



BUILDING TYPES STUDY:

**RECORD HOUSES OF 1977**  
**PLUS APARTMENTS OF THE YEAR**

TWENTY EXCEPTIONAL HOUSES AND SIX MULTI-FAMILY PROJECTS  
SELECTED FOR THE 1977 AWARDS OF EXCELLENCE FOR DESIGN

# ARCHITECTURAL RECORD

MID-MAY 1977



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# “Our flooring contractor installed 28 Armstrong Tredway™ floors over concrete in a single day. Unbelievable!”



Charles S. Dreyer, V.P.,  
Alison Mortgage  
Investment Trust,  
builders of Carousel  
Resort Condominium,  
Ocean City, Md.

“Our buyers were due to take occupancy in a month, and the kitchen floors were yet to be installed in our new 22-story condo-complex in Ocean City, Maryland. That was only the beginning. The building was of all concrete construction, and even though the floors had been capped with a thin coat of concrete, there still was significant unevenness. To install any ordinary resilient would have required further subfloor preparation—thorough sanding of the subfloor in all 189 units. Imagine that in terms of time and cost. Finally, we wanted a flooring which was readily available locally and which had a strong, merchandisable brand name.”

#### Tredway Installs Easily Over Concrete

“Then we remembered Armstrong Tredway. We’d used it once before, in another project, and we thought its unique properties were right for this job. A band of Armstrong Interflex™ adhesive along the edges permanently bonds Tredway to a concrete subfloor. Its elasticity allows it to bridge over minor subfloor irregularities associated with concrete and, because of its flexibility, Tredway cuts, fits, and handles

easily for fast, uncomplicated installation.”

#### Tredway Installs Quickly

“All the Tredway installations were completed on time. And what is remarkable is that in one day a two-man crew installed 28 Tredway floors. That’s unusual, and I have to believe it’s a record no other floor could beat.”



Tredway installs over concrete with just a band of adhesive.



**Tredway Beauty Helps Sell Units**  
“Tredway helped us meet our schedule, and we think it helped our sales. Tredway’s decorator patterns and colors contributed the overall look in our units (as seen in the above photograph of an actual kitchen). And that’s important when they’re selling in the \$40,000-\$61,000 range. We sold out within three weeks after we opened.  
“For beautiful quality flooring that installs easily and quickly, we highly recommend Tredway to other builders.”

For all the details on Tredway floors, call your Armstrong flooring contractor, and ask him how Tredway can give you more flooring for your flooring dollar.





Cover: Private residence, Massachusetts  
Architects: Gelardin Bruner Cott, Inc.  
Photographer: Greg Heins

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Of particular assistance to the Editor in the preparation of this issue were:

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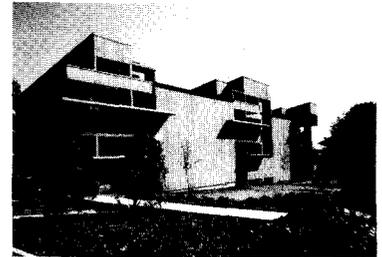


© David Franzen

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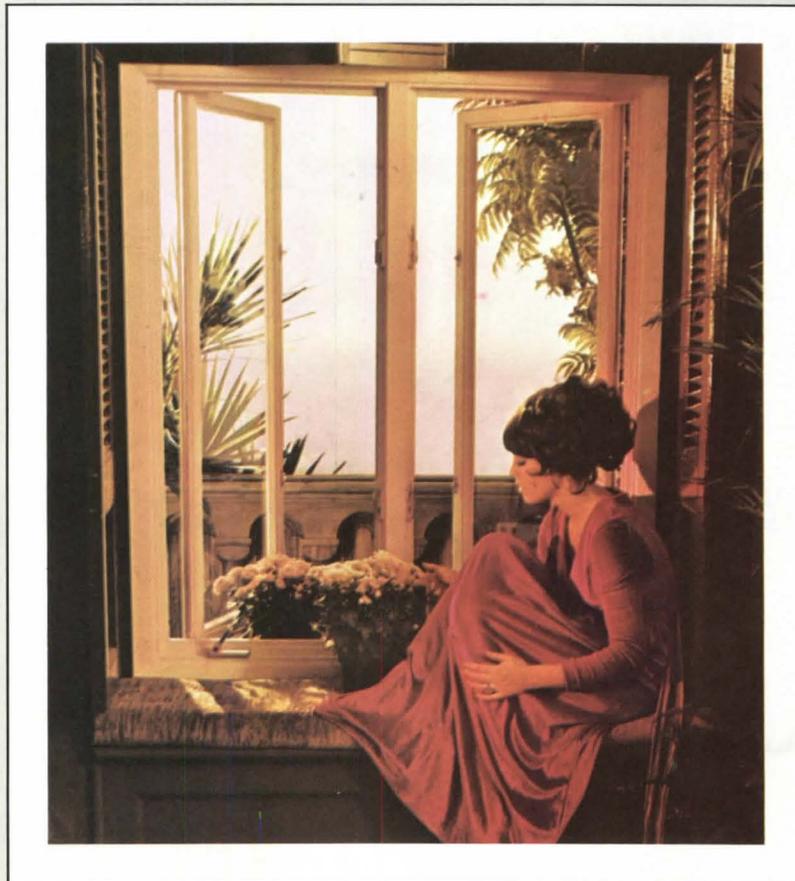
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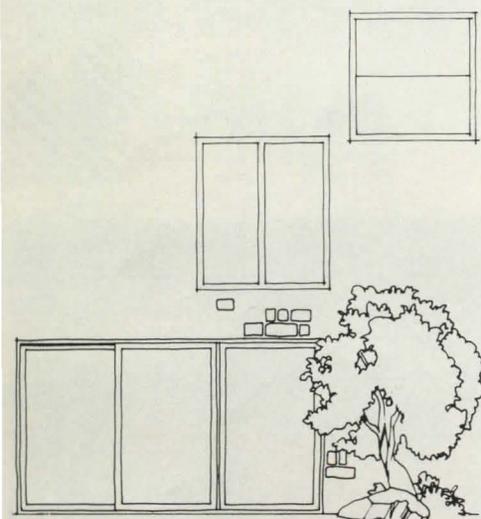
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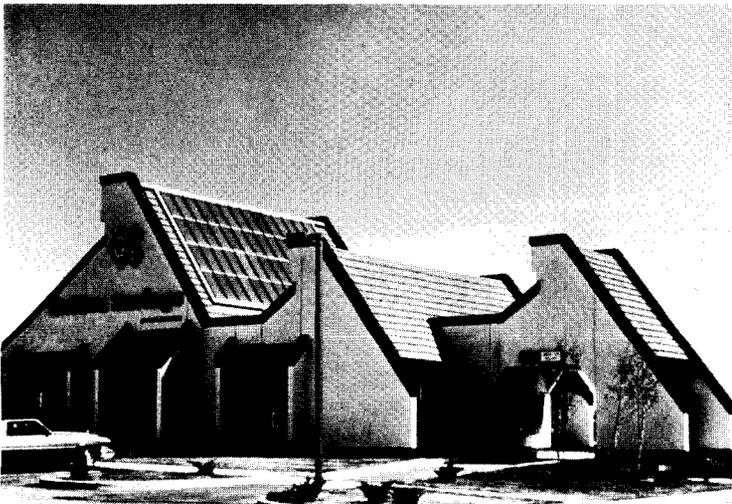
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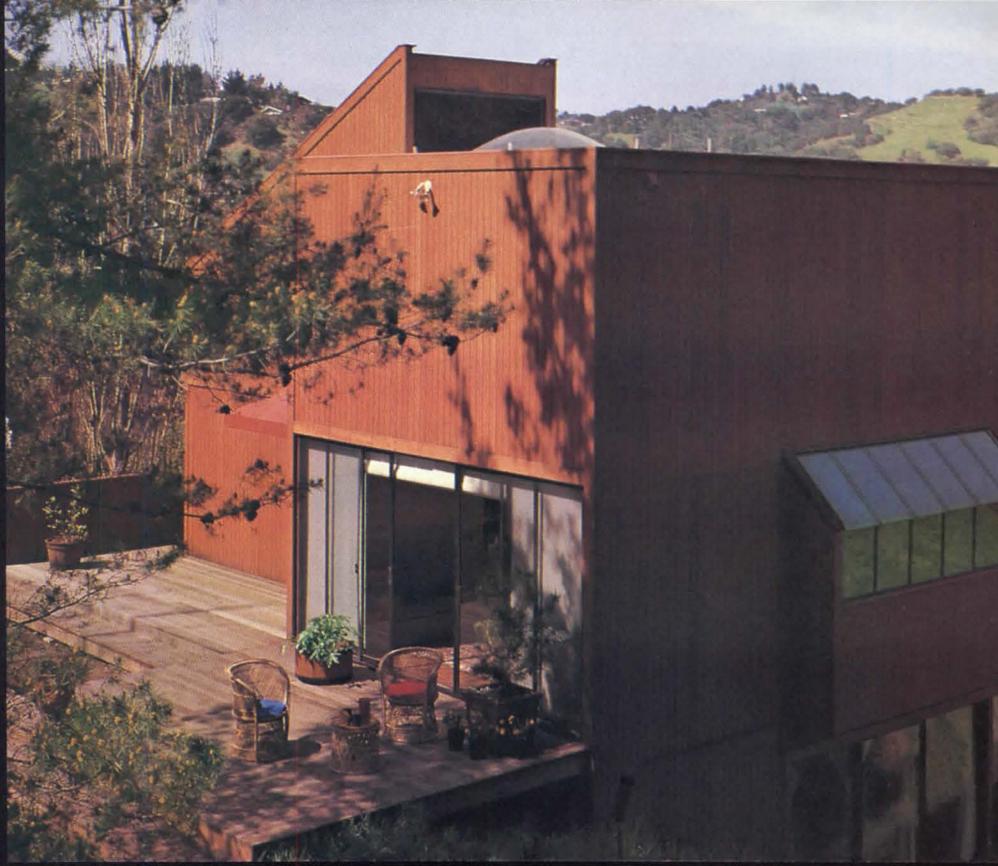


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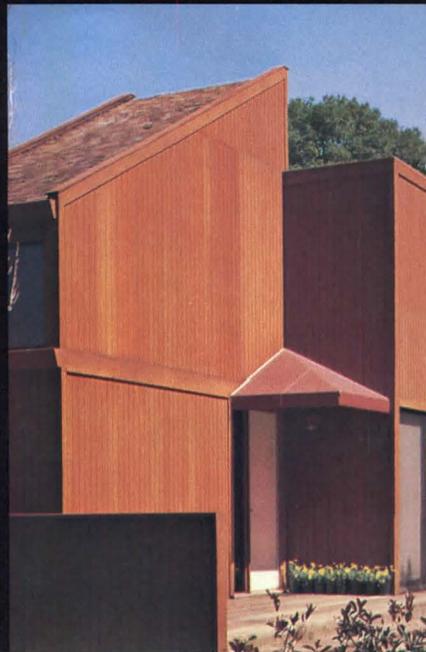
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Architect: Walter A. Hunt, Jr.,  
Planning and Design



