerly awaited decline. In the meantime, the economist sees such schemes as negatively amortizing and shared-appreciation loans as the probable solution to the problem of selling housing to buyers who want it, need it, but just can't afford it.

-WALTER L. UPDEGRAVE

How to read the index

Five symbols are used:



A green solid triangle indicates a very strong market with significant pent-up demand.



A green open triangle indicates a better than average situation, with demand increasing faster than supply.



A white circle indicates the market is in relative equilibriumthat is, supply and demand are increasing at similar rates.



A red open triangle indicates a poorer than average situation, usually an overbuilt market.



A red solid triangle indicates a very poor situation that could be overbuilt by as much as two years.

Each SMSA is evaluated three ways:

- 1. Degree of opportunity—in effect, a summation of all factors affecting the market.
- 2. Demand by units just what it says.
- 3. Demand by purchasing power—the relative ability of the market to pay current prices or rents.

Each of these categories is in turn divided into three sub-categories:

- 1. All housing in the SMSA.
- 2. For-sale housing single-family detached and some midand high-priced condos.
- 3. For-rent housing—rental apartments and low-priced condos.

ANDRY

		DEGREE OF OPPORTUNITY	DEMAND BY UNITS	PUR
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AUSTIN, TX	00	VOA		
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BIRMINGHAM, AL	∇		VOA	
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CINCINNATI, OH	VV			V
CLEVELAND, OH	77	777	V V V	7
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COLUMBIA, SC	OA	700	000	V
COLUMBUS, OH		$\nabla \nabla \nabla$	VVV	V
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DAYTON, OH	$\nabla\nabla$	$\nabla \nabla \nabla$	VOA	∇
DENVER, CO	100	700	VOA	V
DES MOINES, IA	$\nabla\nabla$	$\nabla \nabla \nabla$	VOC	V
DETROIT, MI	VV	V V V	V V V	V
EL PASO, TX	$\nabla \nabla$	VVV	VVC	7
EUGENE-SPRINGFIELD, OR	VV	V V V	VVV	-

Albuquerque shows signs of returning to life with housing demand exceeding supply the last two quarters. Still, high interest rates combined with prices for new homes substantially higher than those for resales makes the situation there worse than the already bleak statistics indicate.

Atlanta has significant pent-up demand for single-family homes and the advantage of for-sale prices that are low relative to consumer incomes. The rub: There's enough housing around in Atlanta to allow potential buyers to wait out high interest rates.

Boston improved considerably last quarter, although many potential buyers are deferring purchase and occupying rental housing whose supply runs ahead of demand

Charlotte's comeback has been interrupted by a quarter of poor economic growth. There's pent-up demand in this market, but it's being syphoned off rather quickly.

Chattanooga enjoys the advantage of low single-family-home prices and the disadvantage of little or no pent-up demand. Steep rents might pressure renters to consider buying although interest rates would act as a deterrent to buying.

Cleveland - at least it's not deteriorating anymore.

Dayton's demand profile is beginning to show improvement for the first time in over 18 months. Still, with little pent-up demand in the market and plenty of housing available to accommodate newly formed households and in-migration, it could take a while for the improved demand picture to warrant new starts.

Detroit again shows signs of life, but the area has a long way to go before any significant number of homebuyers will emerge.

To make best use of the index, keep these points in mind

- The chart's simplified symbols represent complex statistics, so they provide only a general picture. A builder, no Point #1: matter how high his market is rated, must still analyze his own situation very carefully.
- The reports indicate the degree of risk in a given SMSA rather than the number of housing units that can be built Point #2: there. A large SMSA with a poor rating would still support more new housing than a smaller SMSA with an excellent rating. But the relative degree of risk for the developer or lender would be much greater in the larger SMSA.
- The reports are projective, not historical. That is, they forecast demand six months ahead rather than describing Point #3: the situation as it now stands. An SMSA may have strong sales or low vacancies but still be a poor risk; buildingpermit figures may indicate imminent oversupplies. Conversely, an SMSA that looks bad on the surface today may actually be turning around and getting healthy.
- The reports are for the SMSA as a whole, describing the general situation. So a low-rated market may offer good Point #4: opportunities for specific kinds of housing in specific locales.

Flint continues to experience a major improvement. Total demand hasn't bounced back to 1979 levels, notes Gobar, but "the change from 1980's low point looks encouraging."

Indianapolis remains stagnant. Only the demand index for industrial space showed a brief upward trend-the first in over a year.

Knoxville had enjoyed a brief upward swing, but the economy sank again. Gobar feels the backslide is temporary and looks for the market to rebound. When it does, he predicts there will be an active move-up market for single-family homes.

Lansing has taken a marked turn for the better, probably the result of improved auto sales. But the recovery is tenuous. If high interest rates choke auto sales and production, Lansing could easily suffer a setback.

Las Vegas's luck has changed. Demand is improving there as new-housing prices have actually fallen. Against all odds, supply continues to outpace the computer's estimate of absorption potential. A jackpot in the area's recovery is the resumption of industrial growth.

Los Angeles's economy is in the grip of stagflation - a condition marked by high prices and limited growth. Pent-up demand is high and vacancy rates low. This, plus the pervasive shortage of housing, means the market is in for strong absorption once the SMSA's economy stages a sustained recovery. Hopes that the recovery was on its way fizzled out when last quarter's growth was followed by this quarter's moderate dip.

Louisville appears to be nearing the end of its downward slide. Gobar predicts the fall in demand just might be bottoming out.

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NEW BRUNSWICK, NJ						
NEW HAVEN, CT						

Newport News moves up a notch. Industrial activity there has resumed, says Gobar, as coal-shipping facilities have been developed.

Norfolk is improving, but not enough to make it an attractive market. That should change if single-family prices can be held under control and if interest rates ever recede to sensible levels.

Oklahoma City retains a healthy look. There had been concern that new units on the market were priced too high, but Gobar says the most recent data show home prices are coming back into line relative to consumer income.

Peoria is still in bad shape. Says economist Gobar, "The freefall has slowed, but the economy is still losing altitude."

Phoenix reduces its housing shortage as new construction races ahead of the area's absorption capability. With singlefamily housing a bargain relative to the rest of the western region, potential tenants of luxury apartments could choose buying over renting. Still, without an economic resurgence, Gobar sees rising inventories during the next few months. Warning: A sudden turnaround is possible.

Salt Lake City has gained a notch in the ratings, but until this area experiences some strong economic growth, Gobar looks for the market to remain weak.

San Diego slipped a notch after its economic recovery of last quarter peaked. There's pent-up demand in this market, but high prices make it difficult to exploit.

San Francisco has plenty of buyers and its new single-family units, though expensive, are priced well in line with the existing stock. The problem lies in qualifying first-time buyers given the lethal combination of prices and prevalent interest rates.

Seattle's rating has deteriorated since last quarter. With the airlines' financial problems and the derivative impact these problems have on Boeing, Seattle's economy is a bit on the wobbly side.

Shreveport is back on a strong growth path after last quarter's stumble-the area's first major dip in almost ten years. Continued pent-up demand and low vacancy rates augur well for this market.

Worcester will be in good shape if interest rates come down to earth. Its economy is on a comeback and very little housing of any kind is currently being built - a good sign for anyone who does have or is considering putting product on line.

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Country Manor



Keystone Oak





Pine-Ridge

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ways to update a shopworn shopping center

Chances are you can find at least one such update opportunity in every metropolitan area. For, according to the International Council of Shopping Centers, some 5,500 centers are between 20 and 25 years old. Most are in prime locations and continue to have loyal clientele. But dated facilities—typically lacking such amenities as enclosed malls, fountains, eating areas—often keep them from competing with newer centers for business from the growing number of younger, "with-it" shoppers.

Which probably explains why a recent study by Marsh & McLennan Real Estate Advisors Inc. of Boston, entitled "What's in the picture for retail investment in the '80s?" found that for the early part of the decade retailers were setting aside 50% of their construction budgets

for improvements and expansion of existing facilities.

One industrial design firm has already mobilized to take advantage of the growing opportunity for non-res rehab. Gart Urban Associates Inc. of Coral Gables, Fla., recently formed Urban Renewal Inc. to concentrate on such renovations. Says Urban: "Rehabs will be the way to go for both economic and design considerations."

What follows on the next eight pages is a report on four shopping center update winners in the ICSC's 1981 awards program. The report is not intended as a primer—merely as a source of ideas that could be adapted to a variety of non-res rehab jobs.

—JUNE R. VOLLMAN



54

Clearing away the signs of old age

Highland Park Village, Dallas. Owner: Partnership of Henry S. Miller Jr. and others; Architect: James B. Cheek; Landscape architect: Lambert's. Photos: John Haynsworth



55

Raising the roof instead of building wings

Sharpstown Mall, Houston. Owner: Arthur M. Fischer Inc.; Architect: Nikita Zukov AIA; Engineer: Keith Thornton & Associates; General contractor: H.A. Lott, Houston. Photos: Daniel Bissonnet, Fred Damon, Murrey Getz



58

Using contemporary design to expand markets

Parmatown Mall, Parma, Ohio. Owner: Forest City Rental Properties; Architect: Hellmuth, Obata & Kassabaum; Designer: D.I. Design & Development Consultants Ltd. Photos: Peter Sebok



60

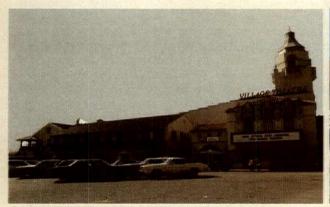
Joining forces under a space-frame atrium

Lennox Square Mall, Atlanta. Owner: Corporate Property Investors; Architect: Greenberg Associates Architects Inc.; Design Consultant: D.I. Design & Communicators; Construction Manager: Schumacher & Forelle Inc.; Structural Engineer: Nannis, Terpening & Associates Inc.; Mechanical, Electrical, Plumbing Engineer: Adams, Shadrick, Davis. Photos: E. Alan McGee

clearing away the signs of old age weathered quite well. (Note "before" photo below.) Of course, as with many longstanding neighborhood centers where ownership has varied over the years, a certain amount of "blight, neglect and compromise" had crept in, says

UPDATE 1: Considering that its oldest building has been in place for half a century, Highland Park Village in Dallas has

ownership has varied over the years, a Henry S. Miller, principal member of





the present owning partnership.

So when Miller's company acquired the property several years ago, a restoration program began. The first step: Removal of extra elements that had been added over the years, revealing some of the pure Spanish architecture that made the center so pleasant a place to shop.

Other work included repairs to wiring, plumbing, paint and masonry; "more creative use of existing square footage," which increased leasable space by 42,000 sq. ft.; and landscaping improvements like that at right, which often incorporate new lighting and fountains.

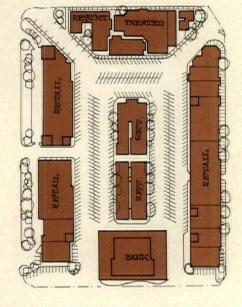
Most of the spruce-up work was done in response to requests from local residents who were surveyed in detail right after Miller's company purchased the center.

The payoff: Since the restoration work began, annual sales have doubled-from \$13.5 million in 1976 to \$27.4 last year.

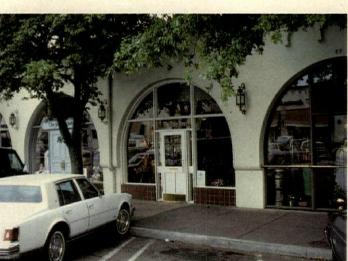




New landscaping (above) helps bring a more contemporary flavor to this neighborhood center. So did clearing away awnings and the like that "hid" original architecture.



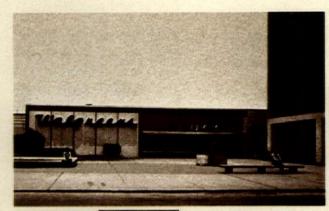




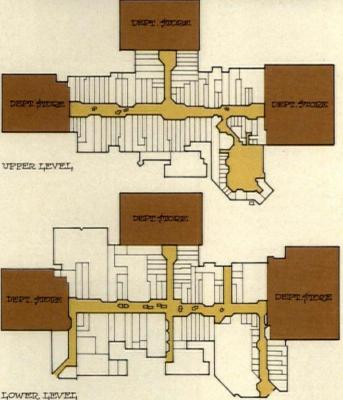
Raising the roof instead of building wings

UPDATE 2: Economics dictated vertical rather than horizontal expansion for Sharpstown Mall in Houston. This meant adding a steel-framed second level to the existing concrete-framed structure. But there were a host of technical problems: how to create support for the second level: how to remove the existing roof; and how to erect the new steel.

Despite such problems the opportu-







nity to grow was just too good to pass up. For one thing, the center had been 100 per cent occupied since opening in 1961, indicating it was in a prime location. For another, retailers were constantly requesting space. Finally, customers were beginning to demand a greater variety of shops as well as eating facilities.

In addition to the technical problems there was, of course, the problem of finding a way to keep the center operating while work was under way. So it was decided to build from the outside in-erect a new second-story roof before removing the existing one (see photos below).

To do this, anchor bolts were attached to existing columns (at the roof level) for the second-level steel columns. To make sure there would be no leaks, special pitch pans were designed to be flashed into place at each column. A large rubber-tire crane was used to erect 1,000 tons of steel. Its 400-ft. boom hoisted the steelwork, much of which was pre-fabbed on the mall's parking lot.

With the new roof in place, secondlevel walls were enclosed with marblecrete, allowing the old roof to be removed. Most of that work, as well as other heavy interior construction, took place at night when the center was closed. TO NEXT PAGE

New over old: Steel for new roof is placed by cranes (right). Precast sections of the old roof are visible in the photo at far right. Building the new roof before removing the old enabled this center to operate full tilt during the update, for there was no time when existing shops or shoppers were unsheltered.









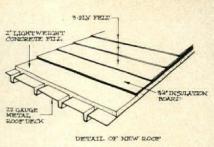
Business as usual. Daytime shopping continued while Sharpstown Mall was updated at night. Note workers removing roof by hand because old structure couldn't handle heavy machinery.





Progress reportsnewsletters, signs and painted barricadeskept shoppers and tenants au courant on status of update.

After-hours had also been the time when the very first step in the expansion program had taken place: reinforcement of 42 existing footings within the mall stores and common area so they could accept the additional load of a new level. That posed a special problem: It meant pulling up carpet and other finish flooring, jack-hammering concrete slabs, pouring additional concrete and placing additional re-





inforcing around existing footings-usually three-to-four day's work for each footing. So each morning, floors had to be made usable for tenants and shoppers.

Demolishing the old roof over the main central area took little time. It had been sculptured in precast folded plates, which were cut into five 88,000-lb. sections for removal by special steel beam jigs that eased the sections down to a forklift.

However, removing an old builtup roof over the remaining space took three months because that work had to be done by hand: The old structure just couldn't support heavy demolition equipment (see photo above). What had to be removed was two complete asphalt and gravel roofs and three inches of lightweight concrete so that 1,400 double tees (they supported the old roof) could be exposed and





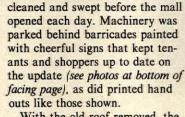
integrated with a new thin slabthus forming the floor for the second level.

Obviously, all of this work generated a lot of dust and debris. So screens were used to protect the stores; and all work areas were



Multi-level atrium

(above and right) is served by escalators, elevators and decorative stairways. It sports new storefronts, a prefinished metal ceiling and a bright, contemporary lighting system. Building a second level added 89 stores.



With the old roof removed, the highlight of the renovation was revealed—a spacious 50-ft.-high atrium (photos above). And the finishing touches were installed: a new prefinished metal ceiling, new storefronts, three escalators, glass elevators and decorative stairways.

There are also new little extras: indoor and outdoor directional signage, new lighted directories, landscaping, coordinated seating, attractive telephone kiosks and planters (see below, left and right).

All told, 89 new shops and a third anchor tenant were added, requiring improved parking facilities. So existing space was modernized and a new three-level deck structure was built.

Expanding up instead of out makes economic sense when land costs are exorbitant, says Sharpstown's owner. And from a practical standpoint it may be smarter, too: For there's a better chance the new level will be used since new wings "often turn into dead ends."

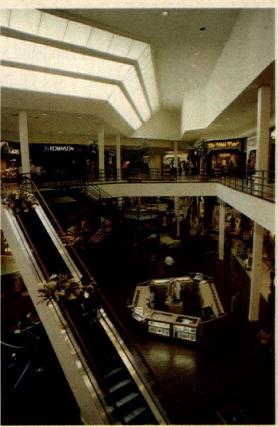






New amenities, including easy-to-read directories (right), are the highstyle kind an up-to-date, today's generation breed of shopper expects. So are exposed telephone kiosks, attractive planters and seating, etc. In fact, even road signs (above) directing shoppers out of the center are new.







contemporary design to expand markets

UPDATE 3: You might call this a mix-and-match update. For in revitalizing the 22year-old Parmatown Mall in Parma, Introducing Ohio, the owners had to develop a new image—that of a contemporary complex, which would appeal to quality-conscious buyers whose business was being lost to newer shopping centers in the area.

> At the same time the owners had to be sure that changing the mall's image would also be of benefit for the



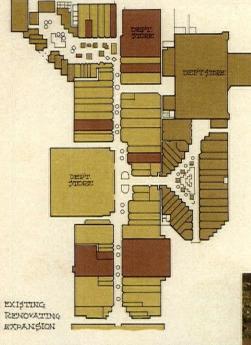


full complement of existing tenantsprimarily middle-to-low-end specialty and service establishments. (There were also two fashion-oriented department-store anchors.)

Some of the changes-most of which would work just as well in smaller centers-include:

• Building a food court, known as Picnic Place, in a former supermarket. It consists of a 21,000-sq.-ft. tree-rimmed eating plaza (photo bottom left, facing page) surrounded by over 20 fast-food restaurants and specialty food shops.

 Developing a projecting storefront design for the 60 new shops that have increased gross leasable space by 115,000 sq. ft. These storefronts poke into the mall area (photos top, facing page), forcing retailers to develop eye-











Pop-out store-front design—created for new section of the mall—has been duplicated by most older tenants. This type of storefront lends itself to more contemporary displays than old-time, broad-glassed storefronts, some of which show in photos at bottom of facing page.

catching displays to entice "with-it" shoppers through their doors.

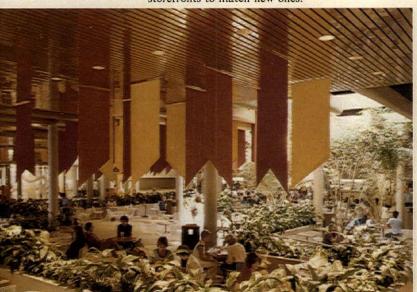
•Modernizing existing space with new ceiling treatments. Using a baffle design gives the older sections a "today" look (see photos, bottom of facing page).

•Introducing enhanced amenities. There are, for example, new lighting schemes, fountains, skylights and seating like that shown in the photo at bottom right.

What's the payoff on a job like this? Overall non-anchor average sales for the last full year's operations increased to \$165 per-sq.-ft. from \$131, with sales for new tenants near \$200. The result: net income before debt service was \$3,889,200.

There are other payoffs: The two existing anchors remodeled extensively; a third department store joined the center; and over 90% of the existing small-store tenants remodeled their storefronts to match new ones.





Picnic Place (above), the mall's added food court, is typical of the eating places provided in most new centers. Fountains, landscaping and attractive seating, similar to what's seen in the photo at right, are also standard amenities used by most new centers to attract shoppers.



Joining forces below might indicate. under a space-frame atrium

UPDATE 4: Linking four unconnected buildings into an integrated complex involves a lot more work than the photos directly

For in order to create the contemporary skylit plaza that is the new focal point of Lennox Square Mall in Atlanta (bottom photo, facing page) large portions of existing roof and floor slabs had to be cut away (see sections below). The cutting was done in half-bay sec-



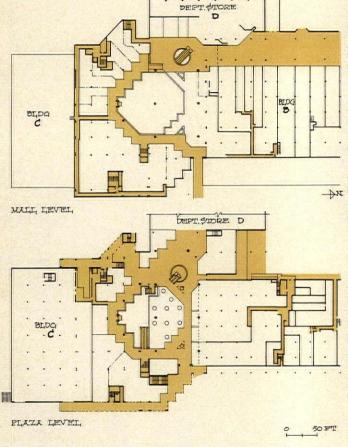


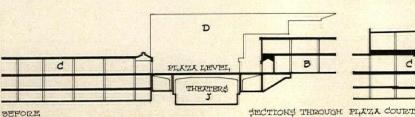
tions, with outer corner columns removed from each bay producing the zig-zag configuration seen in the middle photo, facing page. Rather than "clutter" the plaza with another group of columns to pick up the unsupported slab corners, steel beams were cantilevered out from the existing structure. Where some existing concrete beams had to be strengthened to carry additional load, a concrete strengthening method called "shot-creteing" was employed.

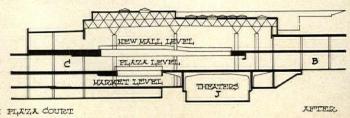
Expanding the upper mall level across and around building C (see sections below) required building an entirely new floor and roof on top of the existing building. Several criteria had to be considered:

- The system had to accommodate the 27-ft. bay module in building C.
- It had to span long distances with relatively few support columns, specifically a 72-ft. clear span across the width of building J (see section below).
- It had to be flexible enough to accommodate many existing expansion joints in the four buildings.
- It had to accommodate many penetrations needed for skylights, clerestories, etc.
- It had to go up quickly and not require the use of heavy equipment on the existing plaza slab. TO NEXT PAGE

Before and after: Sections below show how existing buildings in center have been linked by space-frame atrium.











The system chosen was a spaceframe module of 9 ft. that would work with the 27-ft. bay of building C. The spaceframe structure, supported by only eight columns (photos above and below right) is actually an independent building crossing over expansion joints of the buildings below. Critical placement of the new columns was solved by erect-



Space-age space frame

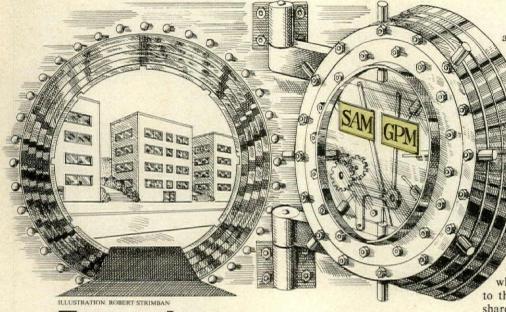
section is lowered into place by 150-ton crane (photo, top right). The frame's depth allows for both "long-spanning" over the existing theater (see section, facing page) and cantilevering long distances to adjoin or overlap existing buildings so new foundations and supports didn't have to be placed too close to old ones. The photo directly above shows the new enclosed plaza under construction, after parts of existing floor slabs had been cut away.



ing them as closely as possible to the existing column grid, producing a new grid equal to and slightly apart from the old 27-ft. module. This called for a redesign of existing foundations to support additional loading. Some separation between old and new columns was required because there is a possibility of independent movement of the roof caused by wind loading.

Total space-frame structure

(part is shown above) consists of 3,500 individual tubes of varying diameters that are joined by over 900 hub connectors. Lowest level of the atrium, used as a food court, has seating for 250 people and includes fast food restaurants, gourmet shops and a produce market.



Two plans unlock mortgage money for new rentals

Persistently high interest rates have had both a positive and negative effect on the rental market. On the one hand, high rates precipitated the slump in single-family starts that has led to more competition for the existing rental stock and, consequently, higher rents. The result is record low vacancy rates and high demand for rental units, particularly in areas with a pent-up demand for for-sale housing.

But those same high rates have made it difficult to finance the new projects that would allow developers to take advantage of the demand for rentals. Escalating land, construction and maintenance costs were already putting a squeeze on cash flow generated by rents. Add to that the prohibitive interest expense and most projects simply couldn't cut it in the initial years after completion.

The two financing plans described below get around the obstacle of high interest rates by deferring some of the loan costs. They allow a project to get moving and build up cash flow to the point where the project can pay for mortgage money at market rates. Nei-

ther plan actually reduces financing cost, but they do make it affordable.

The first plan, offered by L&N Housing Corp., Dallas, Texas, is based on the shared appreciation mortgage (SAM) now familiar to the residential market. The other, offered by San Diego Federal Savings & Loan, is a take-off on the most popular graduated payment mortgage (GPM) on the market. -WALTER L. UPDEGRAVE

A SAM for apartments

"It's essentially a joint venture," Ronn Lytle says of L&N Housing Corp.'s program that will make \$55 million of mortgage money available for new apartment construction, primarily in the Sunbelt. Lytle is senior vice president of Lomas & Nettleton Financial Corp., the nation's largest mortgage banker and parent of L&N Housing. Already, L&N Housing has committed funds for projects in Dallas and Houston. Later, says Lytle, the SAMstyle mortgages will be used to finance apartment projects in such cities as Phoenix, Denver, Atlanta, Tampa and, perhaps, Seattle. In all, 10 to 12 developments will receive between \$4 and \$5 million each under the program.

The L&N SAM is a bit more complicated than the one homebuyers use, but the principle is the same. The company offers apartment developers a first mortgage, usually with a fiveto-seven-year term, in return for a piece of the appreciation upon later sale of the project. L&N usually gets 50% of the appreciation. In addition, L&N buys the land for the project and leases it back to the developer. L&N does not take construction risk, but acts purely as a take-out vehicle for the construction lender. Because L&N expects to reap the benefits of appreciation on the project, the mortgage is made at a below-market rate. Lytle says the rate is calculated

> so that interest payments capture whatever cash flow is left after non-interest expenses are paid. So far, this payment plus proceeds from the land lease has worked out to a rate in the 121/2% to 131/2% range dur-

ing the initial term of the

mortgage. On top of this rate and the share in the sale of the property, L&N takes a 20% to 25% cut of all rent increases. Lytle says L&N decided to embark on the program when apartment rents had escalated to the point where, combined with a share of profit upon sale of the project, they could generate a competitive return. The tightness in the rental market and low level of housing starts the past couple of years also convinced L&N that the time was right for rent-

The way Lytle figures it, with apartments there's the option of keeping the units as rentals or converting them to condominiums. By exercising an option in the loan agreement giving it an interest in the project, L&N could choose to join the developer in the conversion. Or, L&N and the developer could simply sell the project to a converter.

The option of going condo is an important factor in picking projects. "We're looking for garden apartments that are suitable for conversion," says Lytle. "They're not luxury units, but they will have designer features." Fireplaces, vaulted ceilings and recreation facilities are typically part of that amenity package. The projects will be located close to employment centers and run, on the average, between 140 and 150 units.

By the end of August, L&N had given take-out commitments for three projects for a total of \$13.6 million. Summer Brook, a 192-unit project located in Arlington, Texas, just outside of Dallas, is under construction and should be completed by next summer. L&N will make a \$5.2-million mortgage there. Construction has yet to begin on Arbor on Forest Lane, a 154-unit project in Dallas, for which L&N will provide a \$4 million mortgage. In Sugarland, Texas, southwest of Houston, L&N will provide \$4.4 million in mortgage funds for a 140unit project, Rivercrest Apartments.

The rates on these mortgages are well below market. At Arbor on Forest Lane, the Dallas project, the mortgage will carry a 131/2% rate, while the other two will have rates of 121/2% plus 2% per year which is deferred and paid when the project is sold. Besides the interest return, L&N gets 40% of the profit when the Dallas project is sold, and 50% of the appreciation in the remaining two.

Also interesting is the way L&N Housing raised the \$55 million for the mortgages: A public stock offering of 2,200,000 shares at \$25 per share was made in December, 1980. Although L&N Housing is a corporation, it will be taxed as a real estate investment trust (REIT) so long as it distributes at least 95% of its income to shareholders. This will avoid the double taxation on the corporation's earnings. Income will flow through L&N Housing to the investors who will pay taxes at their respective rates, much the same as they would in limited partnerships. Lytle preferred the corporate route to the limited partnership because of the greater liquidity stock ownership affords investors and because part of L&N's goal was to attract "institutional investors," i.e., pension funds. As it turns out pension funds weren't heavy investors in the first offering, although Lytle still sees potential with the funds for later offerings.

L&N offers investors a competitive return in addition to the liquidity. "We're shooting for a 20% overall return," Lytle claims, noting that some of this will be current cash return from mortgage payments, some capital appreciation when the projects are sold. Developers get a bonus too. Since the deals are structured to attract taxexempt entities like pension funds that aren't in need of tax shelter benefits, these benefits-depreciation, interest expense, amortization of start-up costs-are passed on to the developer.

Lytle sees the possibility of raising more money through additional stock offerings, especially if rental shortages and low single-family starts persist.

A GPM for rental projects

In May 1980, the loan officers of San Diego Federal Savings & Loan had a brainstorming session to look for new ways to stimulate apartment construction. They knew what was holding activity down: the high cost of landdue partially to the fact that condo developers could outbid apartment developers for multifamily-zoned parcels-and the high cost of money-so high that rental income couldn't service mortgage debt. The officers knew there was little they could do about land prices, but they figured some creative financing might alleviate the squeeze high interest rates put on cash flow. Specifically, they began looking for a way to lower debt service requirements in the early years of a project.

"We knew the graduated payment mortgage did that for consumers,' says Stan Sowers, a commercial lending officer and assistant vice president at San Diego Federal. "So we figured why couldn't it work for an apartment project?"

The result of the brainstorming session was a graduated payment mortgage styled after FHA's popular GPM and tailored to apartment projects. As FHA does with its GPM, San Diego Federal structures payments on its loan so they're lower in the first five years than they'd be with a conventionally amortizing mortgage. After the first year, mortgage payments increase annually 71/2% until the sixth year when the payment becomes constant. By that time the payment has risen enough to amortize the loan over the remaining 25 years on the 30-year amortization period. Just as lenders depend on consumers' incomes to rise so they can pay the increasing payments on the loan, San Diego expects rents on the apartment projects to escalate enough to cover the increasing debt service expense.

By so structuring the payment schedule on the loan, says Sowers, initial debt service is about 30% less than on a conventional, fixed-rate basis. This means a given amount of cash flow available for mortgage payments can support larger loans with the GPM plan than with a straightamortizing mortgage. In short, an apartment project can qualify for a larger construction loan and a larger end loan with the GPM. The difference can be substantial: a project being able to get financing for 65% of value versus 50% of value with the same amount of dollars to service debt.

"For the developer who has the money to put into a project but needs a little extra to get the project going," notes Sowers, "this could mean the difference between go and no-go." Such a case is where the project will break even on a cash-flow basis with 65% financing. "If a developer is depending on 75% financing, then this program won't work."

Here's an example of how the San Diego Federal GPM works with a hypothetical project that has an appraised value of \$4,380,000 and \$311,844 free to service debt in the first year of operation:

Breaking down the \$311,844 into twelve increments, it's clear the project can afford monthly mortgage payments of \$25,987. Assuming interest rates are 14% (the example is valid at higher rates too), this \$25,987 payment will support a fixed-rate, 30-year loan of \$2,190,000. This works out to a 50% loan-to-value ratio for the project, meaning the developer has to come up with half the appraised value in equity to make the project go.

By switching to a 30-year, 14% GPM, however, the same \$25,987 will support a \$2,817,000 loan. This gives the developer a mortgage that's \$627,000 higher than with a conventional loan and raises the loan-to-value ratio to 64.3%. In turn, this reduces the amount of equity the developer must come up with. Note, however, that the mortgage payment rises 71/2% annually in the GPM program. In the second through sixth years of the loan, the monthly payments rise from \$27,936 to a cap of \$37,308, where the payment remains until the loan is paid off or renegotiated. The lenders feel it's a safe bet rent increases will provide the extra cash flow needed to meet the

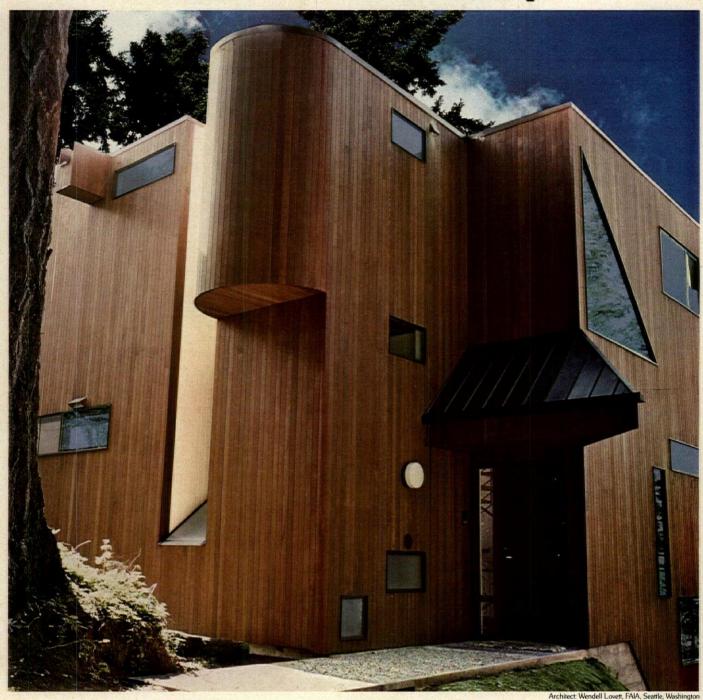
rising mortgage payment.

Like FHA's GPM, the San Diego loan will result in negative amortization. In the above example, the loan balance at the end of the fifth year would be \$3,099,311. This doesn't particularly concern San Diego Federal since the loan-to-value ratio will be relatively low and rents should have risen enough to service the higher debt. Although the GPM is amortized over 30 years, the actual term is five years. At the end of that term, the entire balance is technically due, but in most cases, says Sowers, the rate will be renegotiated and payment schedule set to amortize the loan within the original 30-year amortization period.

Other than the fact that the apartment projects should "be welldesigned, well-built and have a location that makes sense," San Diego Federal has no special criteria for eligibility for the GPM program. Although the possibility of future conversion might be an important factor for the developer when planning the project. Sowers says this isn't much of a consideration for him.

To date, Sowers estimates San Dieo Federal has used the GPM about 10 times, with particular success with small projects in the inner city. But, he notes, the GPM program for apartment projects is still considered a pilot program, an experiment in aiding the flagging apartment market.

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THE EVOLUTION OF A NEWAMERICAN LOOK

Some are calling it an industry "revolution." For there's no debate about the impact that European cabinetry manufacturers have had upon the look and construction of American kitchen cabinetry. And there's also no question about market reaction: The cabinetry sells.

The first European (primarily German) kitchen cabinetry manufacturers entered the American market about seven years ago, introducing innovative cabinetry design—a contemporary styling, which is seen below and on the facing page. Several characteristic features mark these European styles: 1) The doors are flush against a frameless cabinet. This is made possible by concealed door hinges, a European hardware innovation only recently made available in this country. 2) The exterior surfaces are typically a plastic laminate veneer, rather than wood. 3) Hardware is minimal; there are either thin wire pulls (see below left), extruded aluminum strips (top left, facing page)—or sometimes none.

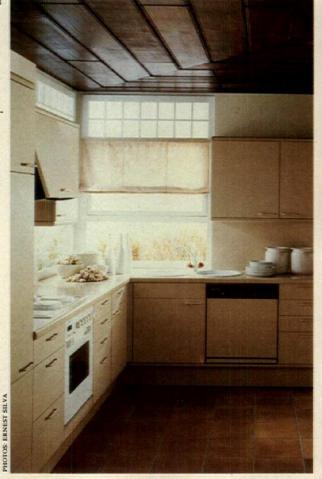
Exterior detailing, however, is but one side of the coin. Dieter Rosenberger, general sales manager at Poggenpohl USA stresses that the term "European look" is misleading. "One should say 'European design,' since that also refers to the interior fittings, the gadgets and options available"—the storage systems and convenience features such as lazy susans, wire-baskets and pull-out worktables—that maximize and compartmentalize storage space.

Despite high price tags on these products, which tend to limit their use to high-end housing, interest has grown steadily. A clean look, superior engineering and storage advantages have caught the eye of the American public.

"Design and maximum convenience are the two things that the American consumer saw in the European products," commented Ken Peterson, president of the American Institute of Kitchen Dealers (AIKD) "and what they began to demand from us."

—JENNIFER A. WAGNER

Flush-door construction is a hallmark of European cabinetry. Shown here is a popular line from a German company that entered the U.S. market seven years ago. Industry spokesmen note that European cabinetry, like European cars, is designed for economy of resources: space, building materials and energy-including human energy. Now that Americans are experiencing those same shortages of space, energy and time, the simple but well-engineered design has become increasingly appealing.