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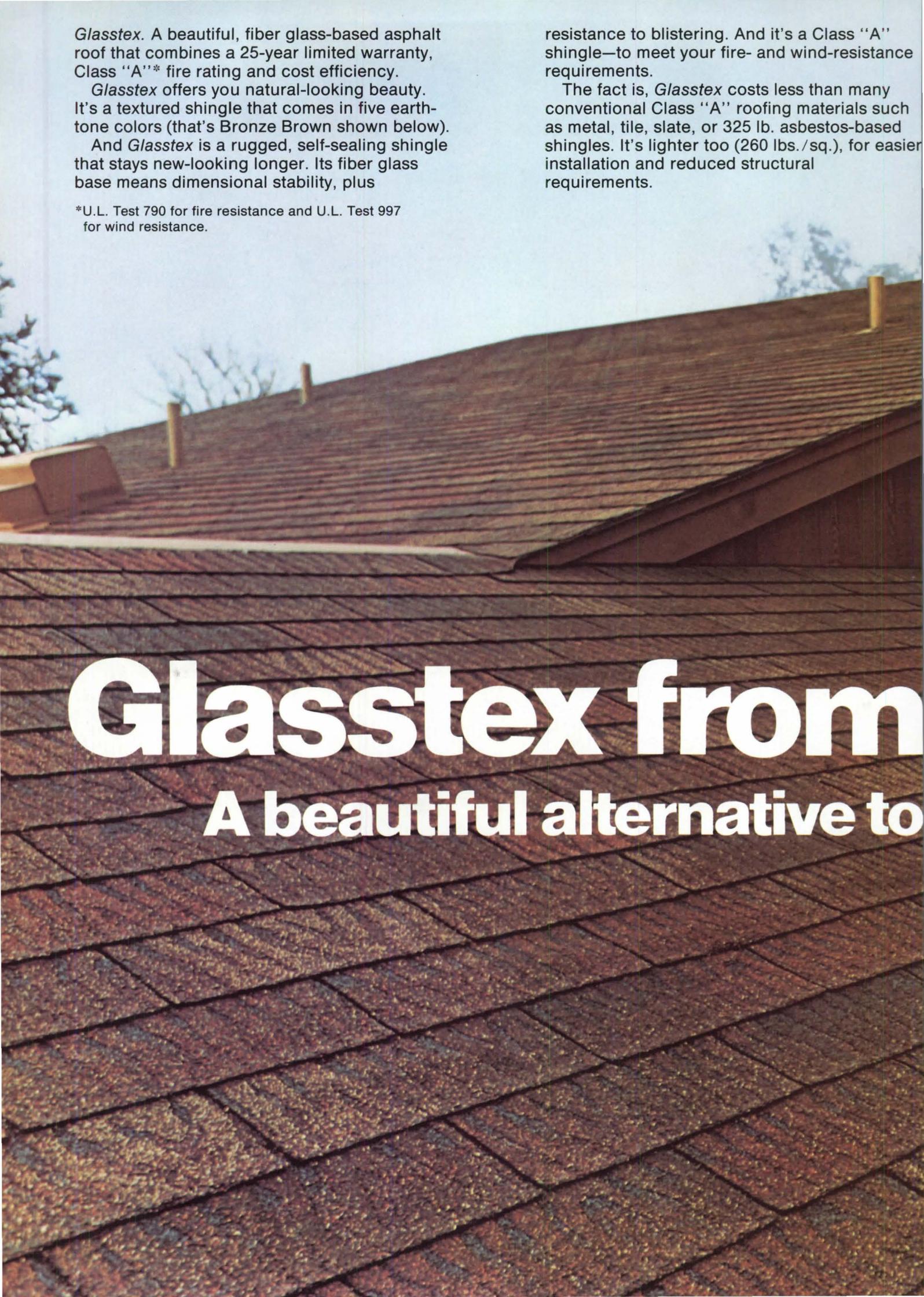
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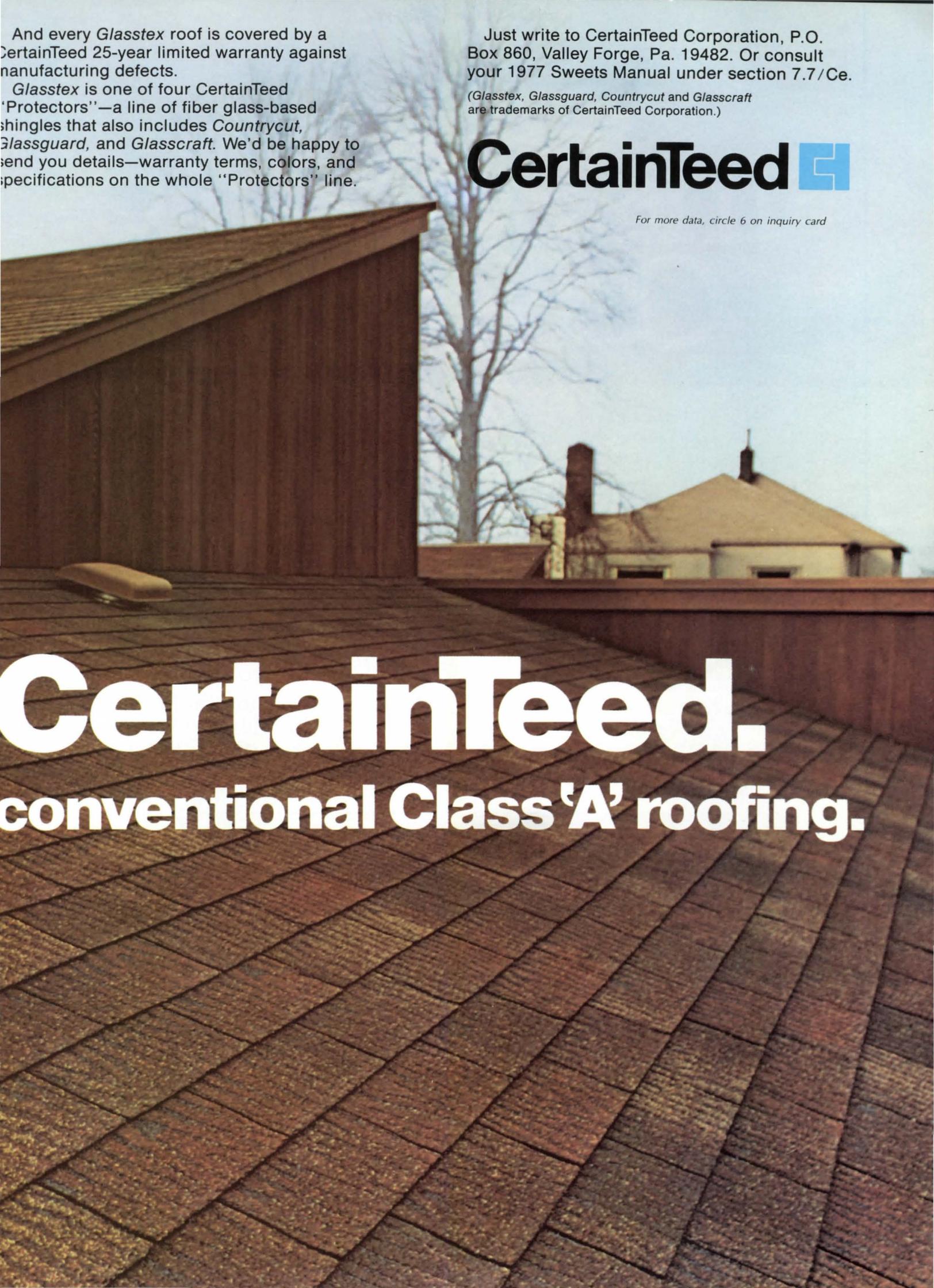
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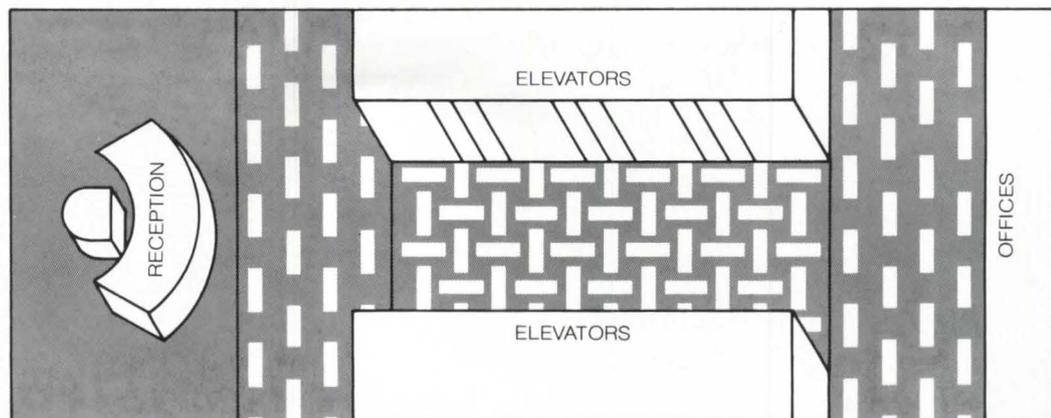
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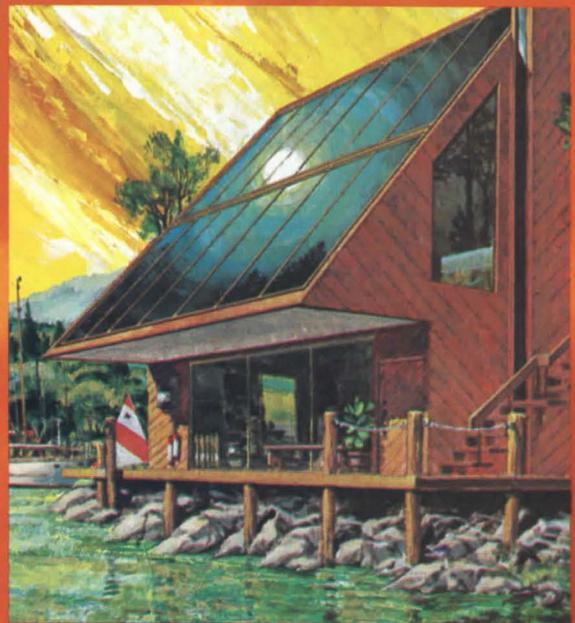
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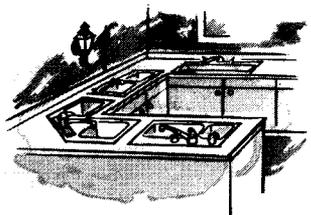
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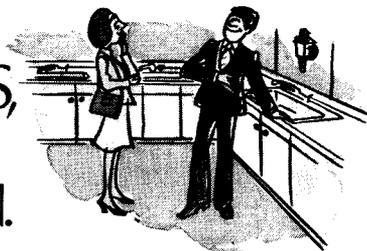
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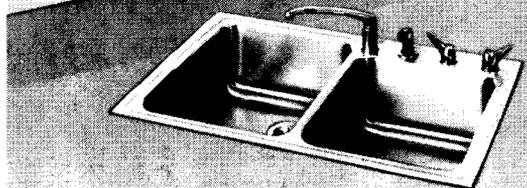


# MAKE MORE OF IT WITH ELKAY.



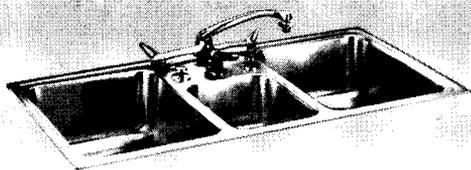
LCMR 3322-C with  
LK 2301 Faucet.

This Elkay Cuisine Centré Sink features a spacious main compartment and a utility-shaped side compartment.



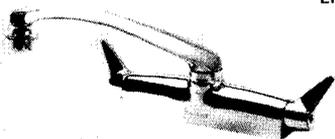
LR 250-C

This Elkay 250+ Sink provides one extra-size compartment to accommodate large roasting and broiling pans, and one regular-size compartment.



LCR 4322-C

A sink like this Elkay Cuisine Centré can change your client's entire cooking operation by providing almost space-age convenience.



LK 2200

Insist on Elkay Faucets. Only an Elkay Faucet is good enough for your Elkay Sink.

For more information, talk to your Elkay Representative or write to us.

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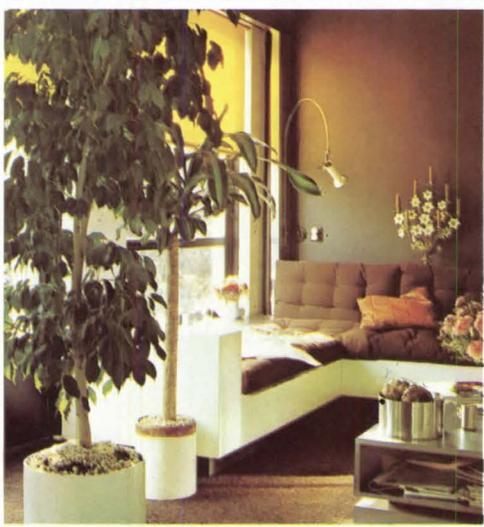
Write or call for literature and complete details. Marvin Windows, Warroad, MN 56763. Phone: 218-386-1430.

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# The Winners:

1977 Plywood Design Awards



1. Charles Herbert Bryan Shiffler  
2. Diana Crawford Don Sandy Jim Babcock  
3. Ted Palmer Bill McCulloch  
4. William Bruder

## Residential/Single Family

**FIRST AWARD:** William McCulloch, AIA, McCulloch Architects. **LOCATION:** Long Beach, California. **JURY:** "The handling of simple materials, the detailing, the use of natural light and the transformation—outside and inside—of a tract house to an effective piece of architecture is an honest use of plywood in an organized fashion. Plywood was a logical choice because of the need to sheath existing walls."

**CITATION:** E. Fay Jones, Euine Fay Jones Architect. **LOCATION:** Little Rock, Arkansas. **JURY:** "The variety of ceiling heights helps achieve a great sense of warmth in the interiors, despite the vast spaces. There's a serenity, a repose, a completeness to the house."