Solid wood cabinetry (above) also from a German manufacturer, is not as common as that constructed with laminate or laminate/wood—but it is by no means rare in European designs. This is a slightly more traditional style than that shown at left.

PRODUCT INFORMATION INDEX







Bold aluminum strip hardware is a European innovation. Its main advantage: It never gets dirty. Notice the customized storage features—the above-sink shelf and curved shelves on the left.

German cooktop (right) is made by a company that has distributed here since March of last year. The impact of foreign appliance manufacturers is already being felt here. At least one American manufacturer is coming out with its own "European-style" appliance line.



Double-basin sink (top of page) is one of the kitchen fixtures offered by a German ceramics manufacturer. As with the cabinetry, the sink is designed for maximum convenience, with a built-in cutting board and central waste compartment for scraps or peelings.

Curved-corner storage (above) adds an elegant touch to this kitchen. Many European units such as these resemble furniture more than kitchen cabinetry. It is no coincidence. When a European moves to another home, he takes his kitchen cabinetry with him. In some countries it is actually called "kitchen furniture."

THE EUROPEAN LOOK **BECOMES AMERICANIZED**

Domestic manufacturers with their ears to the ground are well aware of consumer interest in the European "look." And with the auto industry experience fresh in mind-with imports outselling domestic products - American cabinetry companies are now producing their own less expensive versions of this increasingly popular design.

"To the credit of American manufacturers," AIKD president Ken Peterson says, "even the most traditional firms have responded in a positive way, recognizing that they were lagging behind in cabinetry design. The Europeans awakened the domestic manufacturers to improving styles, adding the convenience features, even upgrading their stock lines."

That's not to say that European designs were picked up lock, stock and barrel. Although 50% of National Kitchen Cabinet Assn. (NKCA) members now have a so-called European line, most have modified their first-generation products to accommodate American taste. Many consumers find the pure European look too stark, notes Jerry Leibson of Prestige Cabinets, Freeport, N.Y. "So we added a touch of wood and a rounded corner to our line-just to give a softer look."

Other manufacturers have also toned down their contemporary lines by modifying the bold aluminum-strip hardware. "And actually," asserts Ed Duncan, a market planner at Wilsonart, "it's no longer the 'European' look. It has become the 'contemporary American look.' '

Nevertheless, domestic manufacturers are concentrating on interior fittings more than before, and many are beginning to offer elaborate storage systems as standard. However, they are also eliminating some of the "gadgetry." Peterson points out that while Americans are "tantalized" by the systems, they still want and need large storage spaces. Bob Baker, director of administration, AIKD, concurs: The European cabinetry is styled for those who shop every day. We need larger volume, more flexibility.'



Linen-cloth veneer and oak hardware

add the warmth that many Americans prefer to the look of plain laminate. This cabinetry is part of the manufacturer's "contemporary line," added "in response to a continuing demand for more European styling."





Laminate/wood combination (left) is the most popular treatment for the contemporary-look. Shown is one of four contemporary lines offered by this once traditional-only company. Note substitution of woodstrip hardware for aluminum as seen on page 67.

Pull-out "hostess cart" (below), reminiscent of European pull-out work-tables, is the kind of feature that is drawing attention from consumers. This is one of the manufacturers three contemporary lines.

European "ancestry" is apparent above, but a collection of five lines, of which this is one, is being billed as the "American Contemporary Collection." Hidden behind closed doors is a wide range of storage accessories inspired by European systems.



'DESIGN' AND 'CONVENIENCE' MERCHANDISING **HOT-WORDS**

In model homes, cabinets like those shown here have been received favorably in most markets. As AIKD president Ken Peterson has predicted, the low-maintenance and cleanability aspects of the exterior are attractive to many homeowners, particularly working women. The storage features are still new enough to the market that prospects in all areas are impressed with them (also see pp. 100-101).

Where is the look selling most? Primarily in Florida, California and other sunbelt states; also in urban areas where the populace tends to be more sophisticated. With this style growing more affordable, however, it is moving quickly out of these geographical "hot spots."

Popularity is spreading from demographic hot spots as well. Although it remains most popular with the younger set and with high-end buyers of any age group, more conservative buyers are also accepting the look. The reason: It is

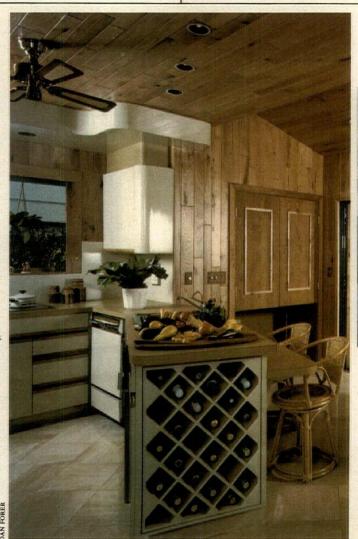
easy to decorate around the contemporary styling. With the more traditional markets, the cabinetry doesn't clash with antiques or traditional decorative elements. "Even when traditional homes are remodeled, modern features are being worked in and merchandised," says Peterson. "The theme of a kitchen may be the old-fashioned look, but it is not the cabinetry that dictates that theme. The mood of the room is carried by the contributing materials - with the cabinetry as a background."

Architect Steven Gravett of Holland Builders in Ft. Lauderdale, Fla., cites one of his company's Spanish-style projects that features contemporary cabinetry in the kitchen. "It doesn't appear at all out of place." And Tom Dunlap at the Evans Group, an architectural firm in Orlando, Fla., says "the good thing about European styling is that it can go with anything.

Versatility is the key word when it comes to describing the contemporary line of customized cabinetry like that shown on this page. At far right is an "ultra-modern" kitchen with severe black cabinetry, setting a formal tone. There is no exposed hardware and colors are limited to a black/grey/white scheme. Even tile grouting is black.

A more traditional-and informal-look is achieved at near right. Here the cabinetry does not set the tone, but rather blends in. As AIKD president Ken Peterson points out, the "contributing elements," such as paneling, ceiling fan and eating counter dictate the "feel" of the kitchen.

The kitchen at far right was designed by New York City designer Virginia Frankel; the one at near right is by architect Barry Sugerman, North Miami,









NNETTE M. TECCE

Flush-door cabinetry (above) has a distinctly more American look than the units that are shown on pages 66-67, thanks to the predominance of wood and the simple, white knobs. The cabinetry is constructed of a honey-tone ash. Designer: Kitchens by Lenore, Birmingham, Mich.

Townhouse kitchen at left is enjoying rave reviews from prospects, according to Bill Nichols in the sales office of Ocean Reef in Ocean City, N.J. "People fall over when they see the kitchen," he reports. Architect: Robert Johnson, Margate, N.J.



DAN FORER



Clean-line cabinetry at left is constructed of textured steel, rather than of wood or with a laminate veneer. The manufacturer, St. Charles Mfg. Co., was one of the far-seeing domestic companies that was already producing the so-called contemporary look—and had been for some time—when the foreign manufacturers arrived. Designer: M.A. Peterson, Hartford, Conn.

White laminate unit (above) complements the light, airy feel of a small bathroom. Many of the storage features offered for the kitchen, such as wire racks, pull-out and adjustable drawers, are also made available with bathroom cabinetry. The owner of this home, a designer herself, feels that the contemporary look is here to stay. Architect: Barry Sugerman.

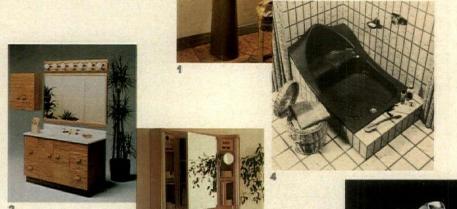
FOREIGN BATH FIXTURES CLICK WITH BUYERS WHO SEEK SOMETHING SPECIAL

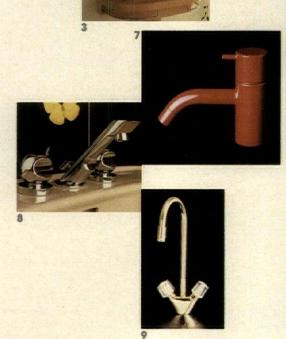
Accompanying the growing popularity of contemporary cabinetry is an interest in faucets and fixtures from abroad. The major contribution of European design in the bathroom thus far is the "coordinated look" - which, according to James Mitchell, group product manager at American-

Standard, was not available heretofore. "People used to pick and choose fixtures. But today they want a 'suite of fixtures', a cohesiveness of fashion." Industry spokesmen feel that some

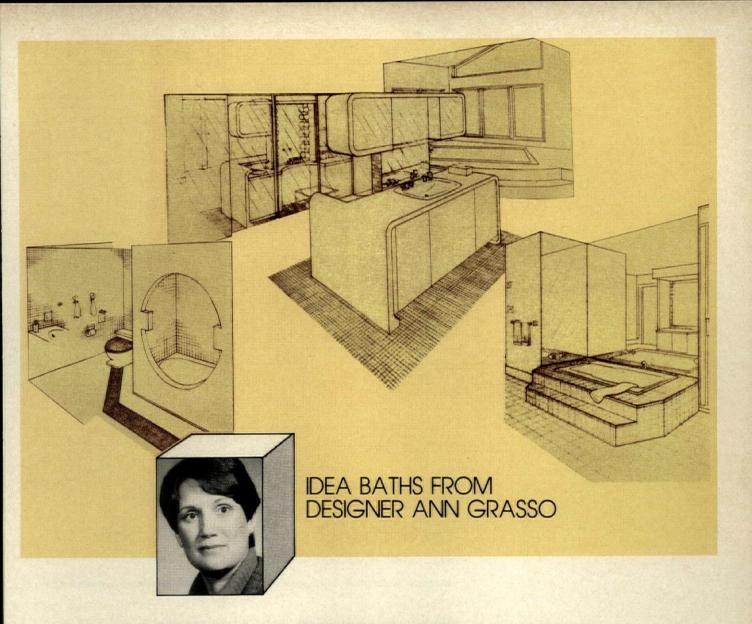
of the foreign faucet designs are a "bit much" for more conservative Americans. Nevertheless, several American manufacturers have picked up on the high-spout German and sculptured Italian designs, and are producing an elegant "European-style" line for the bathroom, where a luxury look is a major selling point. As these and other products, such as the Italian-design shower seat shown below and German appliances on page 66 gain exposure, it will benefit builders, industry observers suggest, to watch market interest in them.

FOR DETAILS, SEE PRODUCT INFORMATION INDEX





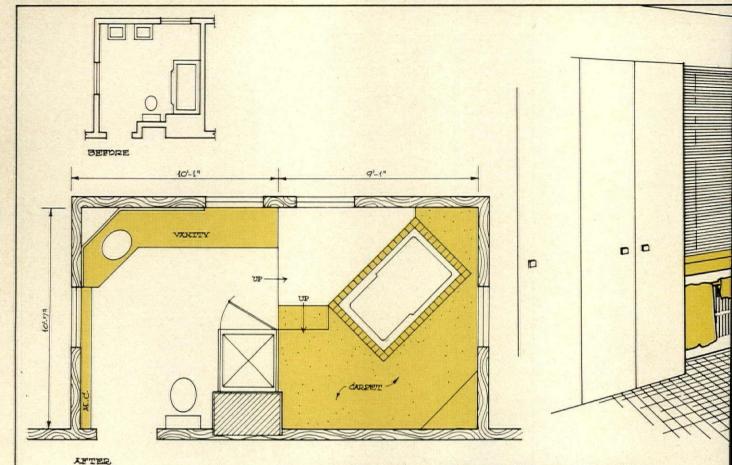
1. "Chablis" pedestal lavatory from Kohler is "a melding of American design and European styling," says manufacturer. 2. Bath furniture with "borrowed styling" provides the storage Americans want. Perma-Bilt Ind., Torrance, Calif. 3. Italian-design basin/cabinet houses everything from toothpaste to AM/FM radio. Available from Hastings Tile & Il Bagno, Lake Success, N.Y. 4. One-piece shower floor and seat is manufactured by Villeroy & Boch, USA. Pine Brook, N.J. 5. Centerset with angled knobs is a European prototype for American manufacturers. Grohe America, Elk Grove Village, Ill. 6. Waterfall™ faucet has 8-in.high swing spout, and is based on standard European design. Delta Faucet, Indianapolis. 7. Contemporary deck-mount faucet from Europe complements the new look in cabinetry. Washerless brass fitting has an epoxy finish. Architectural Complements, Boston. 8. Italian faucet has a sculptured look that has appeal for the luxury bath. Supplied by Europa Bath Boutique, Chicago. 9. "Europa Water-guard" faucet from Kohler in Kohler, Wisc.



REMODELING WITH A FLAIR FOR THE FUNCTIONAL

A hard-working bath can be easy on the eyes—as the drawings above indicate. And by hard-working, of course, we mean baths that get a lot of use every day—often by more than one person at a time. These idea-filled baths—and all that you'll see on the next ten pages—are re-dos by Ann Grasso of New Design Inc., Mattapoisett, Mass.* They're just a sample of the two-dozen or so bath remodelings she tackles each year—a specialty for her since she joined the firm three-and-a-half years ago. The baths range from low-budget remodelings for do-it-yourselfers to total re-works that ran into the thousands of dollars. But, as you'll see as you turn the pages, all of them show how many opportunities there are to combine fun with function in a reborn bath.

^{*} New Design Inc., founded ten years ago by Wayne Walega CKD, also handles many kitchen remodelings—and last year won six of 19 national design awards of the American Institute of Kitchen Dealers.



Level changes can enliven a bath for the budget-conscious

Est. total cost: \$12,000. This includes: design

work; Kohler toilet, sink and tub, with Grohe temperature valves in shower and tub; custom-built wall-hung vanity of Nevamar plastic laminate; American Olean tile; Lightolier hanging lights; and shower stall of tempered glass: Levelor blinds.

Though the master bath in their 1920s house was in good repair, the owners decided they couldn't face the tile and fixtures any longer - the color scheme was pea green and lilac. So they called in Ann Grasso, who had never before seen two pedestal sinks side by side. "But worse," she says, "was the toilet right by the tub, so anyone taking a bath looked straight into the toilet bowl" (see plan top of page).

Because the husband was very worried about the cost of remodeling, Grasso prepared three possible schemes-the maximum she'll present to any client. One worked within the existing room dimensions. The second called for one wall of the bath to be pushed into the adjoining bedroom alcove. And the third annexed the bedroom alcove completely (see after plan above). This re-do cost more than the other two but, Grasso says, "the husband looked at the plans, then told his wife I'd given them only one that showed great imagination.'

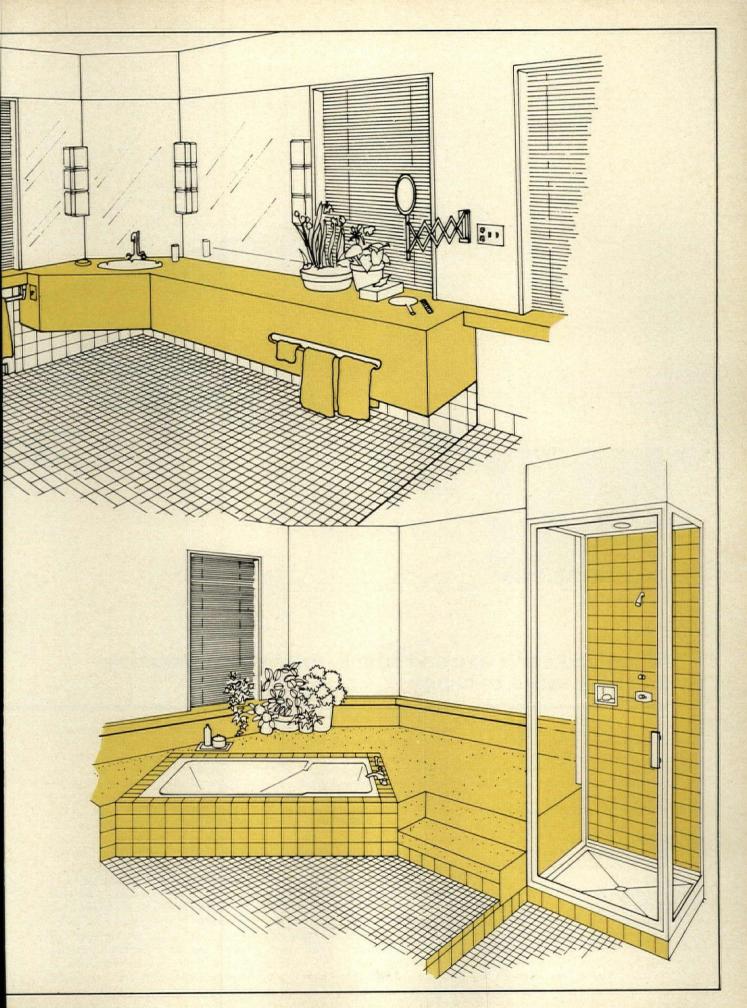
In extending the bath into the former alcove space, Grasso didn't try to level out the floor between the two rooms. Instead, she raised the new tile floor in the former alcove-now the tub area-then emphasized the multilevel idea by building a carpeted platform with step-up around the tub (see drawing facing page). Her original scheme also specified a bank of mirrored storage units behind the tub, but these were scotched to save money.

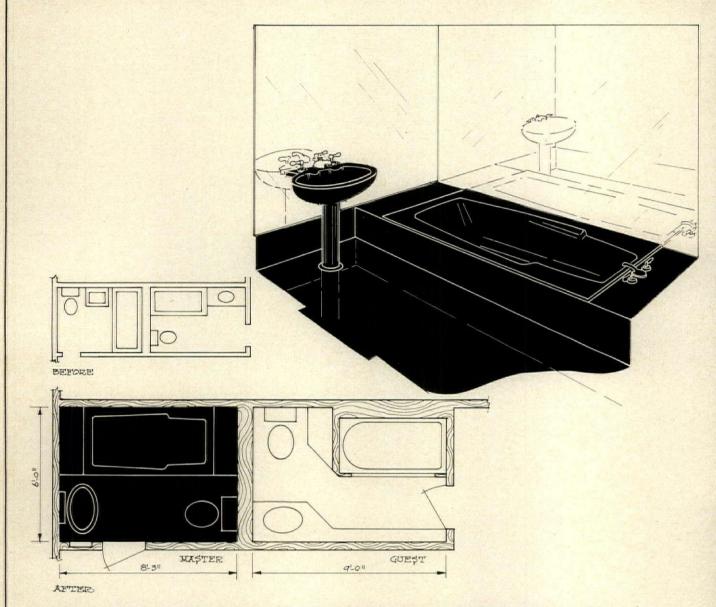
Because of budget considerations, the fixtures are white and the long wall-hung vanity has only one basin. But splashes of butter yellow-the color of the vanity, carpets, cabinets, etc. - and the interplay of angles in the bath make it visually exciting.