FIRST AWARD



CITATION

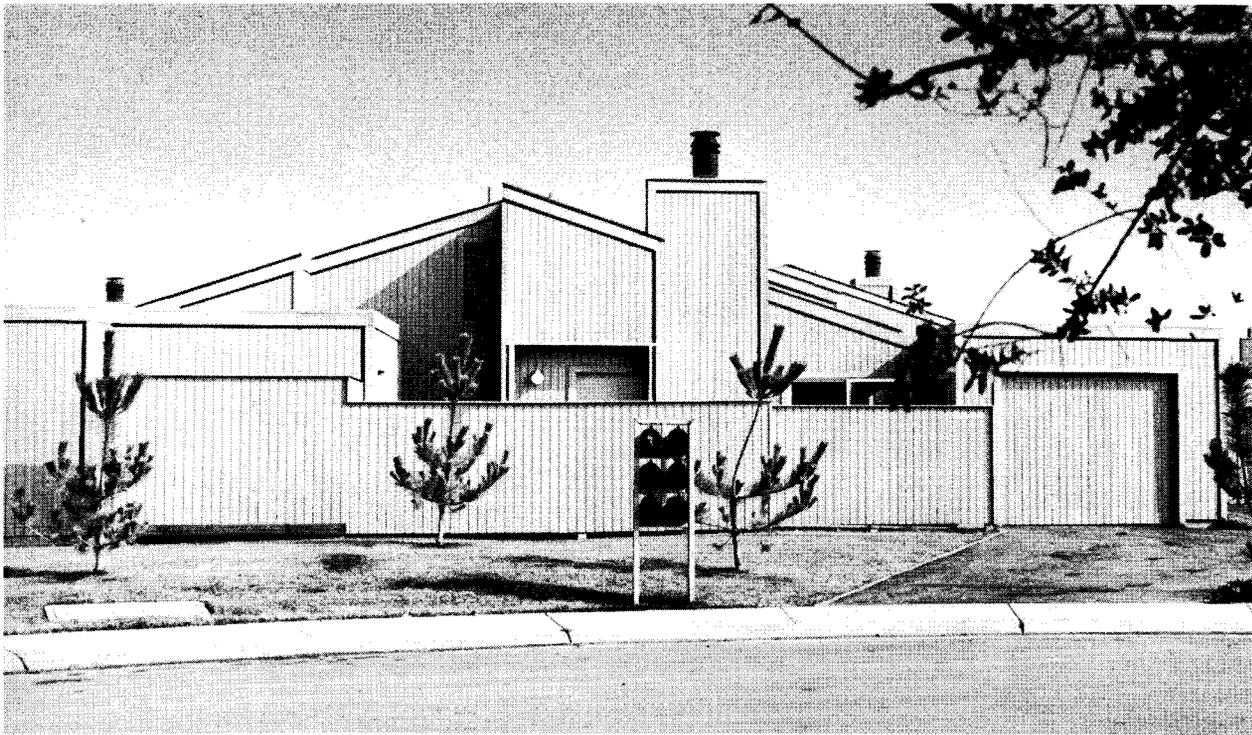
**JURY:** Paul Rudolph, Chairman, FAIA, New York, New York; William Bain, Jr., FAIA, Bellevue, Washington; John D. Bloodgood, AIA, Des Moines, Iowa.

# Residential/Multifamily

FIRST AWARD: Donald Sandy, Jr., AIA, James A. Babcock, Architects/Planners. LOCATION: Stockton, California. JURY: "Developing the land to the maximum use, the architects have given a great sense of privacy to the townhouses through separate entries, garages and courts. The uniform use of the plywood on walls, garage doors, fences and chimney enclosures gives the project an intimacy that's appropriate to the residential scale."

CITATION: Gwathmey-Siegel Architects. LOCATION: Purchase, New York. JURY: "Two-story entry porches break down the scale of this project and give it character. Detailing and careful joint placement make the apartments an admirable piece of architecture, especially considering the budget."

FIRST AWARD



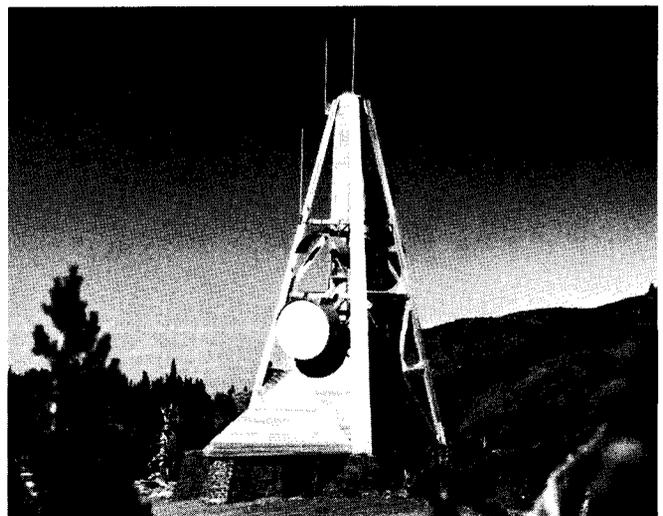
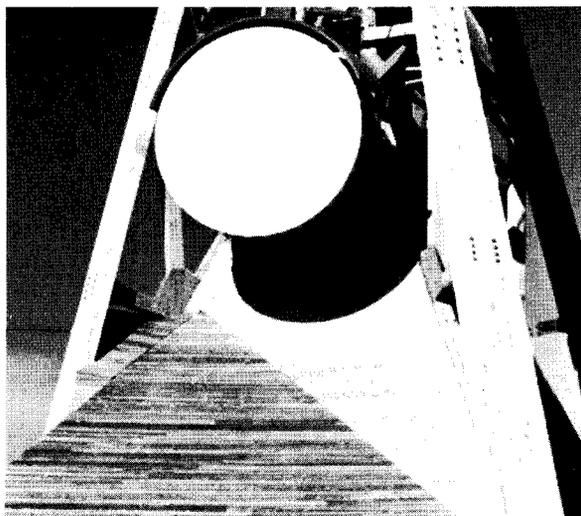
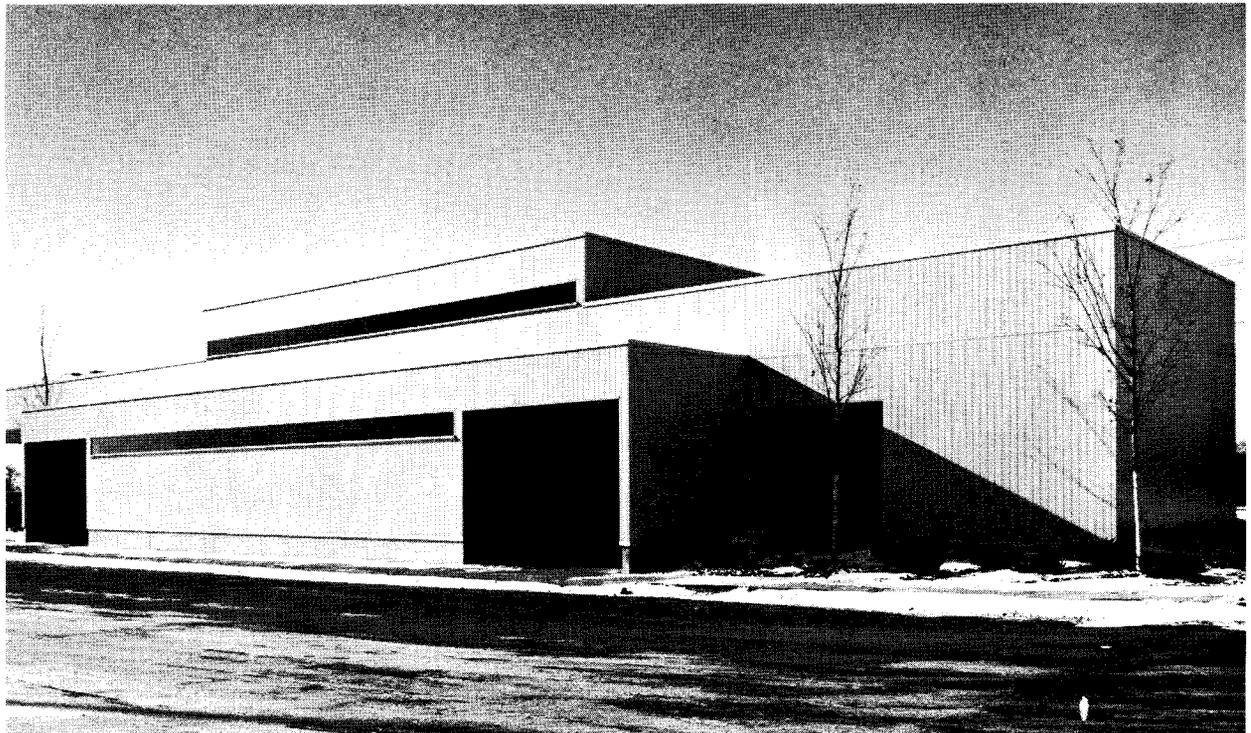
CITATION

## Commercial/Institutional

**FIRST AWARD:** Charles Herbert and Associates.  
**PROJECT:** South Des Moines National Bank, Wakonda Branch, Des Moines, Iowa. **JURY:** "The simplicity of this structure makes it stand out against the automobile forms in the parking lot. The jury admires the boldness and simplicity in handling exterior volumes."

**CITATION:** Shavey Schmidt DeGrasse Shavey, Partners in Architecture. **PROJECT:** Mission Peak Microwave Tower, Wenatchee, Washington. **JURY:** "A combination of ruggedness, romanticism and the need to solve mechanical and scientific problems, the tower is a kind of sculpture dominating a very rugged landscape. Once seen, the tower is hard to forget. The use of plywood facilitated construction in a hostile—and virtually inaccessible—environment."

### FIRST AWARD



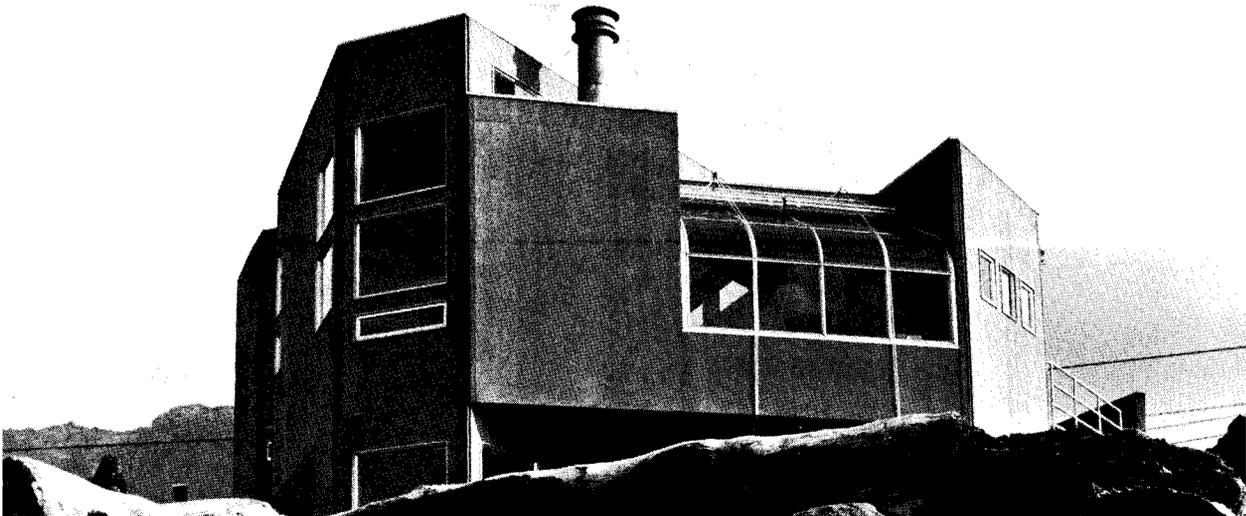
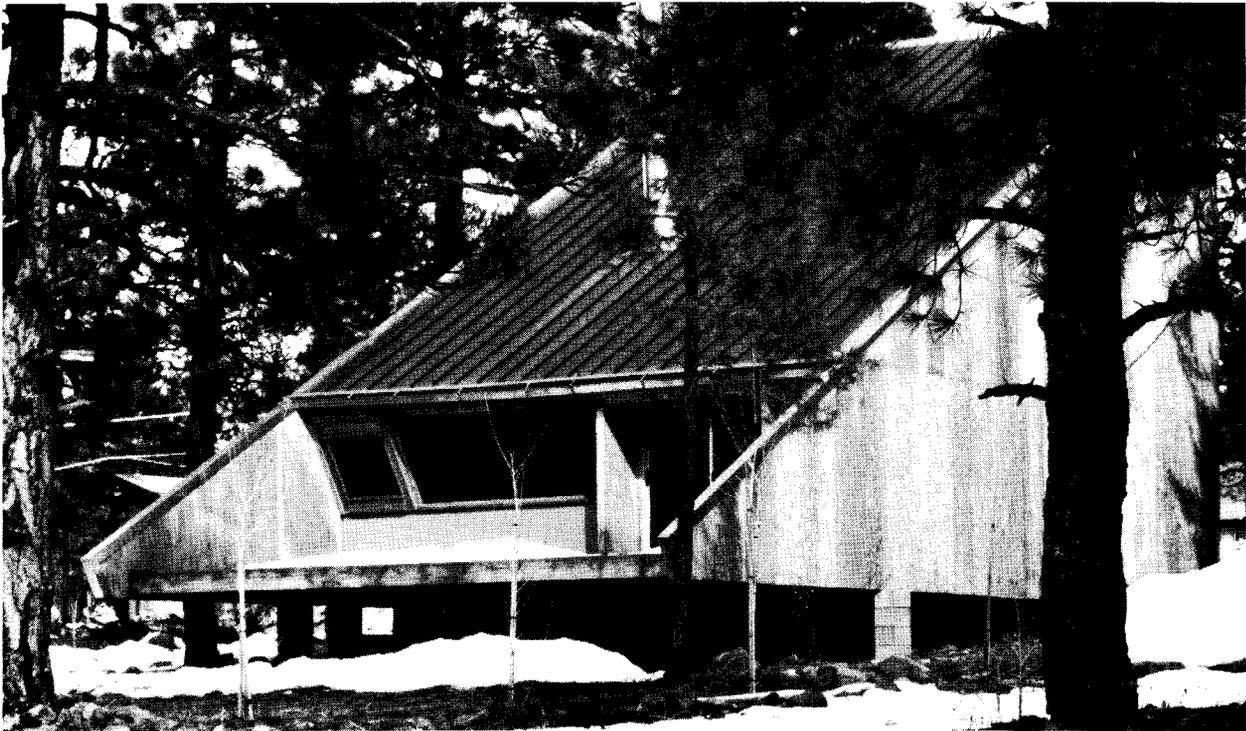
### CITATION

# Vacation Homes

FIRST AWARD: William P. Bruder, Architect. LOCATION: Pinewood, Arizona. JURY: "There's a great variety of spaces; the interior is intimate while it soars. The small amount of glass, appropriate for the site and the home's intended use, is used to the best advantage. The cabin is very direct, without pretensions. It uses materials in a very dignified way, and nothing about its economy smacks of cheapness."

CITATION: Barnett Schorr Company, Inc., AIA. LOCATION: Arch Cape, Oregon. JURY: "Though not totally consistent, this weekend house has a spirit of lightness which would give joy. The plan of the house is very good, complete with quarters for the owners on the upper floor and space for youngsters below."

FIRST AWARD



CITATION

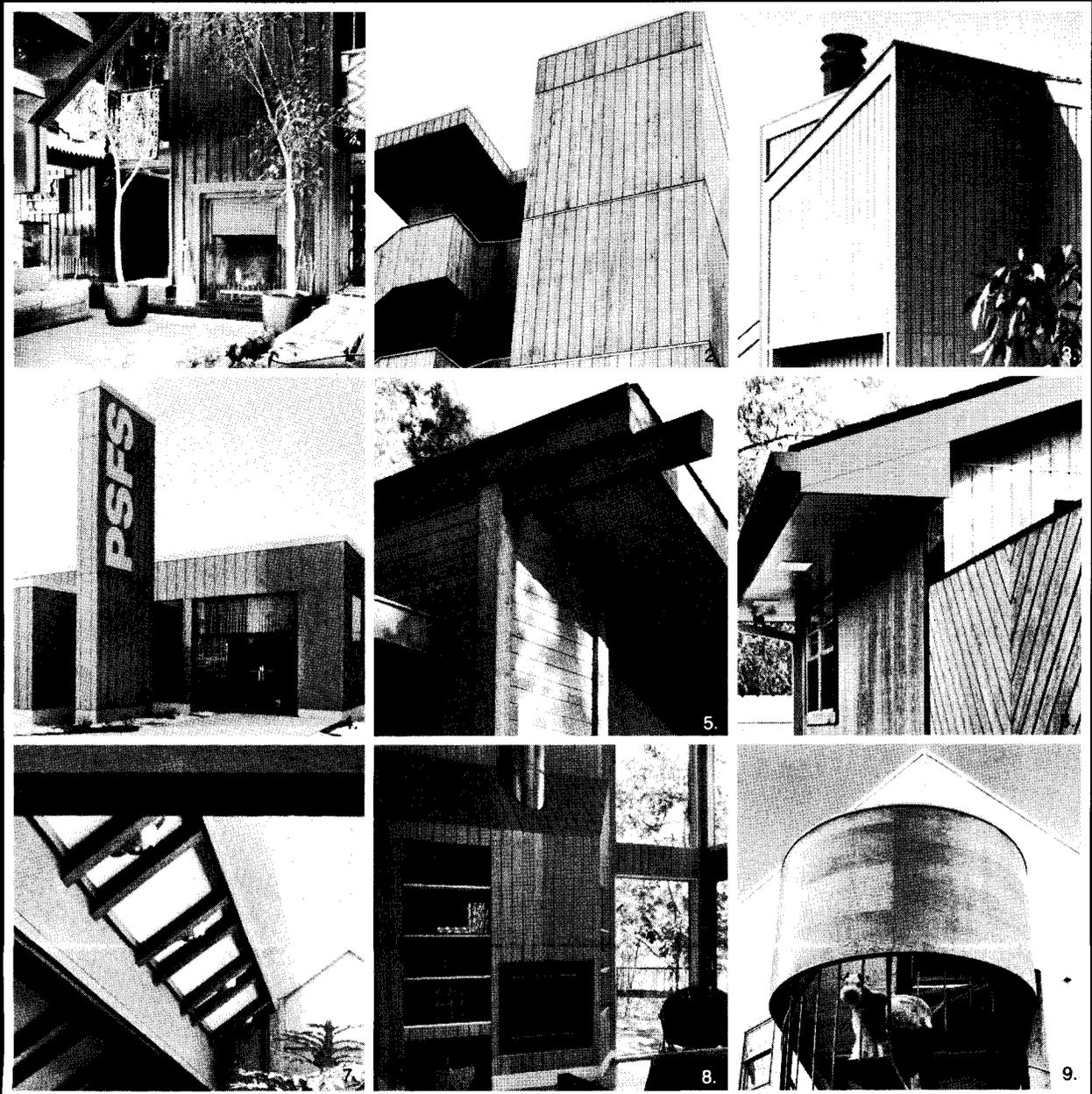
# More Ideas

1. E. Fay Jones, Pallone residence, Little Rock, AR.
2. David Kenneth Specter, Yardarm Beach Condominium, Westhampton Beach, NY.
3. Donald Sandy, Jr., AIA, James A. Babcock, Architects/Planners, Tree Swallow Court, Quail Lakes, Stockton, CA.
4. John A. Fatula, Philadelphia Saving Fund Society Branch Office, Richboro, PA.
5. Frank Y. Peteet II, River House, Browns Ferry, Georgetown, SC.
6. Frank Lopreore, Mesa Four-Plex Apartments, Metairie, LA.
7. E. Fay Jones, Pallone residence, Little Rock, AR.
8. Joanne Goldfarb, Singer vacation home, Lake Linganore, MD.
9. D.J. Pierce and C.H. Bone, Kiss residence, Chester-ton, IN.

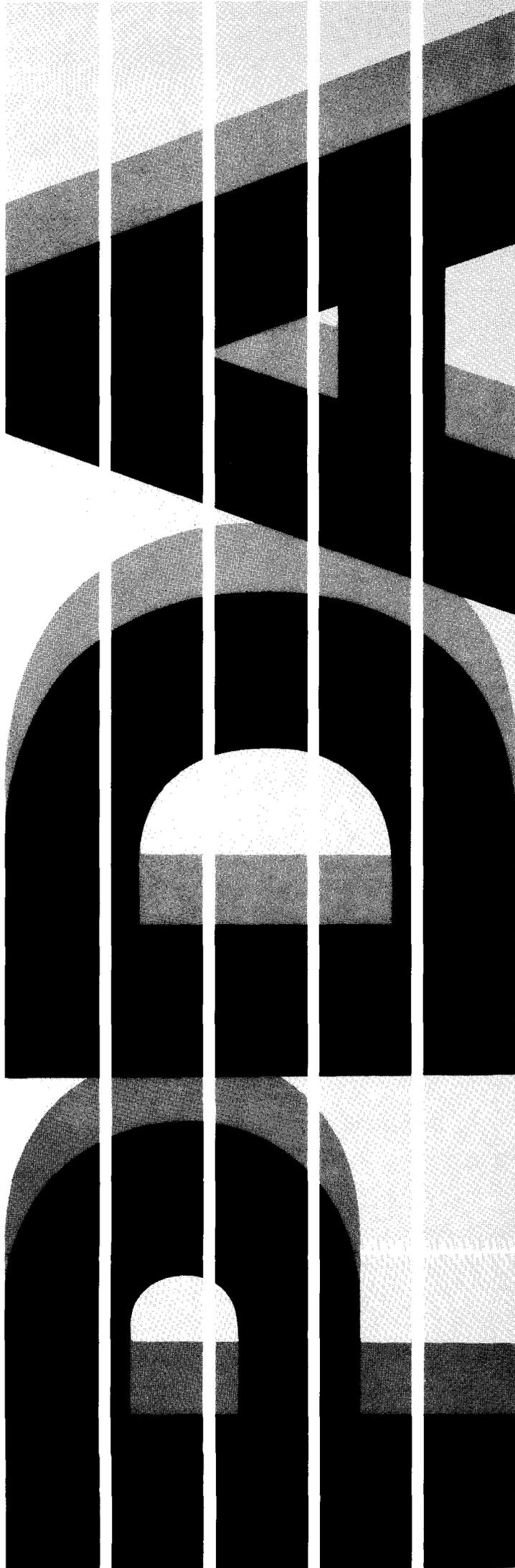
If you'd like even more design ideas using plywood and plywood systems, please write American Plywood Association, 1119 A Street, Dept. AR-057, Tacoma, WA 98401.



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The Plywood Design Awards Program is sponsored by the American Plywood Association and Professional Builder & Apartment Business Magazine.



## Call for Entries Plywood Design Awards

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The program, approved by the American Institute of Architects, is sponsored jointly by the American Plywood Association and Professional Builder magazine.

First Awards of \$1,000 plus Citations of Merit are given in each of four categories: residential/single family, residential/multi-family, vacation homes, and commercial/institutional.

Jurors will be John Field, FAIA, San Francisco, California; John D. Bloodgood, AIA, Des Moines, Iowa; and Victor Christ-Janor, AIA, New Canaan, Connecticut.

December 1, 1977, is the deadline for entries.

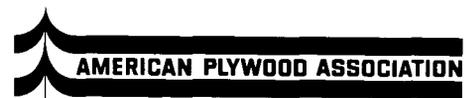
For rules and entry forms, mail this coupon to:  
American Plywood Association  
Department AR-057  
Tacoma, WA 98401

Name \_\_\_\_\_

Number of forms required \_\_\_\_\_

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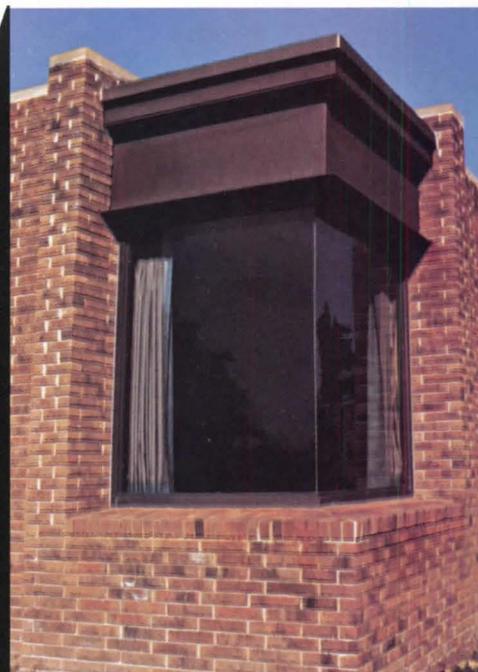
# Du Pont now acrylic glazing materials design



Covered walkway provides safety for students at University of Delaware, Newark, Del. Architect: John Carl Warnecke & Associates.



Security glazing protects tellers at Aetna Federal Savings & Loan, Philadelphia, Penna. Architect: Obermaier & Falco.



Windows retain sparkling clarity at Governor Bacon Health Center, New Castle, Del. Architect: Howard Greenhouse.



Decorative panels highlight First National Bank Cafeteria, Denver, Colorado. Architect: Gensler & Associates.



This skylight is representative of the type of skylights now being fabricated with "Lucite" cast acrylic sheet.



Inside view Governor Bacon Health Center.

# has two LUCITE® to give architects more freedom.



Windows combine beauty and durability at State Mutual of America Building, Denver, Colorado.  
Architect: Roark Associates.



Spectator glazing protects without obstructing view of game at University of Colorado Stadium, Boulder, Colorado.  
Architect: Herb Ross.