Also of interest are the towel holders: One is a cut-out in the vanity (drawing top of facing page) and the other is a rod in front of the old radiator, insuring dry, warm towels.

A shower with three glass sides helps visually expand the bath and unite its two levels although, Grasso admits, "it might be a little harder to keep clean."

Grasso dislikes medicine cabinets over sinks and finds floor-to-ceiling units like the ones next to the bathroom door "one way to win the war without using a great deal of space."





When you can't expand space, let elegant materials impart a sense of luxury

The third floor flat in an old Boston brownstone already had two baths, one 6'×9' and one 6'×8' and, says Grasso, "in both cases, you opened the door and looked directly at the toilet." (See before plan above.)

When the building was converted to a condominium, the apartment's new owner wanted all-new luxurious baths-but in the same spaces.

So for the master bath (at left in the plan; drawing this page), Grasso created a dramatic environment with a black marble floor, black travertine marble around a black whirlpool tub and a custom pedestal sink in travertine and black onyx. Instead of trying to minimize the tub, she let it take one side of the room. Grasso then mirrored two walls "and the whole room seemed visually to double in size."

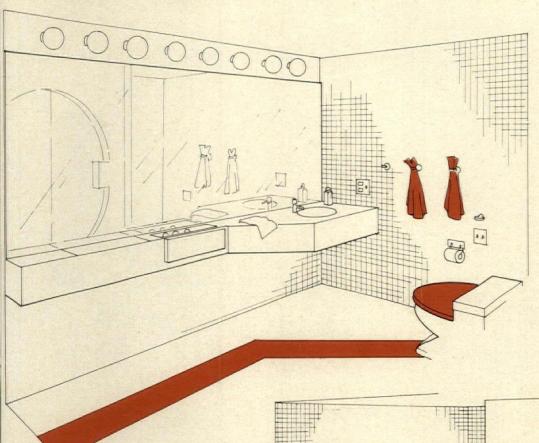
There's a touch of softening beige in the wallpaper, but most accents glitter in brass and chrome and there's even a chandelier of crystal discs over the tub-"not what I'd normally recommend," she says, "but it looks right here."

Since the old building has high ceilings, Grasso was able to raise the floors in both baths to accommodate new plumbing. This means that there's now a step-up into the rooms, so lights were installed at the edge of the platform. They go on automatically when the doors are opened to prevent guests from tripping.

In the guest bath (at right in plan;

drawings facing page), custom touches produced a more whimsical air. A 14in.-high copper tub was enclosed by tile on three sides, then given a porthole-style entry because the owner is a boat buff. "The porthole actually is oval," notes Grasso, "but the two side pieces, which act as safety handholds, visually break the oval so it looks round." The enclosure serves to hide the toilet corner, too.

Other space-saving ideas include a stepped-back vanity shelf-"just wide enough for women guests to put down a purse"-and open shelves for towels on one end of the tub enclosure (see plans). And "just because everything else is in white," a red stripe leads to the red-seated toilet and one red dot



MASTER BATH Est. cost: \$30,000.

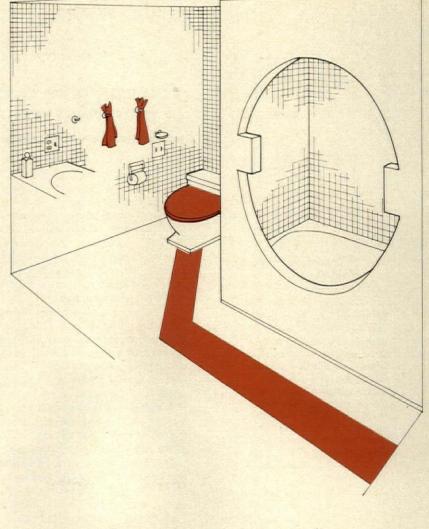
This includes: design services; all construction and custom work; Kohler whirlpool tub and toilet; Paul Associates brass faucets with black acrylic handles; Lightolier chandelier; Bob Mitchell wallpaper purchased by owner and installed separately.

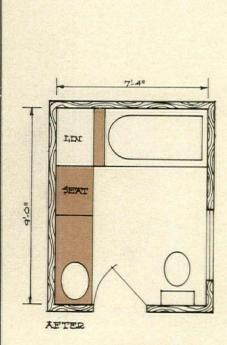
GUEST BATH Est. cost: \$15,000.

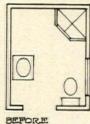
This includes: design services; all construction and custom work; Corian vanity top; Kohler toilet; Vola faucets: American Olean tile; Mayfair China sink with custompainted dot.

was painted inside the china sink.

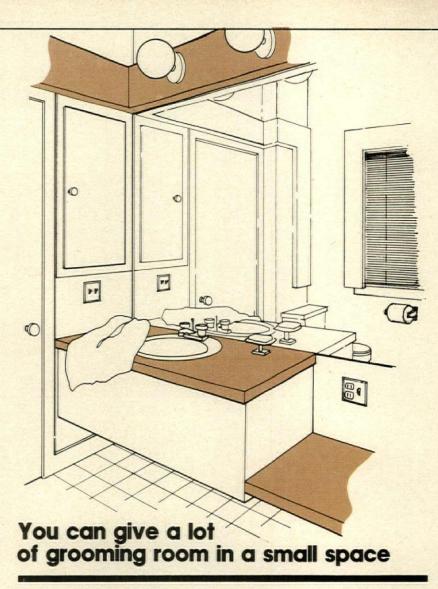
Obviously, this client was not the average bathroom remodeling prospect. "Most people have no idea how expensive bathrooms are and they're shocked by basic prices," Grasso thinks. "When clients specify a strict budget, I might show one alternate plan that goes a little above their maximum, but I'd never suggest custom marble work to someone with an \$8,000 limit." But she has noticed more people asking for things beyond the property value of their house or neighborhood. "I think it's both treating themselves to a good bath or kitchen and also a feeling that remodeling these spaces may bring back money if they sell the house."







Estimated total cost: \$3,000. This includes \$800 worth of design work, custom construction (the vanity) and Greeff wallpaper from New Design Inc. The rest was purchased separately by the owner, including: Eljer sink, toilet and tub; the oak seat and accent strips; and the birch linen closet and medicine cabinet



When one client asked Ann Grasso to look at an old house he'd bought, "he really didn't warn me," she laughs. Built in the late 1700s, the house had become a rental property for welfare families. The bath, originally a closet, had only a toilet, wall-hung basin and standing metal shower (see before plan at left), "all with exposed pipes - and rats." The client planned to do much of the remodeling himself.

In the new plan (upper left) the door has been moved to gain space for a storage/grooming wall. There's a shallow cabinet in one end wall, a linen closet and a wall-hung vanity-"really just a box with an oak-patterned Formica® top," Grasso says.

A slab of real oak was used to create a bench seat (drawing above), providing a dressing-room-like amenity in spite of the tight space and tight budget.

Wallpaper with a dark background and horizontal oak strips were used to lower the 9-ft. ceiling visually and inject some design excitement, "though the old Yankee carpenter the owner used considered this a real

waste of good oak."

Grasso doesn't mind designing for do-it-yourselfers "as long as they understand they don't have the right to use us like a public library," she says. "Too many, of course, just want a quick design and then expect us to teach them how to do the job without paying for our time." Some of her suggestions for working with homegrown bath remodelers:

- •Stress the pitfalls. Make the client really aware of the job's size and that there can be unexpected problems.
- Urge them to hire professionals for the big jobs, especially plumbing.
 - Aim for design simplicity.
- Emphasize the need to invest in quality products.
- •Convince them that patience is often more important than ability. "So many people get three-fourths of the way through and begin to feel the project will never be over-that they've overspent and won't like the new bath," says Grasso. "You must emphasize that a bath is never finished until the last towel is in place.'

BEFORE STTTTA

Partial cost: \$2,000. This includes: design services, Grohe faucets; and construction of custom vanities in Lamin-Art plastic laminate with "Swiss Chocolate" bases and "Paperbag" counters. Kohler sink, tub and toilet were builder's standard offering and are not included in remodeling cost. Also, owners arranged for wallpaper and some other work separately.

Designing a bath for children isn't kids stuff

This remodeling seems simple two new vanities installed in a secondary bath for a boy and girl nearing their teens. But expertise shines in each custom detail.

For example, the children's vanity (drawing left) is slightly lower than normal. "When planning space for children, designers should walk around on their knees to see what they can reach," says Grasso. The vanity is also noteworthy because:

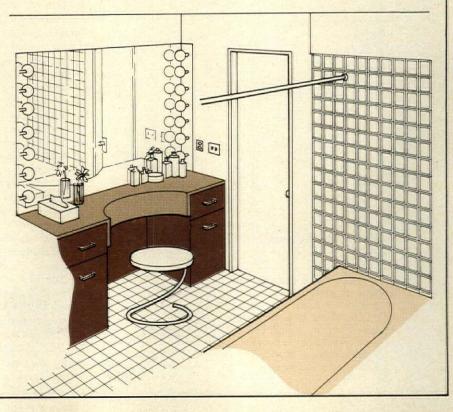
- The two basins are extended out "so splashes drip onto the tile floor and not cabinet doors."
- •The towel bar is between the basins, so it's very easy to reach.
- Each child has a separate medicine cabinet, just above the counter. Not only is this a safety precaution-"You're asking for accidents if a child has to climb onto something to get toothpaste or a water glass"-but, along with the dual mirrors and hanging lights, the twin cabinets help establish separate territories for the boy and girl.

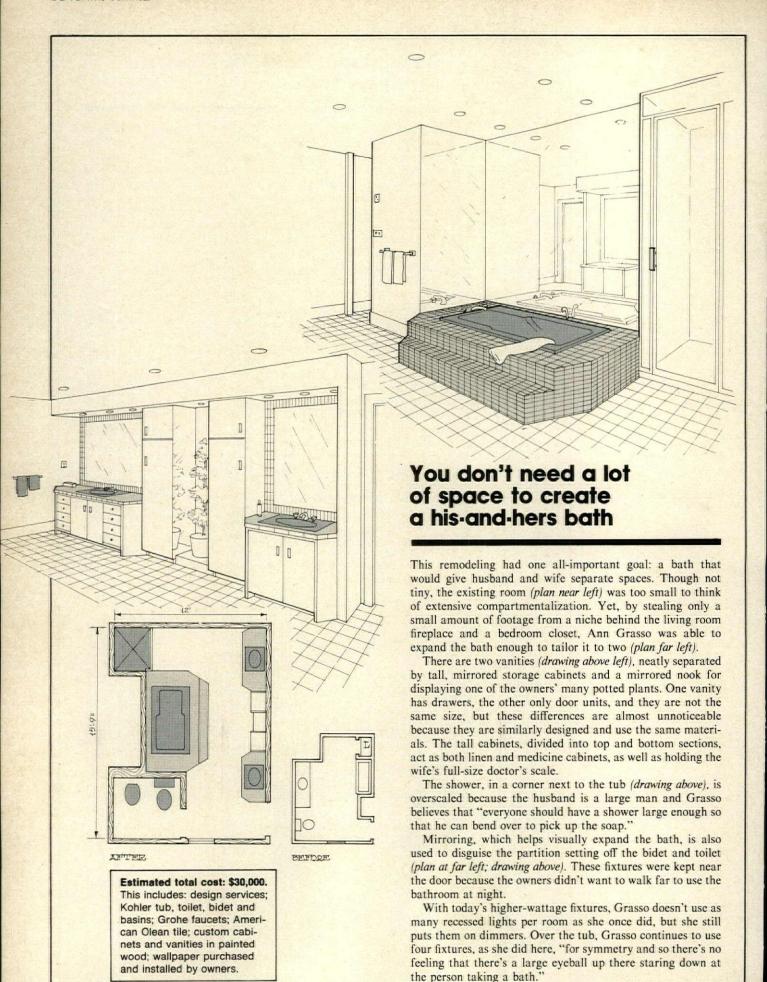
In any bath for young families, Grasso thinks builders should include a grab bar in the tub, as a safety measure. Likewise, she recommends a tub/shower com-

bination without a door, since doors and their tracks can be a problem for mothers bathing young children in the tub. "Doors can always be added when the children become teenagers who take 20-minute showers and let water run all over the floor.'

The make-up area in this bath (below) can be used by the daughter when she's older, but it's primarily an amenity for the mother, needed because of the limited space in the master bath in this home-a production house which was not even completed when Grasso was contacted, although plumbing had been roughed in. The master was "smaller than the lavette downstairs," says Grasso, so she removed a linen closet in the secondary bath (see before plan left) and gave the mother a dressing table here."

The bath's new lighting scheme includes a central ceiling light, a light/fan combo over the toilet, make-up globes at the dressing table and a shower light-all on independent switches. "That might seem like a lot for a bath this size," says Grasso, "but each light serves a specific purpose."





34'-10" HER CLOS MIRRORS -BEDROOM כניםיוייקב HIS Partial cost: \$5,000. This includes: design services. construction of vanity with Wilsonart plastic laminate storage units and African mahogany top; Phylrich sink and Delta faucets on wife's side; Kohler BEFORE "Man's Lav" and faucet on husband's side. Not included: African mahogany platform

around Jacuzzi

"Athena" whirlpool

tub: Grohe faucets

and temperature

valve in shower;

way mirror doors:

Kohler toilet and

bidet. These items were arranged for

Pella windows; glass wall and one-

You can open up a master suite to capture exciting views

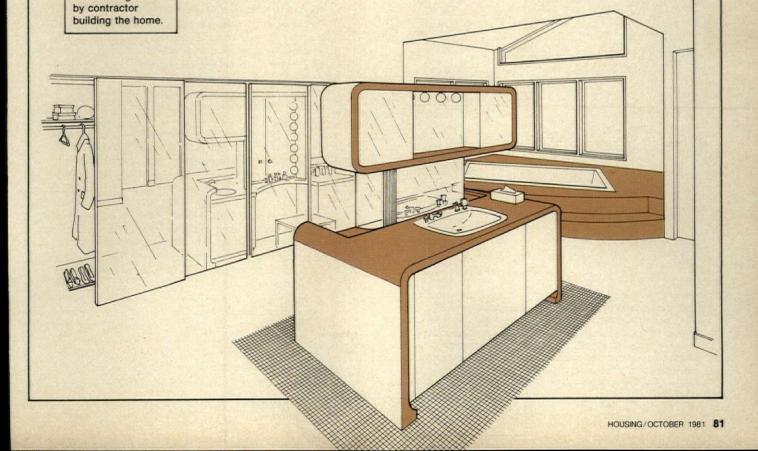
In this case, Ann Grasso's clients asked her for a re-do before their custom home was built: The architect had designed a master suite so over-compartmentalized that it seemed choppy (before plan, left center). And, notes Grasso, the husband's closet and a 14-ft.-long hallway to the bedroom hid one of the house's stunning features—a three-story glass-walled stairwell.

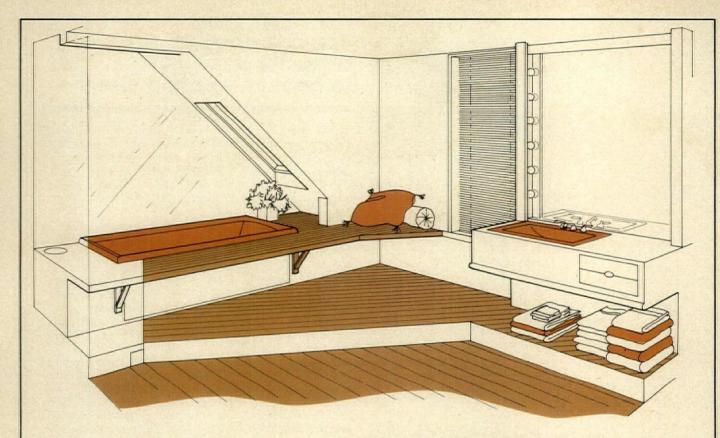
In her new plan, that closet is repositioned to create a dramatic entry from a balcony overlooking the stairwell—an adjustment that also gained the inches needed for neat little pajama and stereo closets.

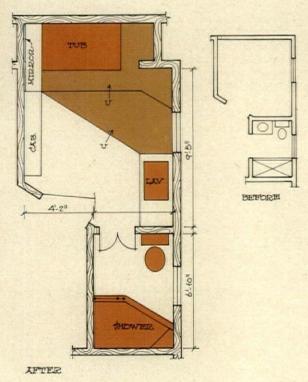
What's more, everything in the room now shares sea views once only visible from the tub corner: The vista can be appreciated by someone in the shower, which has a glass end wall, or by someone in the toilet/bidet compartment, which has sliding doors of mirrored one-way glass (see plan upper left).

The free-standing vanity (drawing below) rises from a practical tile inset in the carpeted bath, and it is positioned so that it doesn't block views—or traffic. The man's side is scaled for stand-up grooming, with center sink, mirrored medicine cabinets at shoulder height and storage cabinets recessed under the mahogany top. The woman's side (in drawing, seen as a reflection in the mirrors) is lowered, with a cut-out reminiscent of old-fashioned dressing tables. "Women like to sit and lean close to a mirror when applying make-up," says Grasso.

A final note: "An open bedroom/bath plan is not just for the very young," says Grasso. "A lot of older couples enjoy the relaxing atmosphere such layouts offer. But they want the toilet to be closed off and they don't want the master suite to look too 'bathroom-y.'"







Estimated total cost: \$8,000. This includes, from New Design Inc.: design services; heavy construction work, including bracing of wall for extension under roof; Jacuzzi whirlpool bath; Kohler sink; American Standard toilet; and Velux skylight. Owner did most of rip-out and preparation work, wiring, plumbing and construction of custom vanity from Wilsonart plastic laminate.

Angles add visual interest to any-size bath

Though the remodeled bath shown above isn't small, it does have a somewhat spartan look-not surprising since, like the bath on page 78, it was designed for a do-it-yourselfer. But it's exciting in spite of its simplicity-the result of angles and level changes Ann Grasso introduced into the expanded room.