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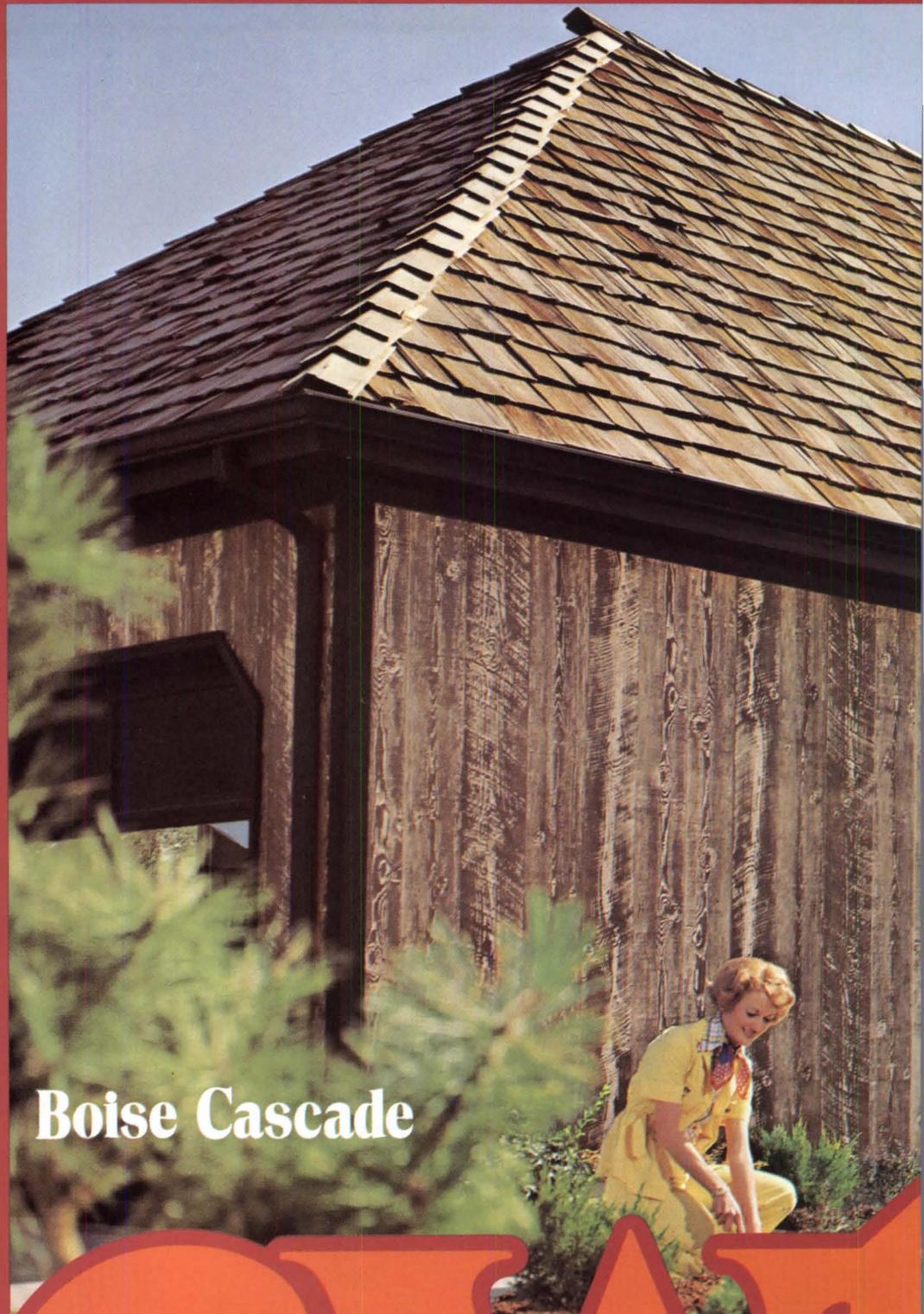
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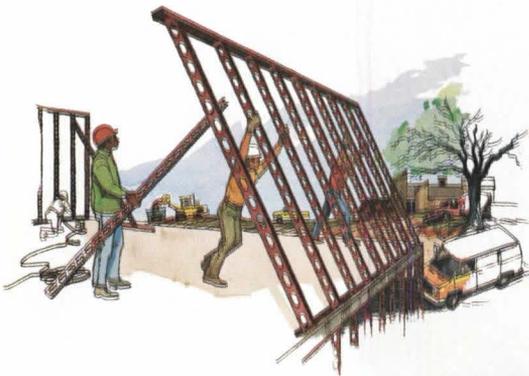
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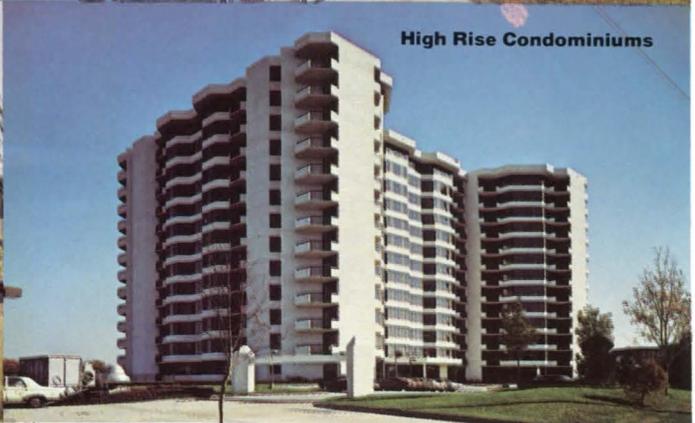
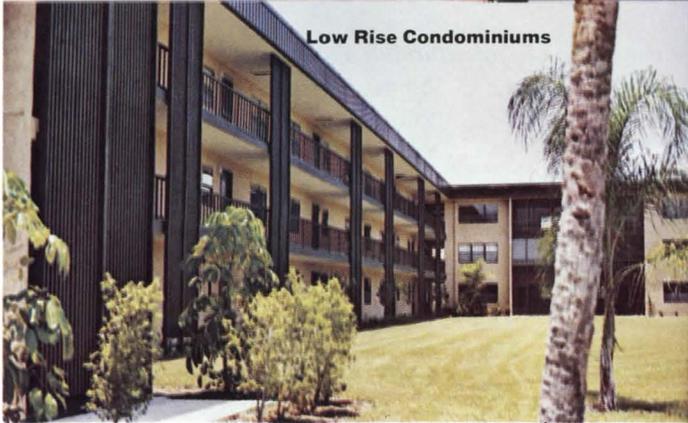
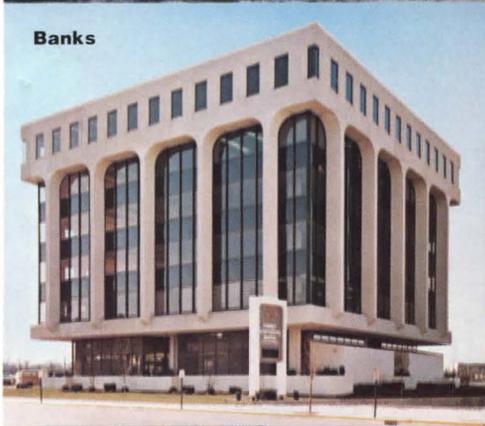
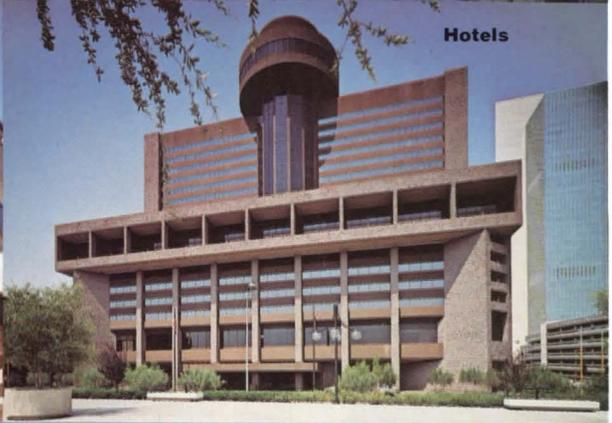
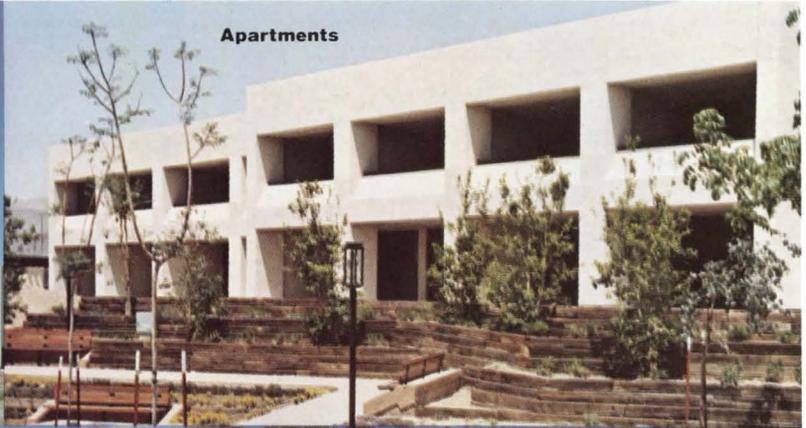
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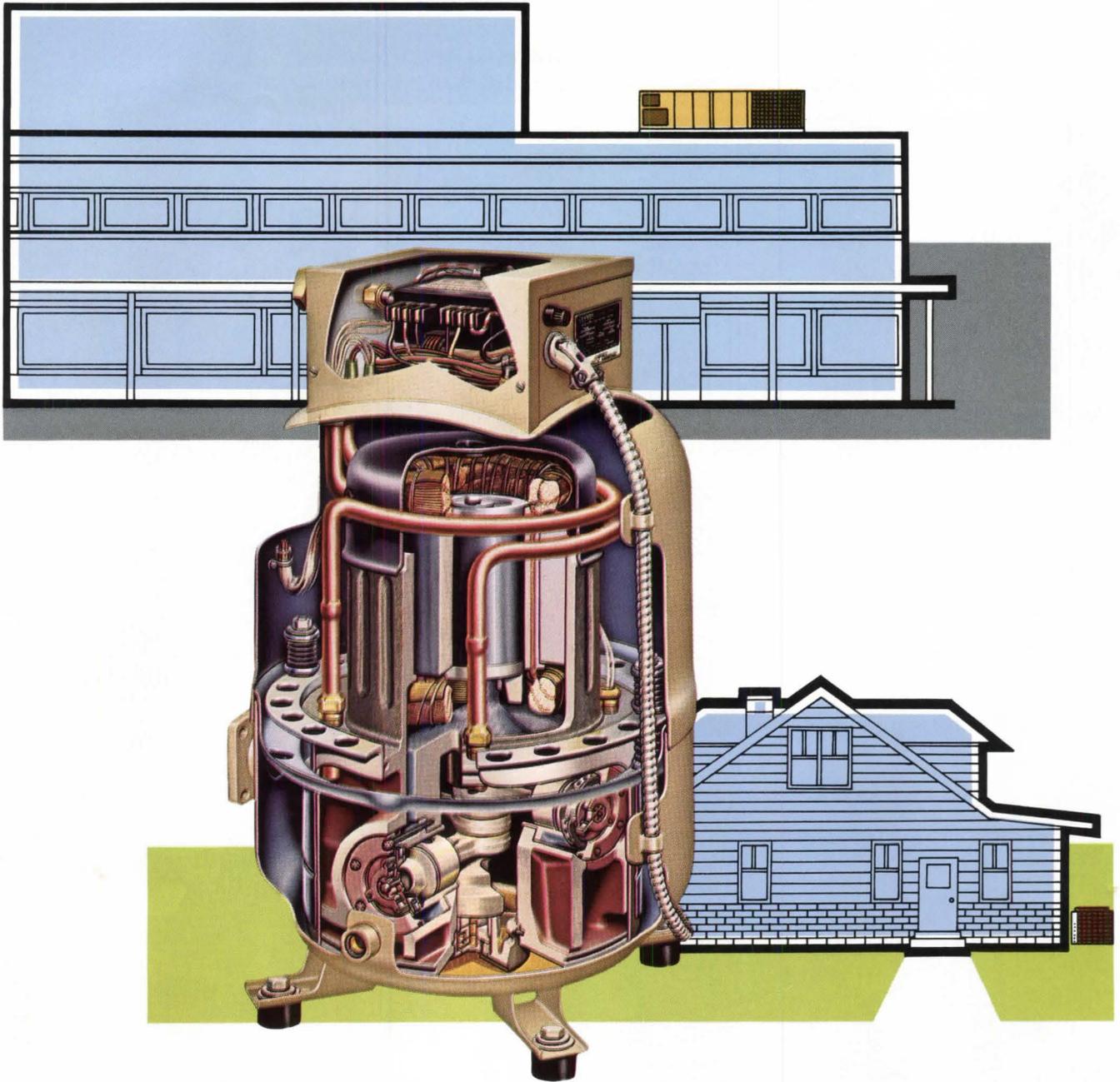
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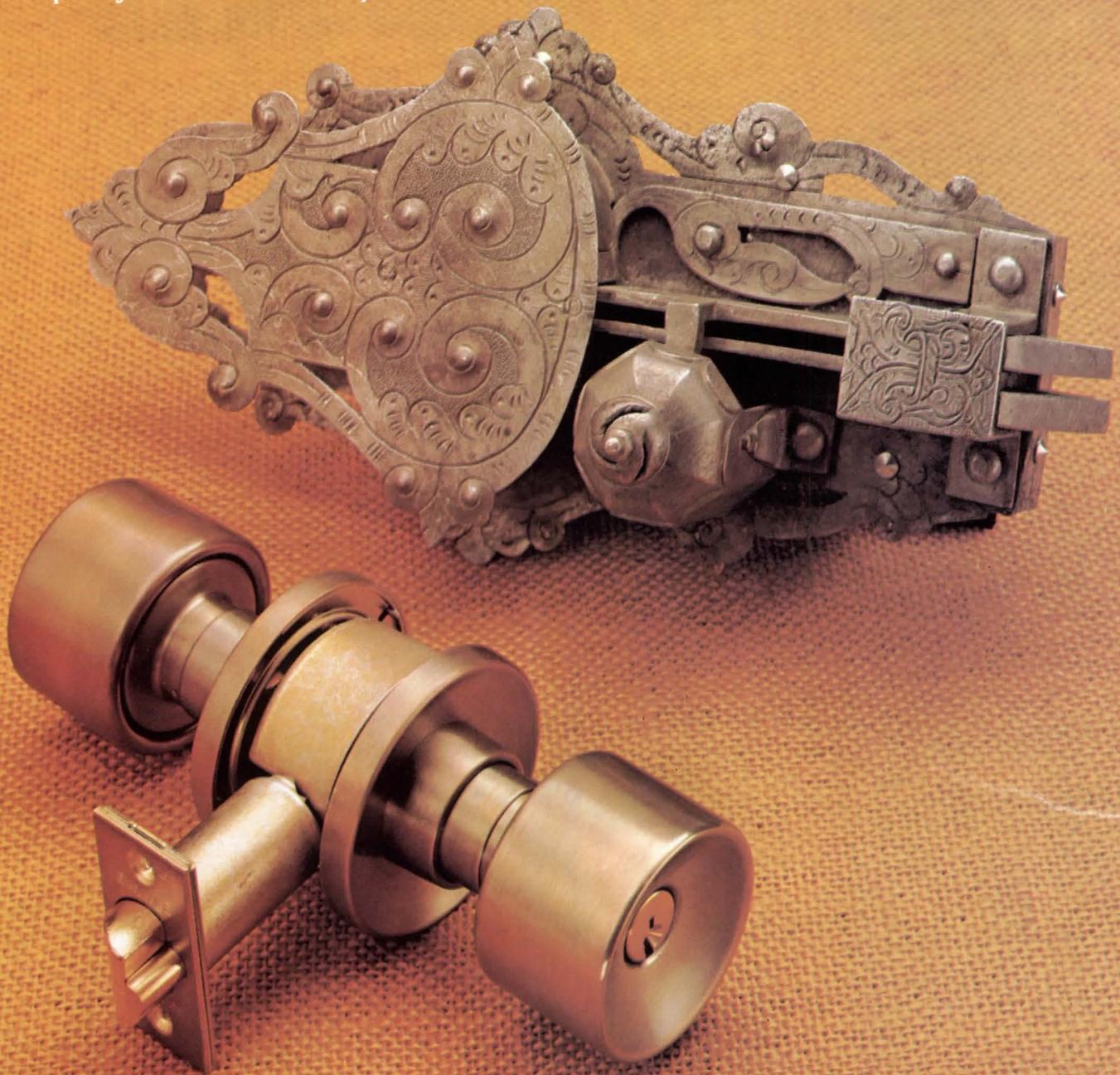
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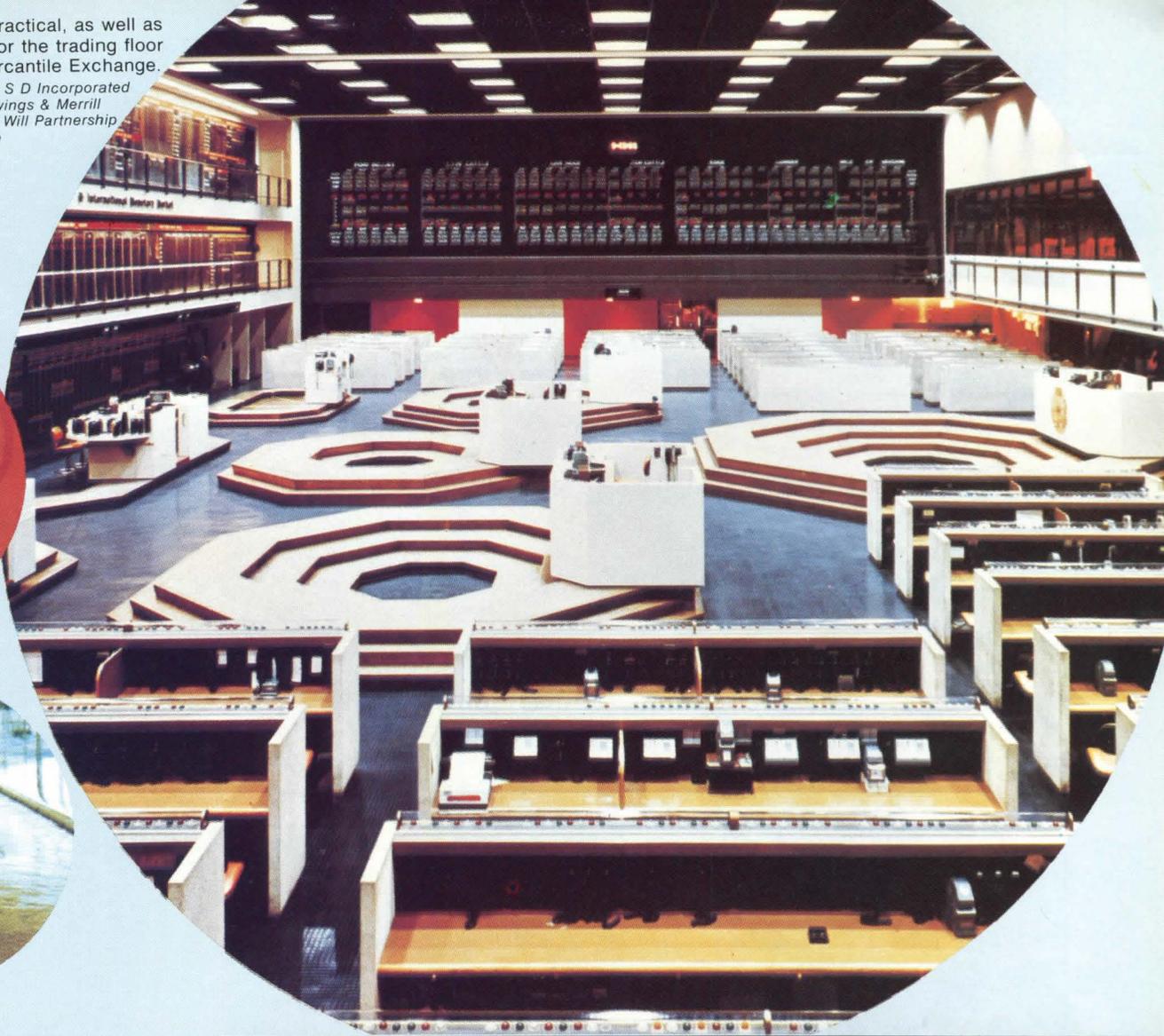
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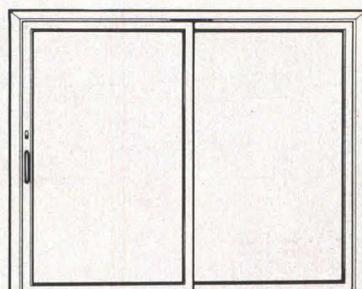
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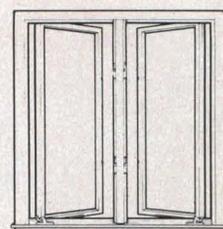
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# from sea to shining sea.

multiple-glazing, all excellent fuel savers.

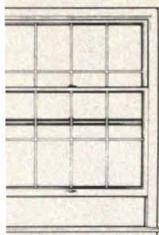
Combined in an energy-efficient design that's two times more weathertight than industry air-infiltration standards.

And with Perma-Shield® vinyl-clad windows and sliding doors there's the added beauty of low upkeep. It makes Andersen the Beautiful, practical in any

building, any design, from sea to shining sea.

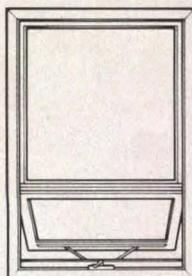
For more details, see Sweet's File 8.16/An. Or call your Andersen distributor or dealer, he's in the Yellow Pages under "Windows." Andersen Corporation, P.O. Box 12, Bayport, MN 55003.

7119 Copyright © Andersen Corp., Bayport, MN 1977



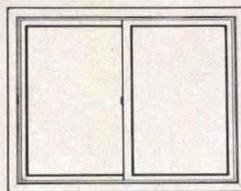
### Perma-Shield Narroline® Windows.

Traditional beauty without the traditional bother. Wood frame is clad with rigid vinyl. Exterior of sash is protected by a weather-resistant, long-lasting polyurea finish.



### Awning Style Windows.

Perma-Shield awning windows available white or our earth-tone color, Terratone. Or choose primed wood.



### Perma-Shield Gliding Windows.

Slide-open "picture" windows. Low upkeep vinyl, inside and out.

The beautiful way to save fuel™

# Andersen Windowalls®



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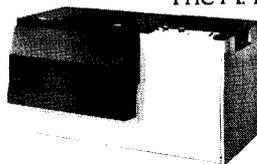


## Pushing a button costs 30% less than pushing a pencil.

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it's easy to make scaled-down site plan worksheets from your original building floor plans.

### See how much repetitive jobs are costing you.

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- Send me your free bulletin on reprodrafting techniques.
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AR-5/15 77

# Shakes. Fakes.



## Shakertown Panels have a look the look-alikes can't match.

The pictures tell the story.

There's no substitute for real cedar shakes and shingles. They have a look, feel and smell the imitators just can't imitate. That's why homes built with cedar shakes and shingles often sell faster.

Of course, the other kinds of siding have their own advantage, too: Fast, panelized installation.

Now imagine a siding that gives you both. Real cedar and time-saving application. That's the whole idea behind Shakertown Panels.

Shakertown Panels are 4 and 8 foot long panels of #1 grade Western red cedar shakes or shingles permanently bonded to a wood backing. So while they go up fast like other sidings, they won't dent or make noise like aluminum. Crack or fade like vinyl. Or need frequent refinishing like hardboard. In fact, Shakertown Panels look, last and insulate better than practically any other sidewall material.

Write us for all the details.

Shakertown Panels. They go up fast. They sell homes fast.



## Shakertown® Panels

Box 400, Winlock, Washington 98596 (206) 785-3501

In Canada: Bestwood Industries, Ltd., Box 2042,  
Vancouver, B.C. V6B 3R6

For more data, circle 25 on inquiry card

# Combine proven performance with energy conservation.

**McQuay Fan Coil Systems give you energy and cost savings.**

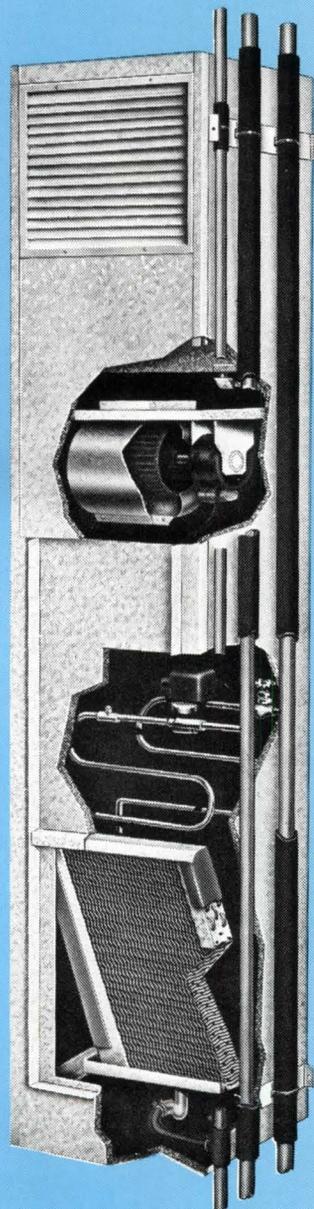
Why neglect traditional, proven air conditioning systems when considering energy conservation? Fan coil systems have been available for many years, and because of their flexibility, systems can be designed to make fan coils extremely energy conscious.

At McQuay, we have recognized this energy conservation potential for fan coil systems. In addition, we have been concerned with reliability and life cycle costs. Our Hi-Line Seasonmaker Fan Coil Air Conditioning System has it all.

We've redesigned the unit to produce the widest range of CFM's—up to 1200—at the lowest kW consumption. But we preserved the proven features that built Seasonmaker's reputation for dependable, economical performance.

Still the same installed cost savings of 15% and more. Just stack the units, sweat the factory supplied couplings together and connect the power. Still the same versatility of discharge arrangements that allow you to service one room or many with a single unit. Still the same simple maintenance.

Design flexibility, reliability, life



cycle cost savings. What you'd expect from McQuay. Before your next job—whether it's new construction or retrofit—apartment, hotel or office building, contact your McQuay rep, or write us for more details on Hi-Line Seasonmaker fan coil units. Write McQuay Group, McQuay-Perfex Inc., P.O. Box 1551, Minneapolis, Minnesota 55440.



**McQUAY  
GROUP**  
McQUAY-PERFEX INC.®

P.O. Box 1551, Minneapolis, MN 55440

*For more data, circle 26 on inquiry card*



## DELTA SCALD - GUARD. With a new safety feature at your finger tip.



It's the exclusive HOT-STOP BUTTON.™ The latest safety innovation for Delta's patented Scald-Guard bath valves. Here's how it works.

As with all Scald-Guard faucets, you can't turn on hot water without first turning on cold. And when you rotate the handle into a position that delivers about one-half hot, the HOT-STOP BUTTON prevents you from going further. If hotter water is desired, the button must be fully depressed before the handle will rotate into higher temperature areas.

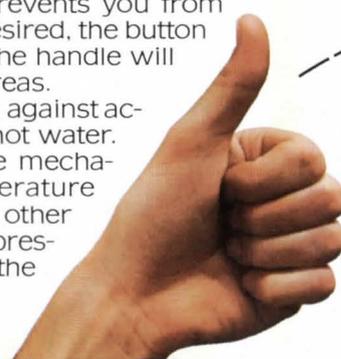
This means greater protection against accidental discharge of extremely hot water.

An optional pressure balance mechanism maintains constant temperature even when simultaneous use of other water appliances causes sudden pressure changes. It simply senses the

change and adjusts to maintain the mix of hot and cold water the user originally set.

As with all Scald-Guard, our newest models are available with a special "reverse valve" for safe back-to-back installation. This saves time and money by eliminating costly, cumbersome cross-piping.

Write for our free literature. And watch for our commercials on TV, preselling prospects today who will be customers tomorrow.



# DELTA & DELEX FAUCETS



**No washers • No washer worries**

Delta Faucet Company, Dept. I-1, Greensburg, Indiana 47240.  
A Division of Masco Corporation of Indiana.