The original bath was tiny (plan near left), like so many in 20-year-old tract houses. But the owner was happy to give up an existing study next to it in order to get the bath he wanted-and to go along with Grasso's idea of extending the bath into what had been a second-floor setback under a sloping roof.

Since the door of the old bath had been in direct line of sight from the home's entry hall, it was closed off and the former study door is now used instead. The shower location was not changed, however, although the existing shower was given a new tile curb and a rod which angles back to a corner seat (plan far left).

In the footage added to the one-time study, the owner now has a whirlpool bath (drawing above) and a skylight for his own rooftop view of the world. To complement the study's existing pine floor, a tub platform and cantilevered seat were built of open deck planking treated with many coats of tung oil for water resistance.

Although a cabinet on the wall opposite the vanity provides major storage, the platform is extended under the vanity to create a towel shelf-an idea Grasso has executed in tile in other baths. The space-saving ledge vanity is only 33 in. long, but it includes an offset basin and one drawer, giving the owner ample space for his shaving needs.

The Grasso approach: Personalize the bath as much as possible

Tailoring a bath to the client's needs isn't always a simple task: Most people don't know exactly what they want. "And if they do, many won't ask for certain items because they're afraid I might think they're kinky," Ann Grasso says.

So she uses a standard questionnaire as a way to reduce this embarrassment factor. Questions include: Who will use the bathroom, and what are their ages and sizes? Do you like to read in the bathroom? [For a more complete list, see HOUSING, Mid-Oct. '80]. After clients complete this survey, Grasso interviews them in person, so she can read their expressions as well as record their answers.

The bath re-do shown below is the result of such in-depth research into clients' preferences. In this case, Grasso saw that the wife was particularly concerned about closets. So the designer also asked for a list of linear footage needs for storage, broken down by types of clothing—sweaters, dresses, shoes, etc. In the new layout (plan at right below), storage is plotted almost inch by inch. Included are such amenities as lingerie and underwear drawers close to the shower and vanities.

In contrast, the "before" plan of this bath (below left) is almost a textbook example of how not to personalize—the architect had created so many boxed-off individual spaces that the bathroom was a maze. To improve the layout—still only on paper—Grasso "took out all the walls and started over."

Note the new location of the tub: It's angled into a corner of the sleeping area, and is no longer boxed in

"Most people use showers for cleansing and tubs for relaxing soaks," says Grasso. "But it's hard to relax in a tub with three surrounding walls—there's not much to look at."

She also believes that placing the toilet next to the tub is a mistake. Not only does this make it more difficult to clean both, but, Grasso says it's "less than relaxing" to soak with your head next to the toilet. Some of the designer's other ideas:

•Sunken tubs that are even with the floor are dangerous—and hard to clean to boot. She recommends using a 4-in. to 6-in. trip edge or hand rails or, better yet, raising the tub above floor level for a luxury look. Platforms, step-ups, etc. can be used to visually break its bulk.

• Faucets on over-sized tubs shouldn't be on the back wall. Installing them there forces bathers to be gymnasts or get wet in order to turn the water on.

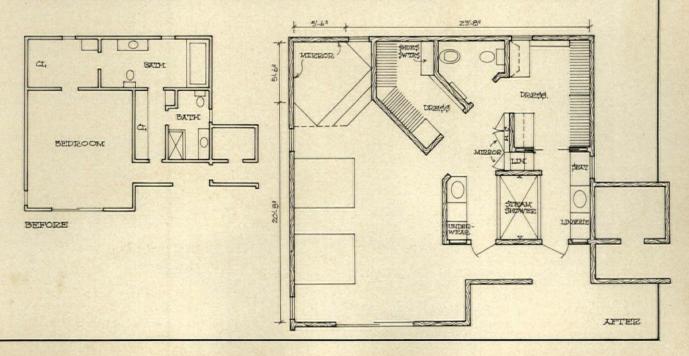
•Larger showers without doors are less restrictive than small, enclosed ones, although it's necessary to exercise special care in positioning shower heads so that the spray is directed away from the opening.

• Double-bowl vanities aren't always needed. "Sometimes extra basins are necessary, as in one case where we converted an old buffet into a triple-sink vanity for a woman with ten children," says Grasso. "But a husband and wife don't necessarily need water at the same time. One basin plus extra make-up space could be a better solution."

•Standard 30-in. or 31-in. high vanities are backbreaking. Grasso prefers a vanity that's 36 in. to 39 in. tall, "if room proportions allow."

Once design and budget are determined, a remodeler must also alert customers to the timing required for an efficient job. "You can't fit many tradesmen into a bathroom at one time," Grasso points out, "and if you don't expedite properly, the plumber may be sitting out in the hall doing nothing, while the electrician wires the whirlpool bath."

Also, she warns, "since a bath is usually not on the first floor by a back door, you must plan how to get rid of large masses of junk." New Design Inc. often uses a wooden slide which goes from a window directly into a dumpster. "This is much better than having a contractor trailing plaster dust up and down the stairs as he makes 50 trips to carry out old tile."



Island kitchens: planning for convenience-plus

The plus? "Island kitchens are friendlier," says Detroit kitchen designer Lenore Greer. She planned the island shown below and below right, which includes a recess for stools so children can watch their mother cook.

"Our buyers like islands because the woman can be working in the kitchen and still be right in the middle of what's going on," says Ron Miles of The Talmadge Tinsley Co., Dallas. His firm builds the kitchen at right, which is open to a family room.

What's more, an island tends to "fence" family and friends out of the cook's way, so he or she can chat good-temperedly—if, that is, the kitchen is planned well.

Circulation patterns should funnel traffic to the outside of the island—and keep it there. In the plan at top right, for example, the garage entry is

at the far end of the L-shaped kitchen. So it takes fewer steps to walk around the outside of the island to get to the nook/family room than to parade through the cook's work triangle.

Space around the island has to be generous enough for the cook to maneuver easily. "There should be 45 inches on either side of the island," says Greer. "Usually there's something in the kitchen with a door that drops down—the dishwasher, for instance. The cook shouldn't have to close it to walk past the island."

This means a kitchen should be at least 14 or 15 ft. wide if its to include a center island, such as the one shown below.

"Otherwise the cook will wish she could shove the island out of the way," says Greer.

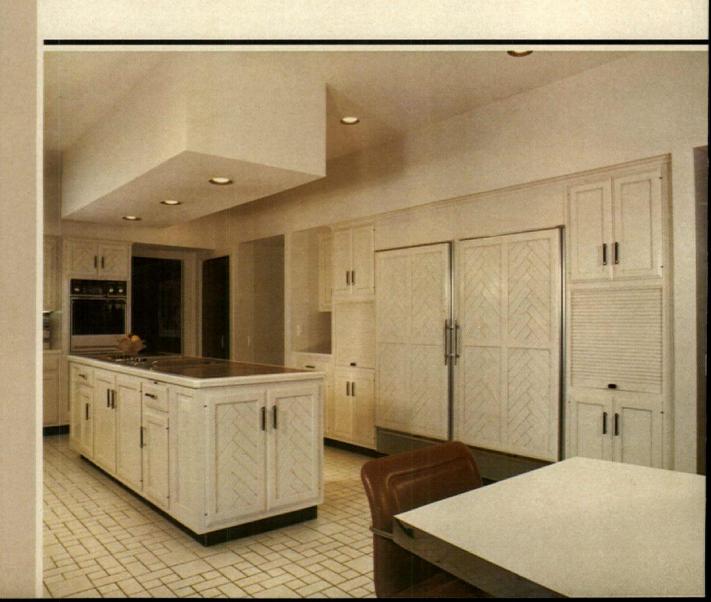
The dimensions of the island have to

be considered, too. If the island holds a cooktop, there should be useful counter space next to it. "If you put a 3-ft.-wide cooktop in the middle of a 6-ft. island, that leaves only 18 in. of counter space on either side," Greer points out. "What can you do on 18 inches?"

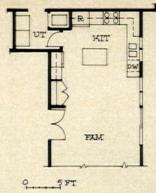
And if the kitchen is designed for a family with small children, like the one pictured below, an island with cooktop has to be deep enough that there's little danger a child racing past will knock over a hot pan.

Lighting over the island—as with any kitchen work space—is also important. If the room has a high ceiling, lighting fixtures could be suspended a few feet above the island, as was done in several of the kitchens shown on the following four pages.

-BARBARA BEHRENS GERS



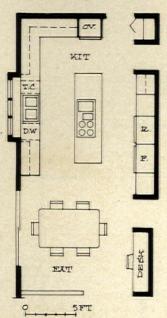


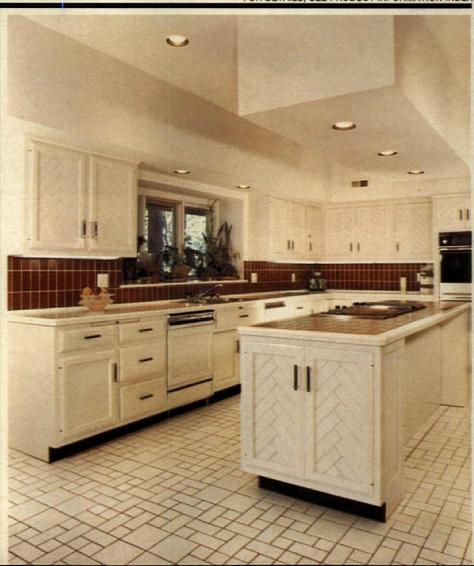


Modest-sized island is a welcome addition to an L-shaped kitchen. It serves as a traffic barrier, keeping other family members out of the cook's way when they walk through to the family room (see plan above). And the island boasts counter and storage space—always desirable in a kitchen designed for a family. A special convenience: There are cabinet doors on both sides of the custom-made island. Project: The Trails at Old Shepherd Place, Dallas. Builder: The Talmadge Tinsley Co., Dallas. Architect: Danielian Assoc., Newport Beach, Calif. Interior: The Childs/Dreyfus Group, Chicago.

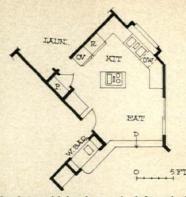
FOR DETAILS, SEE PRODUCT INFORMATION INDEX

Island for an expert cook was designed with a recess for stools (photo right) so she can demonstrate treasured recipes to her seated children. Spices and baking equipment are stored behind doors—all on roll-out shelves for quick access. The 12-ft.-long island also has space for placemats, napkins, etc. in the cabinets facing the breakfast nook (photo left). Moreover, it's only a step away from other storage, so it's a convenient spot to place grocery bags when unloading them into the refrigerator, pantry, etc. Designer: Kitchens by Lenore, Birmingham, Mich.

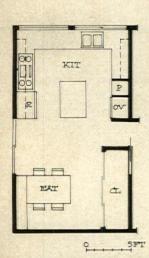








Sculptured island not only defines the kitchen in a home with an open floor plan, but it is also an attractive focal point, which is in view from the home's great room (a step down from nook shown in plan). The 4' × 2'6'' island is constructed of stainless steel and includes a cooktop, creating a compact work triangle within the roomy angled kitchen. Builder: Environmental Development Corp., Cincinnati, Ohio. Architect: Environmental Space Designs Inc., Cincinnati, Ohio.

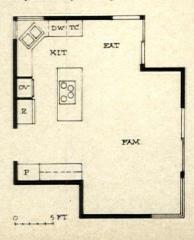


Kitchen with a view benefits from island storage, which makes it practical to give one wall over to windows. But storage isn't the only function of this 3' × 4' island: The family for whom the kitchen was designed includes a cooking teacher, and the island is a convenient stage for demonstrations. And for standard meal preparation it's a handy spot for readying food for the oven-or for setting hot dishes on their way to the nearby dining table. Architect: Hayahiko Takase, Los Angeles. Builder: RST Construction Co. Inc., Gardena, Calif.

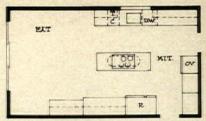




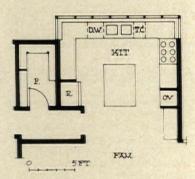
Island in a country kitchen makes it easy for a cooking parent to watch children at play. Note that the cooktop is set well back from the edge of the island, so it's unlikely that a passing child would accidentally knock over a hot pan. Project: The Trails at Old Shepherd Place, Dallas. Builder: The Talmadge Tinsley Co., Dallas. Architect: Danielian Associates, Newport Beach, Calif. Interior: The Childs/Dreyfus Group, Chicago.



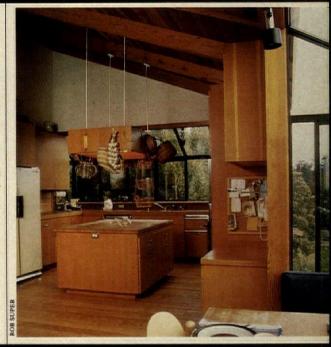




Custom-designed oval hood draws all eyes to the island in this one-of-a-kind kitchen. The 7-ft.-long island has storage in its base, as well as plenty of "setdown" space next to the gas range. Moreover, the maple-block work surface adds warmth to the cool, Europeanstyle kitchen. Architect: David Lubin, Bloomfield Hills, Mich. Builder: Abbey Homes, West Bloomfield, Mich. Kitchen designer: Gary Fried of Kinetics, Farmington Hills, Mich.



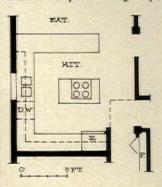
Massive island suits the proportions of a high-ceilinged kitchen. The butcherblock-topped island measures 4' × 6', so it offers plenty of work space for cooking or baking-or for organizing serving dishes for a dinner party. It includes an electrical outlet for plugging in small appliances, such as a mixer, which may be kept in cabinets in the island's base. This storage space is especially important because there are no wall-hung cabinets on the sink wall. Rather, there's a solariumtype window which fills the kitchen with early-morning sun. At night, the island is well-lit by a 10-bulb custom-designed fixture. Architect: Kirby Ward Fitzpatrick, San Francisco. Builder: Vantage Corp., Danville, Calif.

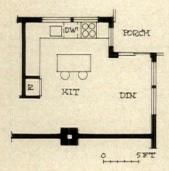


FOR DETAILS, SEE PRODUCT INFORMATION INDEX



Kitchen without walls (also shown on our cover) was designed to make informal entertaining a pleasure. Thus, the center island, which keeps cook within speaking distance of guests-one of whom might even want to pull up a stool beside the island. Project: Tree Top Residences, Miami, Fla. Architect: Charles Sieger Architectural Offices, Miami. Builder: Newport Building Corp., Miami.



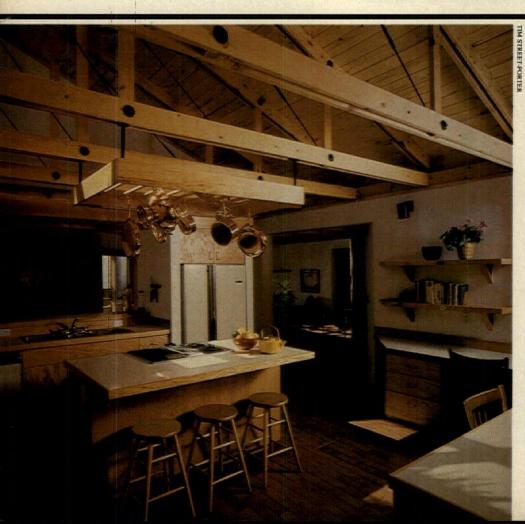


Companionable kitchen makes it easy to visit while cooking: A friend seated at the island is close to the cook but out of his or her path. The two-stool island—it's 5 ft. long—is a good spot for breakfast, too, since eating there eliminates walking back and forth from the dining table. The island can also be used as a chopping block: Although its base is red oak, the top is maple butcher block. (Note that in this kitchen even the refrigerator is oak paneled.) Project: Irving Street Condominiums, Cambridge, Mass. Architect and builder: Douglas Okun and Assoc., Cambridge, Mass.

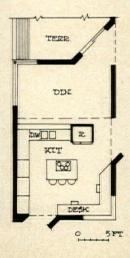


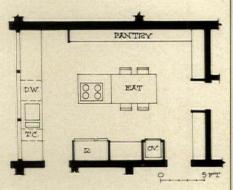
FOR DETAILS, SEE PRODUCT INFORMATION INDEX

Islands can work overtime as



Wide-open custom kitchen is spacious but step-saving, thanks to an island with cooktop which condenses the work triangle. What's more, the owner can prepare food without having her three teenage daughters underfoot, since the island does duty as a traffic barrier. She can still enjoy their company, however, if they pull up a stool or do homework at the work desks built into one corner of the kitchen. The hanging wood rack over the island isn't only decorative: It includes fluorescent light fixtures. Architect: Mazria/ Schiff & Associates, Albuquerque, N.M. Builder: Jim Bishop Construction, Albuquerque



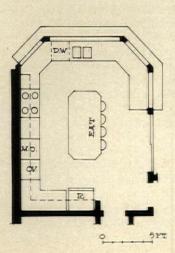


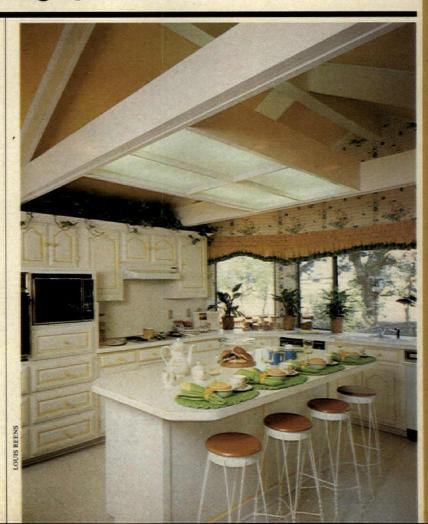
Split-level island is the centerpiece of a family kitchen. Although designed for eating breakfast and late-night snacks, the seating level can also be used for food preparation or as a buffet for casual dinner parties. The higher end of the island holds a cooktop and, more importantly, enough storage space so that one wall of the kitchen could be filled with windows. "So it's a nice, cheery kitchen, especially in the morning," says its designer, architect Barry Sugerman of N. Miami, Fla. Interior designer: Sugerman Newman, N. Miami.

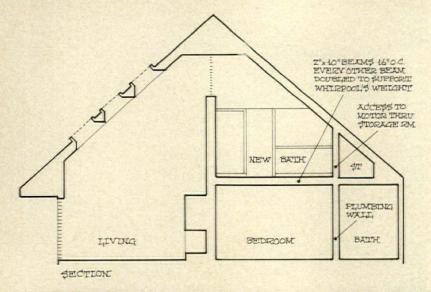


convenient snacking spots

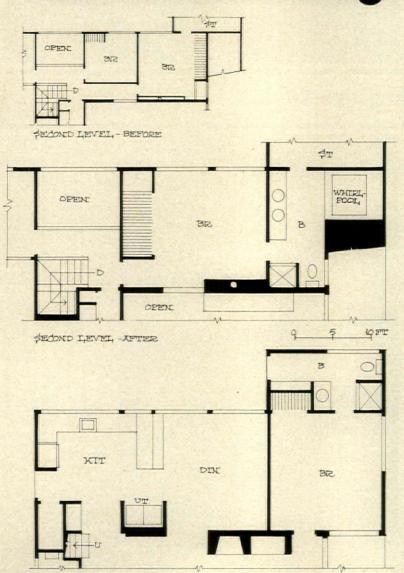
Creekside kitchen was designed to maximize views of the landscape. And the central four-stool island is a good observation point. For less leisurely moments, the island includes a power strip, so that a busy cook can plug in as many as five small appliances at once. For entertaining, the island—only a few steps from sliders to a deck—can be used as a bar or buffet table. Project: Bent Trail Creek, Dallas, Builder: J. Stiles Inc., Plano, Tex. Interior: Marlene Dibrell & Associates, Plano.







Volume space helps solve last-minute design problem



The problem developed because - as is often the case-a buyer came along while a one-of-a-kind spec house was under construction. And quite typically, the buyer asked architect/contractor Alfredo DeVido of New York City to make substantial design changes in the two-story, 2,350-sq.-ft. house on Long Island, N.Y.

The original plan called for a firstfloor master suite, highlighted by a cathedral ceiling (bottom plan, left). Two small bedrooms were planned for the second floor (top plan, left). But the buyer wanted a second-floor master suite, complete with whirlpool bath.

DeVido's first change was to knock out partitions between the upstairs bedrooms creating a large master bedroom. Then he built the master bath along the east wall of the house, tying in the plumbing lines with those of the original master bath downstairs.

He used the volume space in the original master bedroom to accommodate the whirlpool, specifying 2"×10" beams set 16" o.c. for this area. The beams, which match those used in other areas of the house, were doubled every other beam to compensate for the 1,500-lb. weight of the whirlpool when filled (see section above).

The house's steeply sloping roof provided a storage area off the bathroom (middle plan, left). And the architect designed a small door into the storage wall so there would be access to the whirlpool's motor.

DeVido estimates the extra cost for the mid-construction changes came to \$2,500 to \$3,000. -FRAN J. DONEGAN

FIRST LEVEL



Idea Notebook Kitchens with something extra

"Functionality doesn't sell kitchens. Personality does."
That's the gospel according to Craig Hyer of the Haas Cabinet
Co. Hyer, who teaches kitchen design and salesmanship,
is an expert at giving kitchens a distinctive look. For
confirmation, see the photos below and on the next two pages.



Same layout/different look: The kitchens above and at right show how Hyer gives each kitchen a personality all its own. In the room above, he built a display shelf in over-the-sink soffit space and echoed the idea in the island. "The open-shelf look is coming on strong," he says. In the kitchen at right, tambour-door cabinets turn the same soffit space into storage space. One advantage of using the roll-up units there: They don't have to line up exactly with cabinet doors below. Another special touch: a hutch-like arrangement of storage next to the oven at right.





Ideas galore: From the "wagon wheel" ceiling to a "soffit pocket" for displaying treasures, the kitchen at left is full of distinctive touches. Some more: brasschanneled leadedglass cabinet doors; angled cabinets (created from stock corner cabinets and sink-front units); a wine rack; and a greenhouse three steps above floor level so the bookcase doesn't block plants from view.

Sit-down "gourmet centers" (right and below) are a boon to the weary or elderly. What's more, the table-height maple cutting board makes tasks such as kneading easier for a baker who's 5'3" or shorter. Note also the extended soffit ledge in both kitchens: at right, an ornate look created with crown molding and spindle railing; below, a more contemporary version. In both cases, the foot-deep ledge provides space for displaying decorative items or plants. Also at right: a wood-banded countertop--a treatment Hyer says is becoming popular.





For details, see Product Information Index on page 125

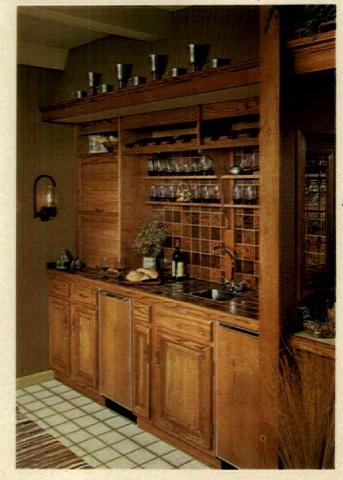
Idea Notebook continued



For details, see Product Information Index on page 125

Paneling on the bottom of the soffit is only one of the unexpected details shown in the kitchen above. Another: a spice rack tucked below wall cabinets. "The time-honored 18 inches between countertop and cabinets is usually wasted space," says Hyer. "Use it to maximize storage." To the right of the sink, a tambour-door cabinet is an "appliance pantry." For a finished look, the unit was crowned with molding and spindle railing, creating a indoor herb garden.

Handsome wet bar shows that Hyer's ideas aren't limited to kitchen applications. Note the sloping soffit above the bar and the indoor "window" to the right of it--fashioned from a cabinet door.





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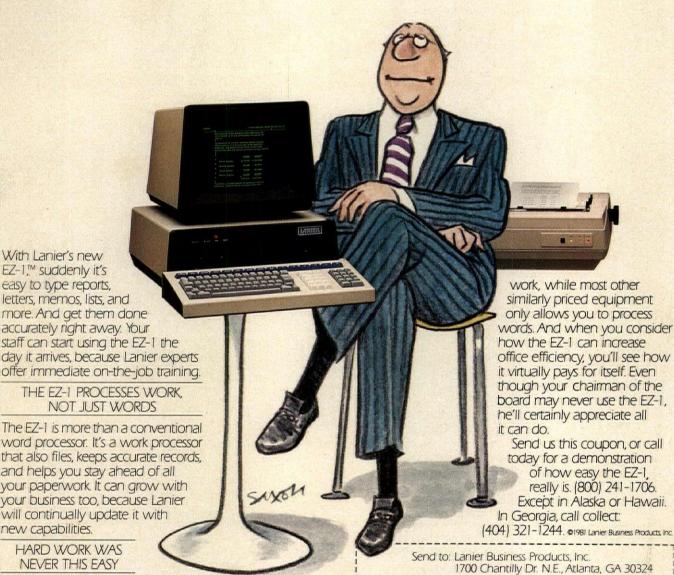
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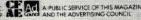
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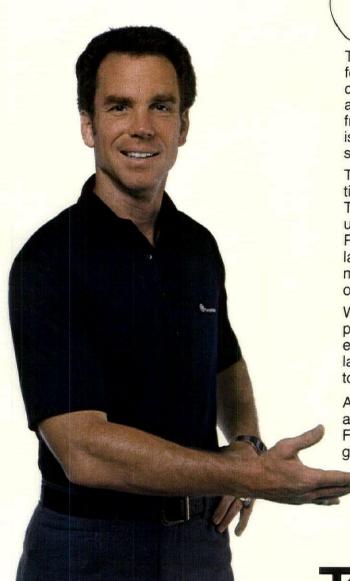
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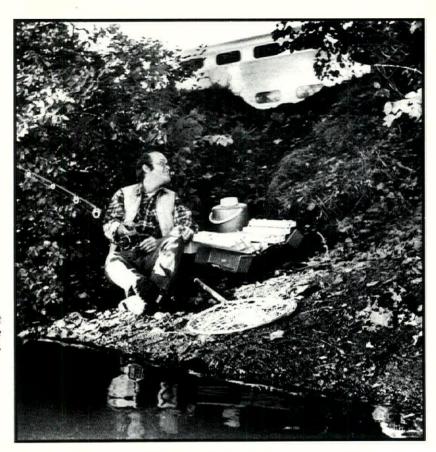


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He watched it out of sight before he cast a lure over by the old stump.

The day Dick Heart missed the 8:05.

Dick Heart turned the gas on under the old but shining coffee pot. He sensed rather than heard his wife Mae coming into the kitchen.

"Thought you'd sleep late today," he said as he

adjusted the flame.

"Well, you get up at the same time every Monday morning for 30 years and it's hard to sleep in," she answered in a soft, sleepy voice.

She looked out the window at the weather and said, "I'll make you some sandwiches to take along."

Dick kept sorting through his fishing gear but not really seeing it. "Ya know, it feels strange, like this is the first time in all these years I won't be on the 8:05."

There was a long pause and then he said, "I was thinking about Tom Ungar, too. We started working the same year. I finally got to retire and go fishing, and Tom's going to be catching that 8:05 this morning... just like always."

"Maybe he doesn't want to retire."

"Oh, he wants to all right. But that pension isn't enough, and he never could save a cent."

Mae heaved a sigh and said, "Well, you'd still be catching that train if you hadn't joined the Payroll Savings Plan. All those U.S. Savings Bonds make a difference."

"Yeah, but you're the one that convinced me to start."

"Nagged you, you mean," she said turning to look at him.

Dick squeezed her arm and said, "Yeah, nagged."

As the 8:05 passed over the Indian Leap trestle, Dick was at his favorite fishing spot. He counted the cars as they went by. In the fifth car, there was Tom in the 3rd window from the back.

He watched it out of sight before he cast a lure over by the old stump. He shook his head and spoke out loud, "Sorry, Tom, too bad someone didn't nag you."

The line twitched. Dick Heart had a strike.

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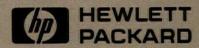
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Circle 99 on reader service card

Jalk Starte

Finding a place for everything has been a continuing problem in most kitchens-more like a game of hide 'n seek than anything else. With square footage shrinking even more in many new homes, storage becomes even more scarce. And for an increasing number of families-especially those with husband and wife working-time is also more scarce. So nowadays, convenience is the name of the game.

That's why cabinetry manufacturers are developing new storage systems and accessories. The object of the storage game now: to eliminate as much fishing, bending and crawling as possible; and to maximize use of what storage space there is. The new systems help homeowners organize their foodstuffs and appliances-even bathroom toiletries-holding everything in an accessible location.

Shown are some of the recent storage "pluses." Introduce a mix of these features to prospects. You'll score points when they learn that their next search for a box of cereal need not be another sporting event. -JENNIFER A. WAGNER





Storage features shown above include a microwave shelf, pullout shelving, and base cabinets that open from either side of peninsula. American Woodmark. Circle 200 on reader service card

Slide-out shelf (left) is one option in a line of storage extras. Also available: wire baskets, lazy susans, below-sink, tilt-out drawer, Long-Bell. Circle 201 on reader service card



Coated wire rack for housewares is part of the manufacturer's "VisibleStorage" system. Quaker Maid. Circle 202 on reader service card

Visible storage - a door-mounted rack (right) - is a feature in this line. Also shown: tambour-door appliance garage (center). Krown Kitchens. Circle 203 on reader service card





Nova-Dor™ vanity (right) includes mirrored medicine cabinet, shelving, and several storage cabinets. Unit mounts onto doors or walls. Regency Products. Circle 204 on reader service card

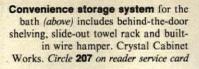
Pull-out vegetable bin (below) is one of several accessories from the vinylcoated "Space Builder" sliding basket storage system. Closet Maid. Circle 205 on reader service card





Slide-out oven shelf (below) provides extra working space-and a convenient spot to set hot casseroles. Built-in shelf is surfaced with "Planked Maple" laminate. Wilsonart. Circle 206 on reader service card





"The Insiders" storage system (right) is a customized configuration of nine different-size wire baskets in a sliding frame. System is designed for use in manufacturer's cabinetry. Excel Wood. Circle 208 on reader service card







Built-in dishwasher is shown with a customized, decorator exterior covered with fabric, wallpaper or similar surface treatment. Dishwasher surface is protected by a clear polymeric panel. Maytag. Circle 220 on reader service card



CounterangeTM cooktop features a builtin downdraft venting system. Five cooktop modules offered include a grill, rotisserie and griddle. Unvented model is available for use with range hood. Amana. Circle 224 on reader service card



Micro ShelfTM, installed above the cooktop, provides an eye-level shelf space to accommodate the manufacturer's microwave oven and a range hood. A conversion kit for non-ducted installation is available. Whirlpool. Circle 221 on reader service card



Space Saver II mounting provides an above-range exhaust ventilator, and accommodates a microwave oven. Prewired unit has 225 cfm double squirrel cage blowers. Ductless model is available. Dacor. Circle 222 on reader service card



Built-in "Micro-Hood" vents fumes through wall or roof, or recirculates air through charcoal filter. U.L.-approved unit holds manufacturer's microwave ovens 18 in. above range. Kenmore. Circle 225 on reader service card



Litton-Aire™ microwave oven includes a built-in exhaust vent and range light. Meal-In-One® cooking system has two distribution sources, insuring even wave distribution. Litton. Circle 223 on reader service card



Modular grill/griddle range is a 30-in. freestanding unit. Features include selfcleaning oven with black glass door and a below-oven storage drawer. Hotpoint. Circle 226 on reader service card



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Convertible cooktop is shown above with a standard white ceramic smooth-top cartridge and an optional rotisserie unit. The 30-in. cooktop also has a built-in ventilation system. Other cartridge options are offered. Jenn-Air. Circle 227 on reader service card



Built-in microwave, designed to replace range hood, features two-speed ventilation system. "MVP" oven has solid-state memory, thermostat, and 10-level heat control. Ductless model is available. Magic Chef. Circle 230 on reader service card



Steam Machine 2TM dishwasher produces steam in each wash cycle to enhance cleaning power. Incoming water may be set at only 120°; temperature is boosted during cycle. Thermador/Waste King. Circle 228 on reader service card



Modular cooktop is offered with updraft or downdraft venting. Converta-Grill® modules include a grille, griddle with Silverstone® finish, white or black glass smooth-top, rotisserie. O'Keefe & Merritt. Circle 219 on reader service card



"Superba" built-in dishwasher is one of four models in the "Energy Saver V" line. "Sure-Temp" system heats incoming water to 150°, a feature which allows a low water-heater temperature setting. Kitchen-Aid. Circle 231 on reader service card



Spacemaker™ microwave oven, shown above installed over the manufacturer's range, has MicrotouchTM controls, a humidity sensor and temperature probe to monitor the cooking cycle. General Electric. Circle 229 on reader service card



Range hood from the "Contemporary" series is offered in ducted and ductless models. Both are available in a range of sizes and colors. Ducted model has a twinsquirrel cage blower. Aubrey. Circle 232 on reader service card

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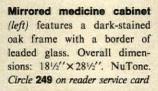
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Traditional-style vanity is part of the "Bedford Oak" line, which has raised-panel, cathedral-arch doors. Cabinetry has a light brown finish and finished interiors. IXL. Circle 248 on reader service card





"Ranch" line of kitchen cabinetry is crafted of inch-thick ash. Wood is protected with a Durasyn® finish that resists stains and moisture. Haas. Circle 250 on reader service card



"Richmond Hill" cabinetry has oak frames and doors, and antique brass hardware. Predrilled holes in side of front frame insure proper alignment of units. Belwood. Circle 251 on reader service card





Oak cabinetry is from the "Potomac Light" line, which features a selection of storage accessories for both the kitchen and the bathroom. American Woodmark. Circle 252 on reader service card

Recessed medicine cabinet, from the "Countryside" collection, has an oak-like frame that comes in three finishes. Monarch Metal. Circle 253 on reader service card



Oak bathroom cabinetry is from the "Leesport" line. Shown are the vanity, tall companion cabinet and hutch. Quaker Maid. Circle 254 on reader service card



"Dark Oxford" cabinetry has solid oak, raised-panel doors, drawer fronts and frames that are stained and hand-wiped. Kemper. Circle 255 on reader service card



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Here's why you should attend...

Because today's rapidly rising land development and construction costs have made the small house homebuilding's key product for the immediate future

Because small houses demand special skills in siting, planning and merchandising if they are to be successful in the marketplace

And because prospects have to be sold on a different kind of lifestyle before you can turn them into small-house buyers

Housing's "How to Plan, Site and Merchandise the Smaller, Higher-Density House" seminar will show you...

How to site medium and high-density housing

How to design small houses that appeal to specific market segments

How to effectively merchandise small houses to these specific markets

Newport Beach, CA, Oct. 19-20 Marriott Hotel Maui, Hawaii, Nov. 16-17 Hyatt Regency Denver, CO, Dec. 7-8 Fairmont Hotel

Specifically, you'll study these key subjects:

Site Planning:

- Why site-planning subtleties become critical as living units become smaller
- How to avoid the "toy village" look of smallhome developments
- How to increase density without sacrificing market appeal
- How to provide privacy in high-density housing
- How to develop street patterns based on actual need rather than outmoded conventions
- How to determine how much common space is needed and where it should be
- How to design for and around the automobile
- How to handle the problems of garage doors, narrow front elevations and setbacks

Product Design:

- How to create floor plans that feel—and live bigger than they really are
- How to relate floor plans to density
- How to make the most of smaller living spaces indoors and outdoors



Single Family Attached and Detached,

- How to gear floor plans to specific market segments
- How to use natural light to open up tight floor plans
- How to maximize square footage in key areas
- How to make creative use of interior volume

Merchandising and Model Presentation:

- How to create models that show buyers the comfort of living in a small space
- How to make your models appeal to market groups
- How to scale furnishings for small houses
- How to use color and light effectively
- How to present the unfurnished model effectively

You'll study with Barry A. Berkus, AIA, president and founder of the Berkus Group Architects with offices in Santa Barbara and Santa Ana, CA, and Washington, DC; Walter J. Richardson, AIA, president of Richardson-Nagy-Martin, an architectural and planning firm based in Newport Beach, CA, and Gene E. Dreyfus, president of the Childs/Dreyfus Group, an interior design firm based in Chicago with offices in New York, NY and Palm Beach, FL.

How to register Please complete and return the coupon below to: Seminar Dept., Housing Magazine, 1221 Avenue of the Americas, New York, NY 10020. Or you may register by calling (212) 997-

Seminar fee \$585 The full registration fee is payable in advance and includes all luncheons, workbooks, tapes and other meeting materials.

Cancellations and refunds Cancellations received later than two weeks before the seminar date are subject to a \$50 service charge.