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For more data, circle 27 on inquiry card

# Announcing the end of the slab!

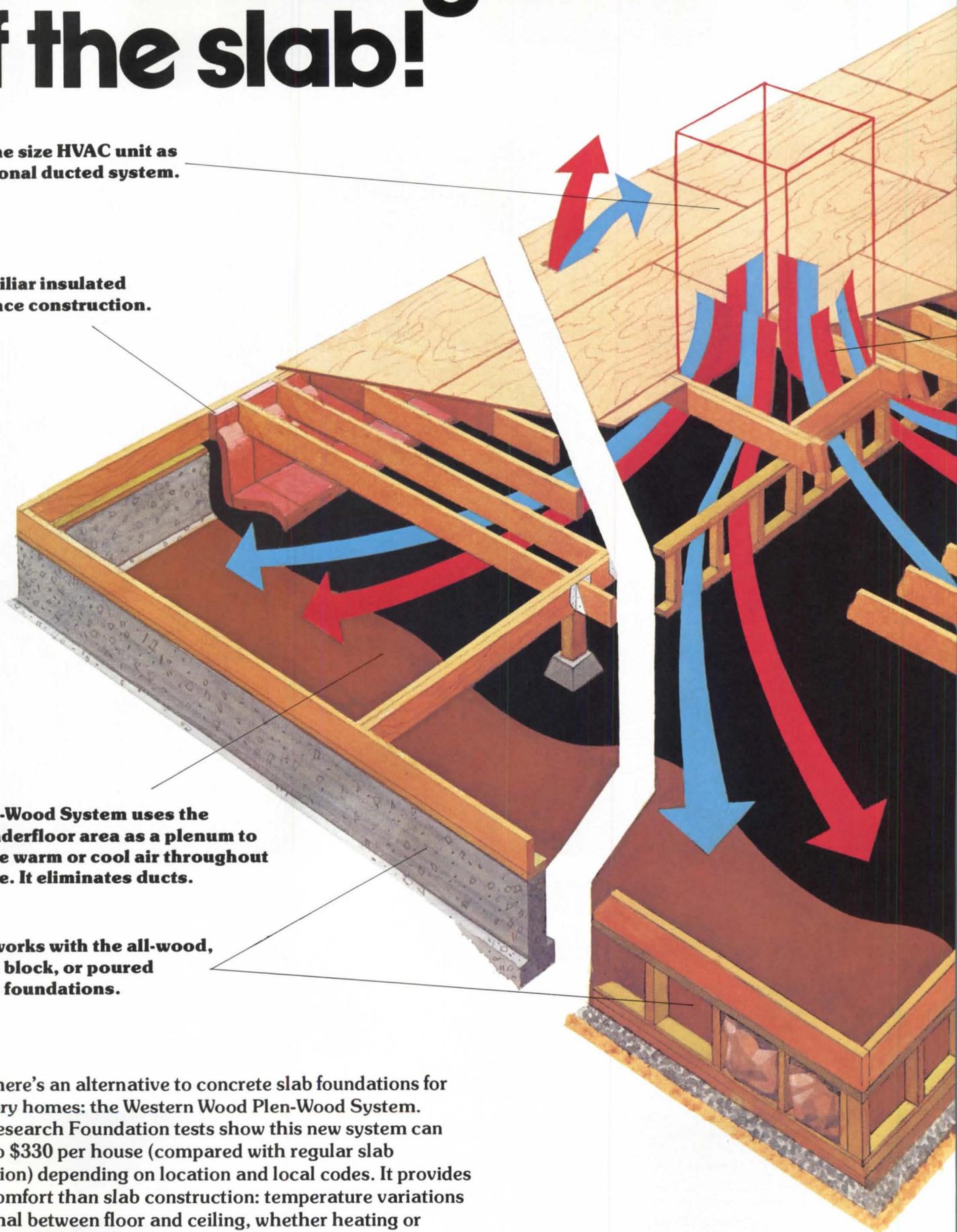
Uses same size HVAC unit as conventional ducted system.

Uses familiar insulated crawl space construction.

The Plen-Wood System uses the entire underfloor area as a plenum to distribute warm or cool air throughout the house. It eliminates ducts.

System works with the all-wood, concrete block, or poured concrete foundations.

Finally, there's an alternative to concrete slab foundations for single story homes: the Western Wood Plen-Wood System. NAHB Research Foundation tests show this new system can save up to \$330 per house (compared with regular slab construction) depending on location and local codes. It provides greater comfort than slab construction: temperature variations are minimal between floor and ceiling, whether heating or cooling. And wood floors are more resilient, and more appealing to home buyers, than concrete floors. And indications are the system saves energy for both air conditioning and heating. Will the Plen-Wood System replace the slab? We think so. Get more details, and you'll think so, too. Mail the coupon today!

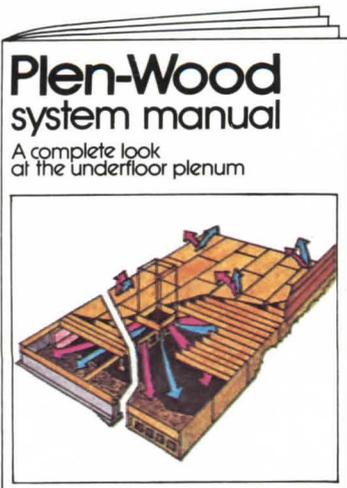


Openings for adjustable air registers are cut through the floor wherever desired to suit room arrangements.

Down-flow design directs air into the sealed plenum.

Use of the underfloor plenum began in the 1950's and is now used in more than 2,000 homes. The Plen-Wood System was developed as a direct result of industry efforts to reduce construction costs and energy requirements. Sponsors included Western Wood Products Association, American Plywood Association, Southern Forest Products Association, and American Wood Preservers Institute. National cost estimates were prepared by the NAHB Research Foundation. The system is permitted by FHA and model building codes and meets new Federal energy standards.

# Introducing the Western Wood Plen-Wood System!



Gentlemen:  
 I want complete technical assistance. Have your representatives phone for an appointment.  
 Send me your free Plen-Wood System Manual with complete specifications on the Plen-Wood System.

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FIRM \_\_\_\_\_ PHONE \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

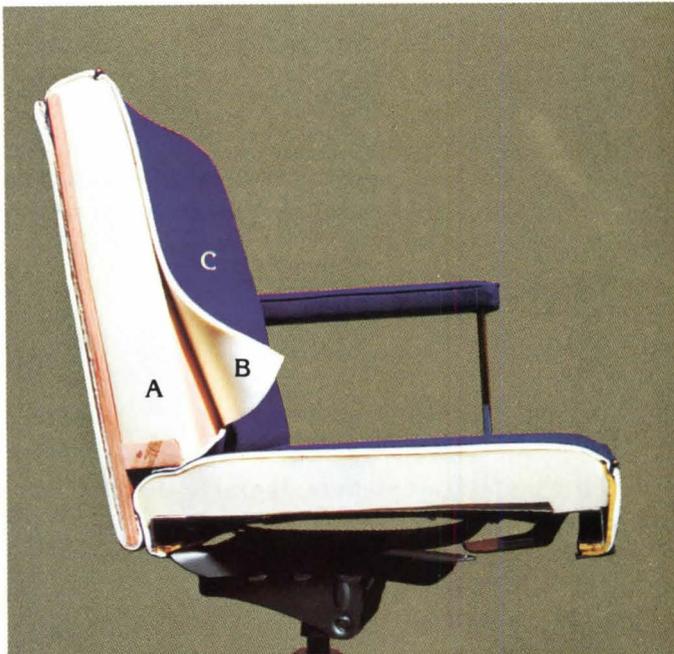


**Western Wood Products Association**

Dept. AR-577, Yeon Building, Portland, Oregon 97204  
One of a series by members of the American Wood Council.



# How properly installed the flammability performance



A. Standard polyurethane cushioning foam. B. A layer of VONAR 3 interliner coated on back of fabric. C. Standard nylon upholstery fabric.

## The inside story.

To help you cope with present needs and future regulations on ignition of upholstered furniture, Du Pont presents the family of VONAR interliners.\*\* The VONAR interliners have shown they can reduce both the likelihood of ignition of furniture as a unit, as well as reduce the burning rate of upholstered furniture in limited ignition situations.

Each VONAR interliner is a thin layer of specially formulated cellular elastomer which is added to furniture under the upholstery fabric. When used properly in furniture, the VONAR interliners totally envelop the cushioning material. Preliminary analyses of furniture to date indicate that the installed VONAR interliners have little or no effect on furniture comfort, aesthetics, or hand—and they can be added at reasonable cost.

VONAR interliners are available in three different application configurations from Du Pont licensed interliner manufacturers or their representatives. VONAR can be applied in any of three ways: as an envelope adhered to standard cushioning material, backcoated onto upholstery fabric, or sandwiched as a separate layer between the fabric and cushioning material.

\*Du Pont trademark for interliner made by licensed manufacturers according to Du Pont specifications. Du Pont supplies the basic elastomer to such manufacturers, but Du Pont does not make interliners.

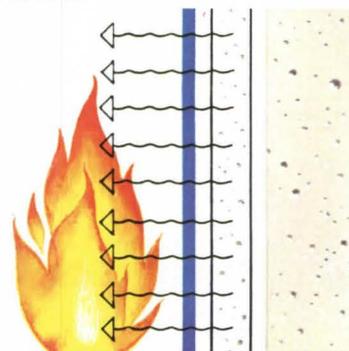
\*\*Thus far there are three VONAR interliners, and they differ in thickness and performance. VONAR 3 has a 3/16" minimum thickness, VONAR 2 a minimum 2/16", and VONAR 1 a minimum 1/16". Tests by furniture manufacturers are necessary to determine which grade of VONAR will be appropriate in any specific furniture construction.

Tests have shown that the effectiveness of each VONAR interliner varies depending on which configuration is used, as well as upon types of upholstery fabric, furniture style, method of interliner application, etc. Since Du Pont only licenses manufacturers to make VONAR interliners, but does not make or install the interliners and has no control over the manufacture of furniture, Du Pont cannot be responsible for the performance characteristics (including flammability) of any type of furniture. Consult your furniture supplier for flammability information on specific types of furniture.

The maximum contribution obtainable from VONAR interliners occurs when the interliners remain intact. If VONAR is ripped or cut, exposing flammable cushioning materials beneath it, the degree of protection provided by VONAR is diminished. For that reason, VONAR interliners are not recommended for rapid transit, public assembly seating or other use areas where there is concern about vandalism and intentional fire.

## What VONAR interliners can do.

In preliminary tests, ignition of furniture as a unit, when properly constructed with VONAR, has been delayed significantly beyond the time afforded by the same piece of furniture without VONAR when subjected to cigarette or limited open flame ignition sources.



The process by which VONAR performs involves three stages:

1) When subjected to the heat of an ignition source, VONAR generates water vapor which helps cool both the fabric and the cushioning material, and helps reduce the exposure of the fabric surface to oxygen.

2) Under more intense heat, VONAR decomposes further, releasing a flame retardant.

3) Finally, decomposition of VONAR forms a char layer which helps insulate the cushioning material from heat and helps limit the oxygen flow to the cushioning material.

# VONAR\* interliners improve of upholstered furniture.



Ten and one-half minutes into this test the office chair constructed without VONAR is totally involved. The chair constructed with VONAR had ceased to burn when the paper fire went out (test details upon request).

The test described here does not demonstrate that all furniture using VONAR interliners will perform in this manner or will not burn under actual fire conditions. The test was not conducted to assign "numerical flame spread ratings" to any materials involved. The results show only that specific types of chairs which used VONAR interliner properly, performed as indicated under the test conditions. Since Du Pont does not make furniture or make or install interliner, we cannot assume responsibility for furniture performance.

## Demonstrated performance.

Du Pont and others under our direction have subjected a number of upholstery constructions using VONAR interliners to both cigarette and open flame ignition sources.

Testing has been performed using cigarette ignition standards developed by the National Bureau of Standards for consideration by the Consumer Product Safety Commission. These tests have shown that VONAR will improve the cigarette ignition performance of most fabrics and constructions tested. Please note: there are some fabrics and constructions that will fail cigarette ignition even when VONAR is used properly.

Further tests designed to approximate actual limited open flame situations have shown the effectiveness of the interliners. For example, the photograph above of two otherwise identical chairs shows how the one without VONAR (left) became totally involved when exposed to an open flame generated by a wastebasket fire. The chair constructed with VONAR (right) formed a char layer where contacted by flame. And it stopped burning when the wastepaper fire burned out, before the flames had reached the polyurethane foam cushioning. Du Pont will continue to test various furniture styles containing VONAR and report the findings.

## Protection against imitations.

Specify VONAR interliner in furniture. The VONAR trademark means the interliner is made by a licensed manufacturer according to Du Pont specifications.

Du Pont assists licensed interliner manufacturers by testing samples regularly for formulation, thickness, and physical properties, and monitors proper use of the VONAR trademark with respect to interliners and furniture.

For more information, ask your furniture supplier about VONAR interliners. Or ask Du Pont. Use the coupon below, or write: Du Pont Company, Room 2533 1A, Wilmington, DE 19898.



Mail to:  
Du Pont Company, Room 25331A, Wilmington, DE 19898.