Seminar hours Registration begins at 8:30 a.m. the first day. Programs run from 9:00 a.m. to 5:00 p.m. on both days.

Hotel reservations
You will be responsible for making
your own hotel reservations. In doing
so please be sure to say that you are

attending the Housing seminar to assure yourself of the special rate. To make your reservations call the Washington Marriott West End at (202) 872-1500, the Newport Beach Marriott at (714) 640-4000 and the Fairmont at (303) 571-1200. With confirmation of your registration for the Maui seminar you will receive a reservation card to be filled out and returned to the Hyatt Regency as soon as possible.

Tax deduction of expenses
An income tax deduction is allowed for expenses of education (includes registration fees, travel, meals, lodgings) undertaken to maintain and improve professional skill. See Treasury regulation 1.162-5 Coughlin vs. Commissioner 203F .2d 307.

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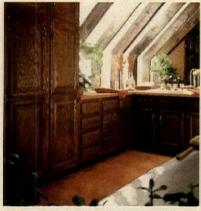
PRODUCTS/CABINETRY



"Warwick" cabinetry is constructed of hardwood frames with solid oak, raised-panel doors. Brass hardware is included. Matching hutches and wall systems are available. Triangle Pacific. Circle 256 on reader service card



"Chapelle" cabinets are shown with planning desk unit installed between standard 17-in. base units. Oak cabinetry, featuring doors with raised cathedral-arch panels, has a light-tone finish. Yorktowne. Circle 259 on reader service card



Dark-stained oak cabinetry is from the "WarmWood" line, which offers a selection of storage units, such as the 84-in.-high multipurpose closet shown above. Kitchen Kompact. Circle 257 on reader service card



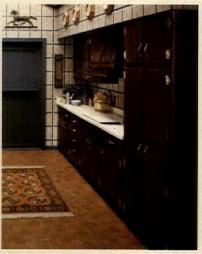
Hickory-look cabinetry (above) is from the "Gardencourt Stratford" line. A broad range of accessories and storage features are offered. H.J. Scheirich. Circle 218 on reader service card



Hardwood vanity, "the Ambassador," is part of the "Collection Series." Base cabinets are offered in widths up to 60 in. Three finishes are offered. Chemcraft. Circle 260 on reader service card



"Cathedral Vintage Maple" cabinetry line offers such storage features as roll-out shelves, plastic bins and swing-out spice racks. Solid maple door fronts and drawer frames have beveled, raised panels. AristoKraft. Circle 258 on reader service card



"Stonington" cabinetry has oak veneer doors with a plank design. Crown molding, matching range hood and a variety of storage features are included in the line. Riviera. Circle 261 on reader service card

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PRODUCTS/BATHROOMS



"Blended Hues" coloration is offered on any line of the manufacturer's china or cast-iron bathroom fixtures. Two-tone colors offered are lavender haze (shown), morning rose and blue mist. Eljer. Circle 241 on reader service card



Vista-Pivot™ shower door adjusts to fit any shower opening. Tempered glass door has a frame made of aluminum with a goldor silver-anodized finish. Kinkead. Circle 245 on reader service card



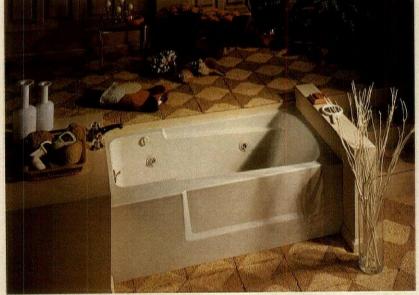
"Commode" vanity is 31 in. wide and 19 in. deep. The cabinet is available in oak (shown), cherry, pecan, and birch. Top is cultured marble or onyx. Rene Products. Circle 242 on reader service card



"Cadet" economy line (above), including lavatory centerset, bath/shower fittings and kitchen faucet, as shown, features a washerless valve system. American-Standard. Circle 243 on reader service card



"Le Gran" lavatory has an extra-long basin measuring 24"×13". Self-rimming china unit has 12-in. faucet centers. Available in a variety of colors. Kohler. Circle 246 on reader service card



"Aquatone Plus" whirlpool is designed to replace conventional 5-ft. tubs. The preplumbed whirlpool has four adjustable jets which provide Hydrassage® action. Universal-Rundle. Circle 244 on reader service card



Five-piece shower surround is designed for remodeling, and installs over drywall, plaster or plywood. Surround is made of high-impact copolymer plastic. Plaskolite. Circle 247 on reader service card



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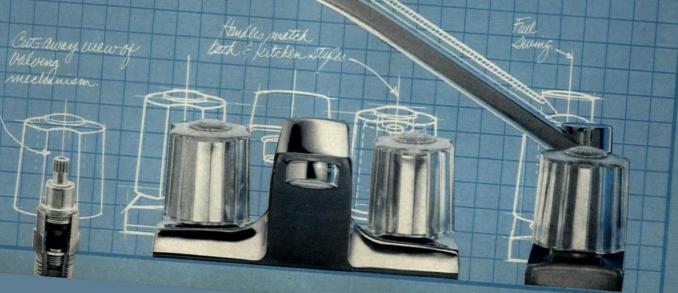
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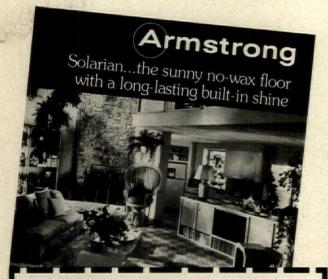
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PRODUCTS/BATHROOMS



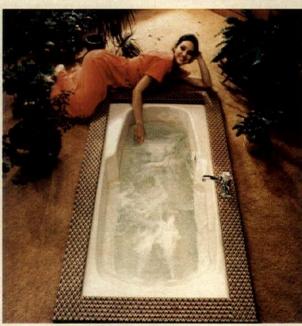
Low-silhouette, one-piece water closet is made of blended PVC and urethane foam, but looks like vitreous china. Unit uses less than 3½ gal/flush. Delta. Circle 237 on reader service card



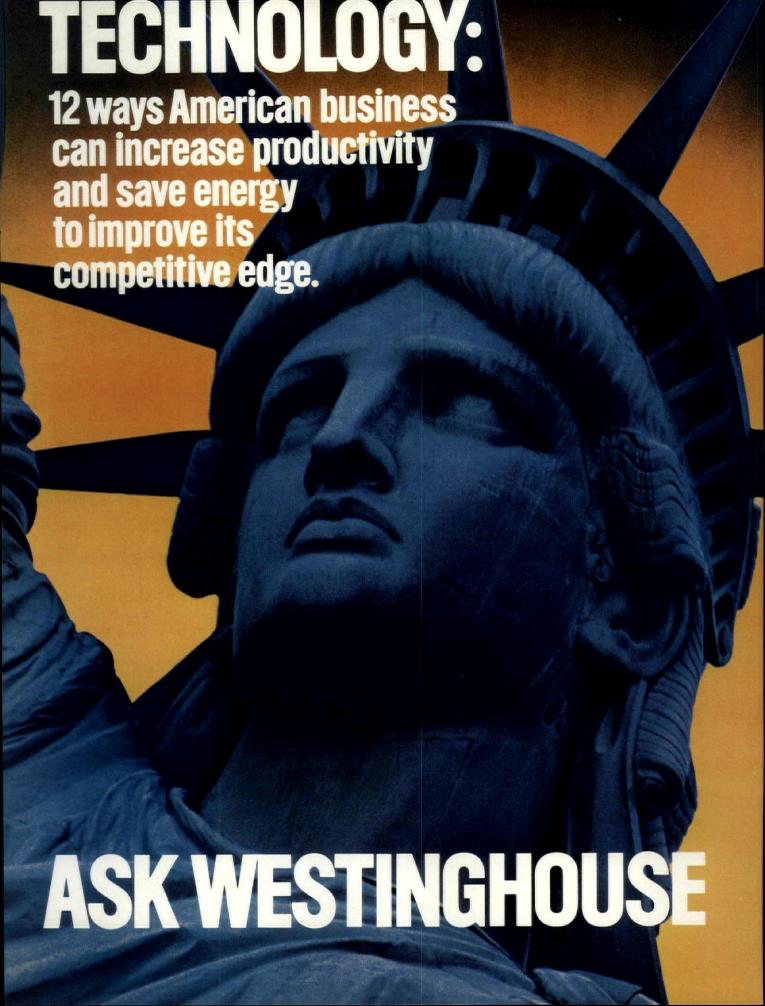
Lavatory faucet (left) is available in washerless or conventional models. The handles have either chrome or acrylic knobs. Built-in water-saving features control water flow. Also featured: an extra-long spout. Union Brass. Circle 238 on reader service card

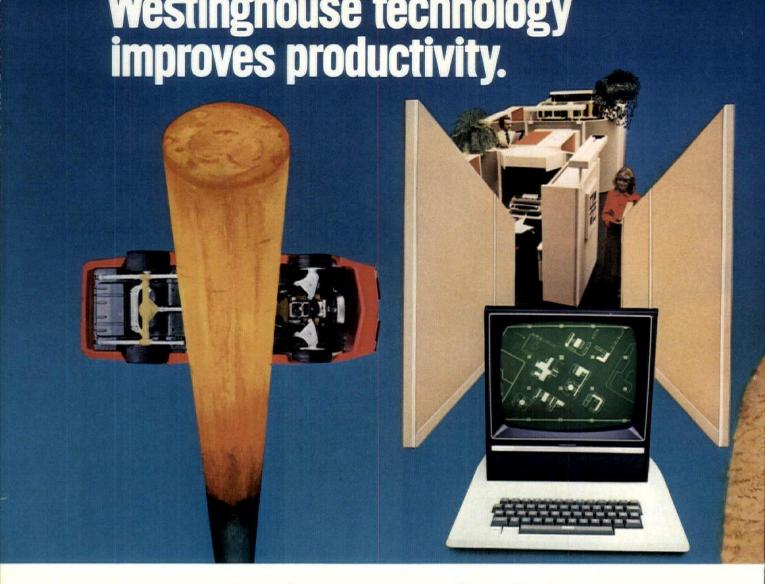
Hand-held showers (right) are from a revamped line: shown are Ondine I, Ondine II and Ondine X-90. The latter unit features a pulsating massage spray. Ondine II and X-90 feature a water-saving "hold" position. Ondine. Circle 239 on reader service card





Acrylic whirlpool bath is designed to fit into the space of a standard-size tub. Factory-assembled plumbing is self-contained. ThermaSol. Circle 240 on reader service card





Precision Heating for Metal Processing increased productivity by 300 percent and cut energy costs by 50 percent for a forging facility.

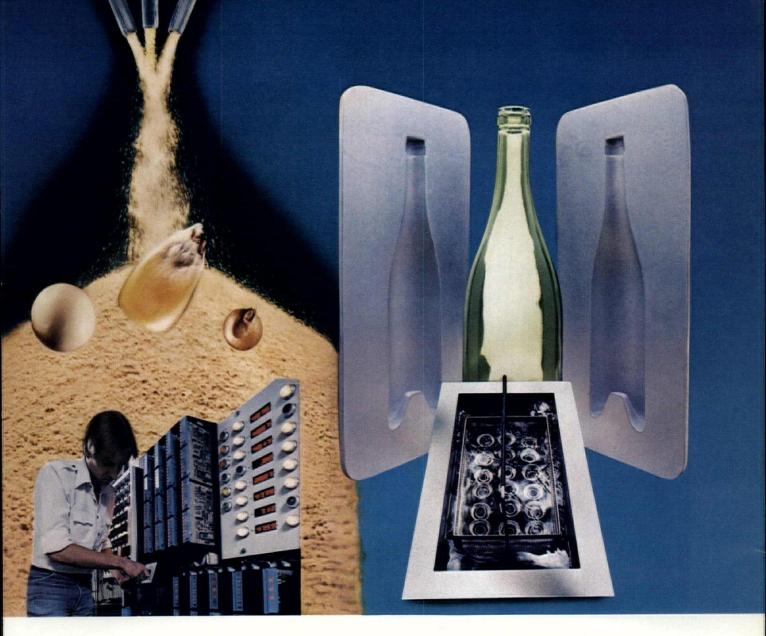
The Westinghouse induction heating system is so much faster than any type of surface heating, it enables the forge to produce parts at three times the old rate. That's because the controlled electric current flow within the bar stock heats to the precise depth required.

Such controlled heating from within significantly reduces the energy waste that accompanies surface heating. It also means an improved environment for employes involved with forging, forming, rolling, heat treating or curing of coatings.

Office productivity increased 6 percent when a Westinghouse "Open Office" System was installed by a major Eastern bank.

"Open offices" improved communications, provided efficient work stations and lowered noise levels for the bank's programmers and analysts. Productivity increased almost overnight.

Today, white collar employes represent half of the American work force, but white collar productivity has increased only 0.4 percent per year in the last five years. Installing "open offices" by Westinghouse can improve those figures.



Microprocessor-based production control increased productivity 300 percent for an agri-business.

A Westinghouse Numa-Logic™PC-700 programmable controller system replaced manual batching. Now a single 8-hour shift can mix 720 tons of 30 different types of feed requiring 41 separate ingredients. With only a 1 percent weight error in a given ingredient.

Before Numa-Logic, the same output required two 12-hour shifts, and there was a 20 percent weight error.

The Westinghouse Numa-Logic can increase productivity in a wide variety of process and manufacturing operations.

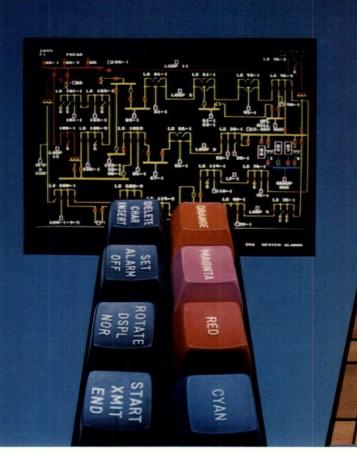
Ultrasonic Cleaning and Degreasing increased productivity by over 900 percent for a manufacturer of iron molds.

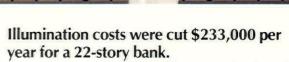
Instead of 1,300 man-hours and \$21,500 to clean 100,000 units, now it takes 133 man-hours and slightly over \$2,100.

Westinghouse Ultrasonic Cleaning does a faster, more thorough cleaning job than any other method. Using less harsh chemicals and no elbow grease, high intensity sound waves implode small vapor bubbles that blast off dirt and residue.

If cleaning has been your productivity bottleneck, ultrasonics could be the answer.

Westinghouse technology saves energy.





1-11-

The reason? Westinghouse Ultralume® lamps. Westinghouse researchers discovered that combining three particular wavelengths of light produced a fluorescent that gives better lighting for less money.

Two Westinghouse Ultralume Fluorescents provide the bank with a lighting environment which the employes agree compares to four standard fluorescents while using only half the electricity.

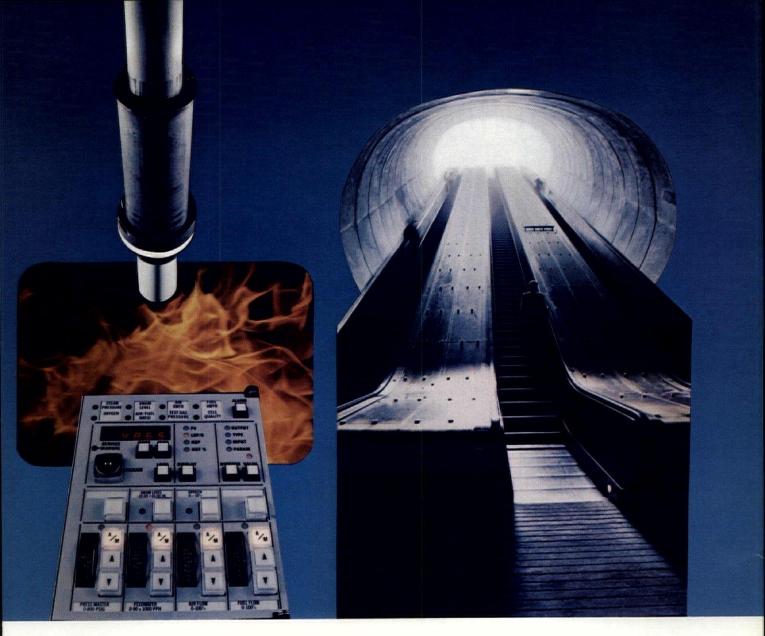
The bank has since installed Ultralumes in two other facilities. And is saving an additional \$84,000 annually as a result.

Energy Management will save over \$800,000 per year in fuel consumption and labor costs for a 600-acre, 150-building chemical plant.

A Westinghouse Industrial Energy Management System replaced the plant's slower, traditional ways of monitoring and adjusting energy generation and use.

Now, over 1,800 sensors provide the central computer with continuous data for real time analysis of the entire plant's energy generation, distribution and process systems.

Result: Any deviation from optimum operational levels—anywhere—can be spotted and corrected in seconds. By one operator. At the press of a button.



Combustion Control has cut the fuel bill of an Eastern chemical company 15 percent, saving it \$75,000 per year.

The company installed a Westinghouse fully automatic boiler system on one of its four boilers.

Combining a probe-type oxygen analyzer with a microprocessor-based oxygen trim controller, the system optimized fuel consumption, increased safety, and decreased excess oxygen by 8 percent.

It has been so impressive that the company has ordered similar equipment for its three other boilers.

Modular escalators will save over \$150,000 per year in energy costs for the mass transit system of a major East Coast city.

The 354 Westinghouse Moduline 100[®] escalators used there save 30 percent of energy costs when going "up," 60 percent when going "down" compared to the conventional type.

These advanced Westinghouse escalators can be connected in modular sections, giving architects a design freedom they never had before. These escalators can skip a floor, span vertical rises of 100 feet or more, and provide a nonstop 10-story ride.

That's right, 10 stories.



Electricity from sunlight is one step closer to economic reality.

The unique Westinghouse Dendritic Web process promises to significantly reduce the cost of manufacturing photovoltaic cells.

It produces long, thin, continuous strips of single crystal silicon, the main component of solar cells. The costly and wasteful slicing of silicon blocks has been eliminated.

Modules like the one pictured behind the dendritic strip above can produce up to 16 watts per square foot. Now, Westinghouse is working toward automated production facilities. And we've designed and installed systems for residential application.

Fuel Cells promise to be a highly efficient, compact, nonpolluting source of electric power.

Westinghouse is developing two types of fuel cells.

One is a phosphoric acid fuel cell targeted for the mid 80's. It converts any hydrogen-rich fuel such as synthetic gas from coal directly into electricity. It's environmentally benign, the only by-products are carbon dioxide, heat and pure water.

The other type is a solid oxide design. It's even more compact and more fuel efficient than the phosphoric acid fuel cell. With an 1800°F operating temperature, it's ideal for industrial cogeneration. It should be ready for use by the mid 90's.



High Power Battery technology may soon give commercial vehicles such as delivery vans a 100-mile cruising range, take only 4 to 6 hours to recharge, and last 100,000 miles.

Westinghouse is developing a high power nickel-iron battery that offers the best combination of high energy density, long life cycle, longer time between charges and competitive life cycle costs.

Smaller and lighter than older types of batteries, the new Westinghouse nickeliron battery could also replace fossil fuels as the power source for industrial forklifts, mining machines, and airplane tow trucks.

It's already in limited production.

Super Small, Super Fast Processors will dramatically enhance America's military capabilities and ultimately revolutionize American industry.

Very High Speed Integrated Circuits (VHSIC) will increase processing capabilities by over 1,000 percent. It will be possible to put up to 500,000 transistors on a single chip.

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And advanced circuit pattern printing techniques will help deliver all of this capability in a package 400 times smaller than today's!

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France	60.6%	
Germany	59.9%	2
Italy	59.0%	
United Kingdom	25.5%	

Source: Based on most recent data from the Bureau of Labor Statistics, United States Department of Labor, June, 1981

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Guidelines for the early detection of cancer in people without symptoms. Talk with your doctor. Ask how these guidelines relate to you.

CANCER-RELATED CHECKUP EVERY YEAR

Should include the procedures listed below plus health counseling (such as tips on quitting cigarettes) and examinations for cancers of the thyroid, testes, prostate, mouth, ovaries, skin and lymph nodes. Some people are at higher risk for certain cancers and may need to have tests more frequently. BREAST

- Exam by doctor every year
- Self-exam every month
- Breast X-ray every year after 50 (between ages 40-50, ask your doctor)

Higher risk for breast cancer: Personal or family history of breast cancer, never had children, first child UTERUS

Pelvic exam every year

Pap test—after 2 initial negative tests 1 year

Higher risk for cervical cancer: Early age at first intercourse, multiple sex partners. Endometrium

 Endometrial tissue sample at menopause if at risk. Higher risk for endometrial cancer: Infertility, obesity, failure of ovulation, abnormal uterine bleeding, estrogen therapy. COLON & RECTUM

- Digital rectal exam every year
- Guaiac slide test every year after 50
- Procto exam—after 2 initial negative tests

1 year apart—every 3 to 5 years after 50 Higher risk for colorectal cancer: Personal or family history of colon or rectal cancer, personal or family history of polyps in the colon or rectum, ulcerative

AGE 20-40

CANCER-RELATED CHECKUP EVERY 3 YEARS

Should include the procedures listed below plus health counseling (such as tips on quitting cigarettes) and examinations for cancers of the thyroid, testes, prostate, mouth, ovaries, skin and lymph nodes. Some people are at higher risk for certain cancers and may need to have tests more frequently. BREAST

- Exam by doctor every 3 years
- Self-exam every month
- One baseline breast X-ray between ages 35-40. Higher risk for breast cancer: Personal or family history of breast cancer, never had children, first child after 30. UTERUS

 Pelvic exam every 3 years Cervix

Pap test—after 2 initial negative tests 1 year

apart—at least every 3 years, includes women under 20 if sexually active.

Higher risk for cervical cancer: Early age at first intercourse, multiple sex partners.

Remember, these guidelines are not rules and only apply to people without symptoms.

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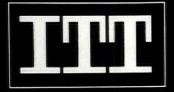
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Copper	NO	NO	NO	NO	NO

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Duraflex pipe* offers more pro- tection. Copper can corrode and rust. Duraflex pipe is inert, so it resists corrosion, rust and rot. And this tough pipe won't allow scale to build up and clog lines.

Your customer's plumbing will be safe during severe winters. Copper pipe can crack when water freezes. Duraflex pipe won't. It expands to accommodate frozen water, preventing damaging leaks.

Duraflex pipe simplifies instal- lation. It's lightweight, flexible and can be handled by one person. In fact, it can take as little as one-half

the time to plumb compared to copper. And unlike copper, Duraflex pipe can be joined without using open flames or creating toxic fumes. That means a safer and faster job. Your contractor can employ one of four quick and easy joining methods with simple tools and readily-available fittings.

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Shell Chemical Company, Manager/ Communications, One Shell Plaza, Houston, Texas 77002.



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McGraw-Hill Conference and Seminar Group. Conducts 175 seminars yearly including those specifically for the light construction industry.

McGraw-Hill News Bureaus. Located in 17 domestic and international cities plus 160 correspondents who file industry information daily.

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Housing:

Information that leads to action in the light construction industry.

For help in locating manufacturers listed below, use HOUSING'S Buyers' Guide (Aug. '81).

KITCHEN/BATH COVER

Page 65-Cabinets; Formica® units by Custom Cabinets, Oakland, Calif. Flooring; bleached oak parquet by Stewart. Cooktop; Jenn-Air. Countertops; Formica®. Sink; stainless steel. Windows; Cobbledick-Kibbe.

THE EUROPEAN INFLUENCE

Pages 66-72

Page 66-Left: Cabinets; "Combi-Color" cabinetry from Poggenpohl. Appliances; made in Germany. Right: Cabinets, the "Eden 6697" line from Tielsa of Germany, constructed of a golden-tone oak. Countertops; high-pressure laminate, with solid oak, 1/2-in, trim, also supplied by Tielsa. Flooring; Villeroy and Boch tile, as is the wall tile. Appliances, oven, cooktop; Gaggenau USA, a German manufacturer with American headquarters in Boston, Mass. Sink; Franke, steel finished with baked-on

Page 67-Left: Cabinets; Allmilmo. Fixtures; all are European. Lower left: Cooktop/grille; combination gas/electric unit from Gaggenau USA. Upper right: Sink; "Bilgar" from Villeroy and Boch. Tile; the "Armada" series from Villeroy and Boch. Lower right: Cabinets; dark oak from Pog-

Page 68-Cabinets; the "Belgian" kitchen from Rutt Custom Kitchens, constructed of natural linen-cloth veneer with oak trim. Flooring; vinyl, from Armstrong. Drop-in range; Thermador. Refrigerator; Sub-Zero. Sink: Kohler.

Page 69-Top: Cabinets; "Flair" from Quaker Maid. Countertop; Wilsonart, oak edging. Ovens, cooktop, dishwasher; O'Keefe and Merritt. Carpeting; Jason. Two-position range hood; Vent-A-Hood. Sink; Elkay. Left: Cabinets; Yorktowne's "Olympia" line from the "Contemporary American" collection. Flooring, countertop; Kentile. Range, dishwasher, cooktop; Modern Maid. Wallcovering; Birge. Right: Cabinets; Coppes, oak with a honey finish, "Flush" style. Refrigerator; Whirlpool's "Mark I." Sink; bar sink by Elkay. Bar faucet; Grohe, gold-finish.

Page 70-Left: Cabinets; custom-made by Best Cabinets, Fla. Range; Jenn-Air. Dishwasher: KitchenAid, Sink; Kohler, Instant-Hot; G.E. Ceiling fan; Hunter. Right: Cabinet surfaces; Wilsonart. Flooring; Italian ceramic tile. Oven; Whirlpool. Cooktop; Whirlpool, convertible. Dishwasher; Whirlpool. Refrigerator; three-door with cold water/ice cube dispenser, Whirlpool. Countertops/sink; Corian® by DuPont.

Page 71-Top: Cabinets; Graybill Cabinet Co. Flooring; "Cedas Bahamas" from Virginia Tile. Oven; Thermador's "Thermatronic II." Cooktop; Jenn-Air. Countertops; Corian®. Sink; Kohler's "Brookfield." Fit-

tings; Moen. Middle left: Cabinets; custommade with high-pressure Formica® and oak trim. Flooring; "Jeffersonian" herringbone oak from Sykes Flooring Co., Inc. Appliances; all from Whirlpool. Countertops; custom-made Formica®. Sink; stainless steel American Standard. Lighting; Progess. Below left; Cabinets; St. Charles textured steel. Flooring; "Saltillo" Mexican terracotte tile. Cooktop; Jenn-Air. Dishwasher: KitchenAid. Refrigerator; Sub-Zero. Sink; Elkay. Below right: Cabinets; custom-made. Tub surround; American Olean. Tub; Kohler. Lavatory; Kohler. Lighting; Lightolier.

ISLAND KITCHENS

Pages 84-89

Page 85-Top: Cabinets; custom-made. Oven; Jenn-Air. Microwave oven; Jenn-Air. Cooktop: Jenn-Air. Dishwasher; Whirlpool. Refrigerator; Whirlpool. Countertops; ceramic tile. Sink; Eljer. Bottom: Cabinets; custom-made by Grabill Custom Cabinetry, Grabill, Ind. Flooring; ceramic tile. Oven; micro-thermal oven by Thermador/Waste King. Trash compactor; KitchenAid. Refrigerator; Sub-Zero. Freezer; Sub-Zero.

Page 86-Top: Cabinets; custom-designed by Environmental Space Designs, Inc., Cincinnati and constructed by Kinsella Manufacturing Co., Cincinnati. Oven; Chambers. Microwave oven; Chambers. Cooktop; "Magnawave" by Chambers. Dishwasher; Chambers. Refrigerator; Sub-Zero. Sink; Kohler. Light fixtures over island; Habitat. Middle: Cabinets; modular cabinets from Mutschler Kitchens. Oven; Thermador/Waste King. Cooktop; Jenn-Air. Dishwasher; Thermador/Waste King. Trash compactor; Thermador/Waste King. Refrigerator; Sub-Zero. Countertops; Corian by DuPont. Sink; Elkay. Bottom: Cabinets; custom-made. Oven; Jenn-Air. Microwave oven: Jenn-Air. Cooktop; Jenn-Air. Dishwasher; Whirlpool. Refrigerator; Whirlpool. Countertops; ceramic tile. Sink;

Page 87-Top: Cabinets; custom-designed by Kinetics, Farmington Hills, Mich. Oven; G.E. Cooktop; McGraw-Edison. Dishwasher: "Superba" by KitchenAid. Trash compactor; KitchenAid. Middle: Cabinets; custom-made. Flooring; oak. Refrigerator; "Americana" by G.E. Sink; Elkay with Moen fittings. Solarium window; Blomberg Window Co., Sacramento. Bottom: Cabinets; Cameo Cabinets, Miami, Fla. Flooring; ceramic tile from Designer Tile International, Miami. Cooktop; Jenn-Air. Dishwasher; KitchenAid. Trash compactor; G.E. Countertops; ceramic tile from Designer Tile International, Miami.

Page 88-Top: Cabinets; custom-made by Anz Woodworking, Arlington, Mass. Sink; Elkay. Lighting; Lightolier. All appliances; Roper. Faucets; Delta. Bottom: Cabinets;

custom-made of oak by Masterwood Cabinets, Albuquerque, N.M. Oven; G.E. Microwave oven; Amana. Cooktop; Jenn-Air. Dishwasher; KitchenAid. Refrigerator; Frigidaire. Countertops; Wilsonart. Sink; Elkay. Cabinet hardware; Stanley. Flooring; brick by Kinney Brick Co., Albuquerque, N.M.

Page 89-Top: Cabinets; custom-made by M Cabinets, Miami, Fla. Flooring; Stoneware. Oven; Thermador/Waste King. Cooktop; Jenn-Air. Dishwasher; Kitchen-Aid. Refrigerator; Sub-Zero. Sink; Elkay. Island top; maple butcher block. Bottom: Cabinets; custom-made by Tidwell Industries, Lancaster, Tex. Oven; Hotpoint. Microwave oven; Hotpoint. Cooktop; Hotpoint. Dishwasher; Hotpoint. Trash compactor; Caloric.

BATH RETROFIT

Pages 90-91

Page 91-Flooring; ceramic tile from American Olean. Tub surround; ceramic tile from American Olean. Lavatory; American Standard. Whirlpool bath; Ja-

IDEA NOTEBOOK

Pages 92-94

Page 92-Top: Cabinets; "Classic Harvest" from Haas Cabinet Co. Oven; Jenn-Air. Cooktop; Jenn-Air. Countertops; Formica Corp. Sink; Kohler. Wallpaper; from the "American Country" collection by Imperial. *Bottom:* Cabinets; "American Country" from Haas Cabinet Co. Oven; Jenn-Air. Cooktop; Jenn-Air. Countertops; Formica Corp. Sink; Kohler. Wallpaper; from the "American Country" collection by Imperi-

Page 93-Top: Cabinets; "Ranch" by Haas Cabinet Co. Flooring; ceramic tile. Cooktop; Modern Maid. Countertops; ceramic tile. Sink; Elkay. Middle: Cabinets; "Farmstead" by Haas Cabinet Co. Flooring; Armstrong. Refrigerator; Westinghouse. Countertops; Formica Corp. Sink; bar sink by Elkay. Food center; Ronson. Bottom: Cabinets; "Plantation II" by Haas Cabinet Co. Refrigerator; Westinghouse. Countertops; Formica Corp. Sink; bar sink by Elkay. Food center; Ronson.

Page 94-Top: Cabinets; "American Heritage" by Haas Cabinet Co. Flooring; Armstrong. Oven; Modern Maid. Microwave oven; Modern Maid. Cooktop; Modern Maid. Dishwasher; Modern Maid. Refrigerator; Westinghouse. Countertops; Formica Corp. Sink; Elkay. Lighting; Thomas Lighting Co. Bottom: Cabinets; "Farmstead" by Haas Cabinet Co. Flooring; Armstrong. Refrigerator; Scotsman. Countertops; ceramic tile. Sink; bar sink by Elkay. Food center; NuTone. Icemaker; Scotsman.

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Eligibility

Any house or apartment building in the United States or its possessions built since January 1, 1979. Must have been designed by a registered architect.

Entry categories

Production housing - any housing, single-family or multifamily, built for sale or for rent. Includes: both year-round and vacation housing; experimental houses; rehabilitations and recyclings; PUDs; mixed-use buildings or developments; etc.

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Note: Remodelings must involve structural changes. Redecorations and single-room or single-apartment remodelings are inadmissible. Before- and after-construction photographs required for judging.

Registration fee

\$50 per entry. (Fees are non-refundable.)

Registration deadline:

October 16, 1981.

Submission of materials

A spiral binder for each project entered will be sent to registrants by January 1982. Binders should be filled with photographs and plans to illustrate the design, and returned. Detailed instructions will be sent with the binders. Deadline for return of binders: February 12, 1982.

Judging

A panel consisting of leading architects, builders and editors of Architectural Record and HOUSING will meet on March 30 & 31,1982 at the A.I.A. headquarters in Washington, D.C. to judge entries. Award types: First Honor Awards and Awards of Merit.

Winners

All winners will be notified immediately after judging; winning entries will be published in HOUSING. Award certificates and slides of winning projects will be presented at the 114th annual A.I.A. convention, June 6-10, in Honolulu, Hawaii. Winners will be asked to provide A.I.A. and HOUSING with slides of winning entries, and will be charged \$25 by A.I.A. to cover production of its annual award-winner presentation. Winning binders will not be returned.

Conditions

Entries must be approved by all parties concerned. The Entrant represents that he is the sole proprietor of all rights in and to the material, illustrations and photographs submitted; that such items are free from copyright restrictions that would prohibit publication by HOUSING; that Entrant hereby grants to HOUSING the right to publish such material, illustrations and photographs at such times and in such manner as HOUSING shall determine, and agrees to indemnify and defend HOUSING from any claims arising out of or in connection with any such publication by HOUSING. The Identification sheet (white) must be signed to validate your entry.

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The All Savers Certificate it could have been better for housing

In many ways the much-touted All Savers Certificate, which makes its debut this month, is a sign of the times for the housing industry.

For one thing, it wasn't designed to bolster the industry but rather to bail out the thrifts. And even though 75% of new savings generated must be used for residential financing, there won't necessarily be many new mortgages. Instead, much of the money is likely to go into existing mortgages in the form of Fannie Mae, Ginnie Mae and Federal Home Loan Mortgage Corporation term securities. So even as starts reach new lows (see p. 15), the government offers little help for housing.

The All Savers Certificate is a sign of the times in another way: It's one more investment that's been created in recent years for small investors. People who once looked to housing as a secure investment that would provide tax shelter, possible appreciation and a hedge against inflation now have other choices: All Savers or the newly expanded Individual Retirement Accounts for shelter; certificates of deposit and money market funds for high yields. Housing's no longer the only game in town

At the same time, the public is being told that funds diverted into housing for the past several decades should have gone into the nation's reindustrialization, and that housing's "favored treatment" must end: Housing must compete for money in the capital markets along with everyone else. So we're seeing 17% mortgage rates, which the public finds harder to accept than 17% returns on certificates of deposit. (Unfortunately, most people don't make the connection between the two.)

Meanwhile the annual rate of housing starts has dipped to 937,000. That's due not to lack of demand, but lack of ability to qualify for loans at today's prices and interest rates.

Housing isn't just an investment. It's shelter—which people need—and it's a way to achieve a particular lifestyle—which they feel entitled to. If they can't get what they want—or at least feel they're working toward what they want—they'll spend their money on other things that improve their lifestyle: cars, vacations, stereo sets, clothes, restaurant mealswhatever denotes status and success to them. That may be happening today: Commerce Department figures show personal consumption expenditures moving up.

If we have to live with high interest rates—and no one offers us much hope to the contrary—we must find a way to help people come up with large enough down payments to qualify them for a mortgage. Earlier this year Senator Robert Dole of Kansas proposed a bill to permit tax-exempt savings accounts for first-time homebuyers. Unfortunately, that proposal got swept away in the All Savers enthusiasm. The idea—or something similar-should be revived. All Savers is fine as a quick fix for the thrifts. But for the long haul, let's limit its tax benefits to people who don't already enjoy the advantages of home ownership. Let's encourage them to help themselves. Let's give them a reason to save rather than spend.

We realize this amounts to more "favored treatment" for housing. But with All Savers, the Treasury is losing out anyhow. Why not use that money to get people started on owning a stake in their community-and in the nation? -NATALIE GERARDI