Please send me:  
 further technical data and test results  
 a list of furniture manufacturers using VONAR  
 a list of licensed manufacturers of VONAR

Name \_\_\_\_\_ Phone \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

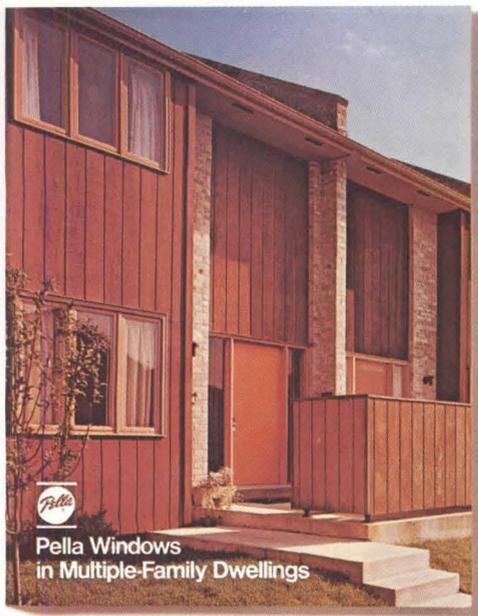
Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

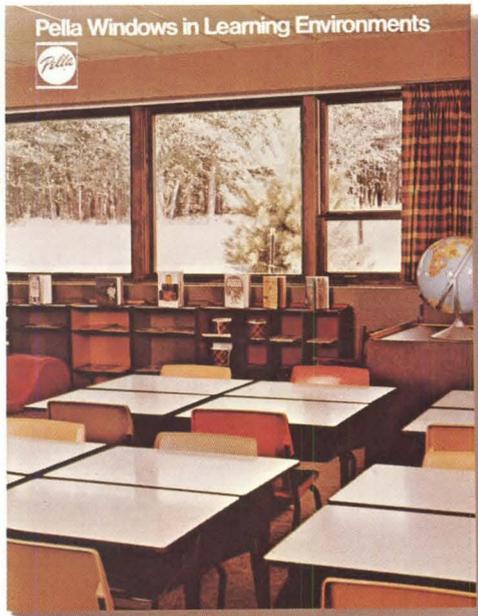


For more data, circle 29 on inquiry card



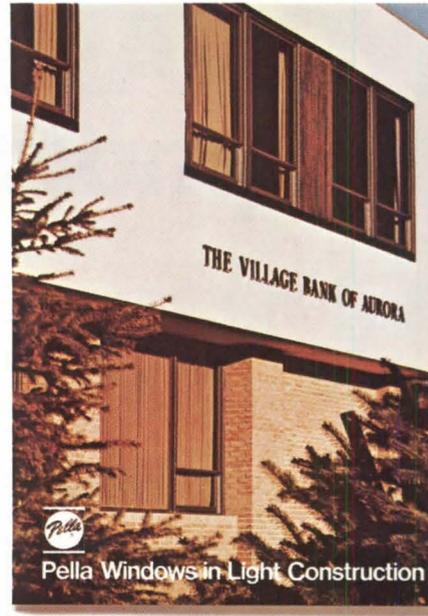
Pella Windows  
in Multiple-Family Dwellings

**Multiple-Family Dwellings** — Pella Wood Windows can help give apartments and condominiums a non-commercial feeling.



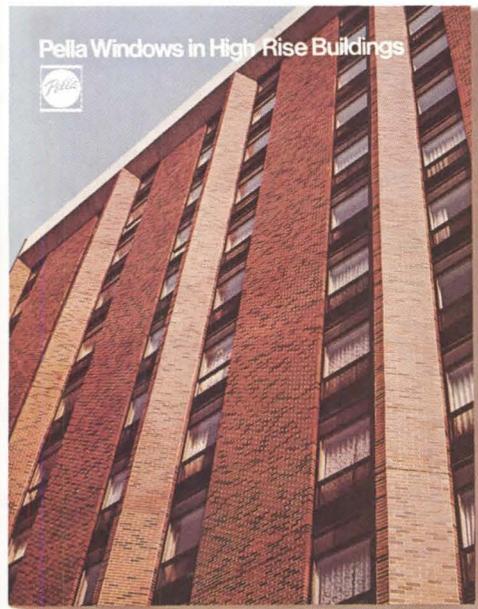
Pella Windows in Learning Environments

**Learning Environments** — shows how Pella Windows are being used to create the kind of warm, home-like environments students prefer.



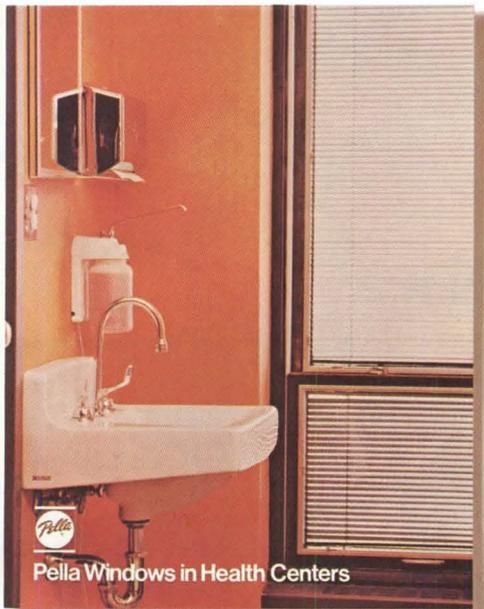
Pella Windows in Light Construction

**Light Construction** — illustrates how Pella Windows and Sliding Glass Doors contribute to the architectural theme of a variety of building styles.



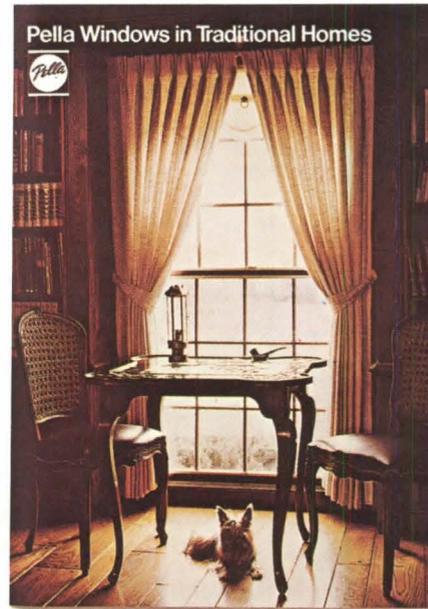
Pella Windows in High-Rise Buildings

**High-Rise Buildings** — Pella Clad Windows combine the beauty of wood inside, with the low maintenance of aluminum outside.



Pella Windows in Health Centers

**Health Centers**—Pella Windows help health centers, hospitals, and homes for senior citizens project a feeling of comfort and security.

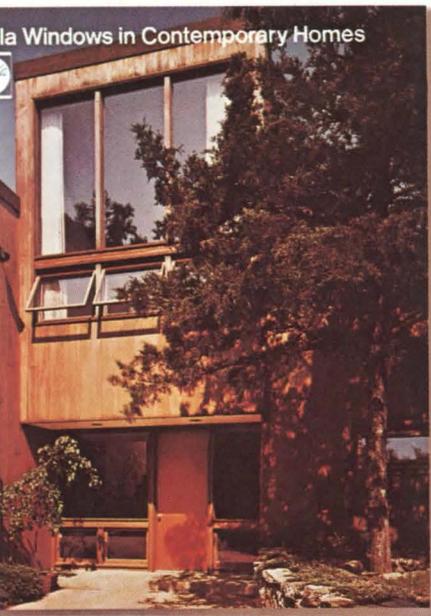


Pella Windows in Traditional Homes

**Traditional Homes** — Pella takes a close look at the types of windows best suited to the traditional home.

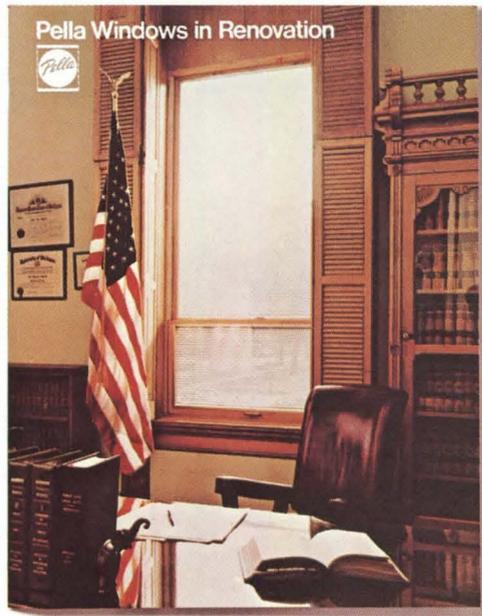
**If it involves windows and doors  
Pella has written the book.**

**Free for the asking.**



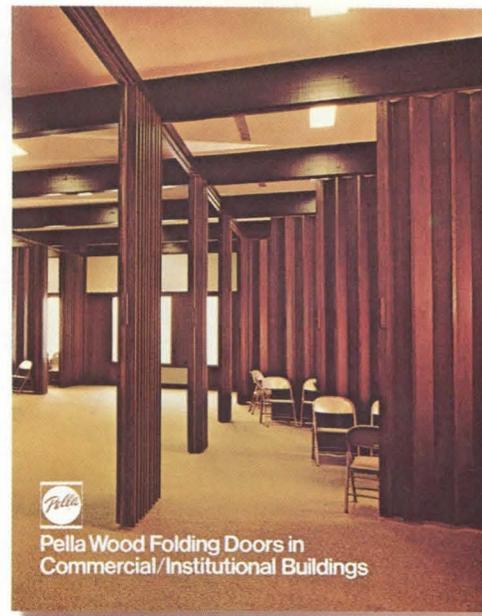
Pella Windows in Contemporary Homes

**Contemporary Homes** — shows how our low styles work equally well with a wide variety of contemporary architectural designs.



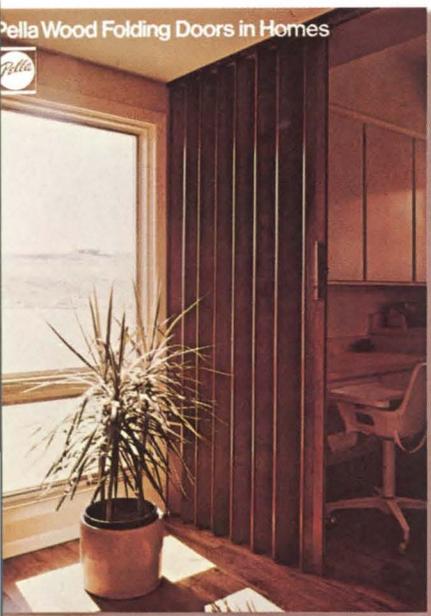
Pella Windows in Renovation

**Commercial Renovation** — Pella Windows can help preserve the original character and dignity of elderly court houses, hospitals, office buildings.



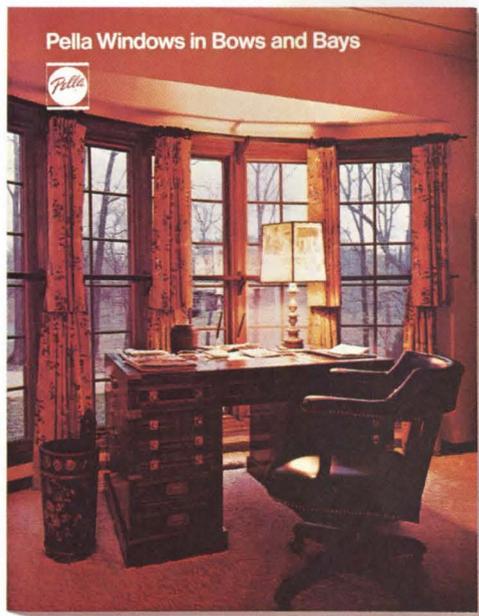
Pella Wood Folding Doors in Commercial/Institutional Buildings

**Folding Doors in Commercial/Institutional Buildings** — attractive, functional, durable... Pella Folding Doors close off or divide space beautifully.



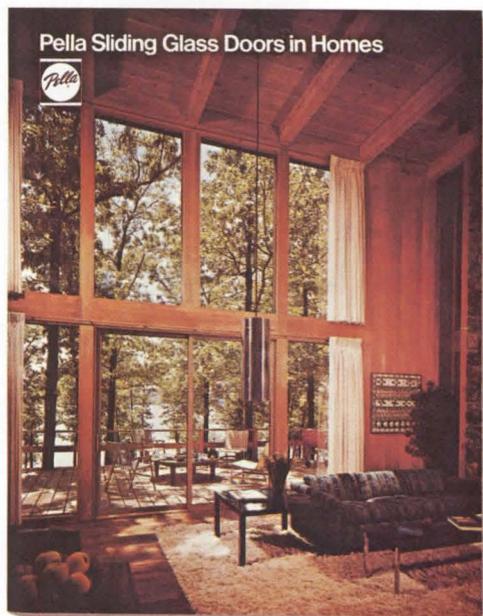
Pella Wood Folding Doors in Homes

**Folding Doors in Homes** — use Pella Wood Folding Doors and save the cost of dropped ceilings and stub walls on your next project.



Pella Windows in Bows and Bays

**Bows and Bays** — these arrangements are an important architectural element. This brochure contains a good selection of classic examples.



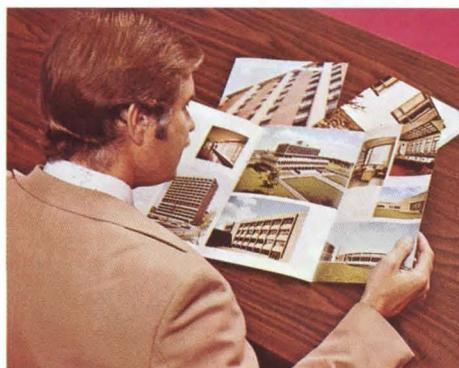
Pella Sliding Glass Doors in Homes

**Pella Sliding Glass Doors in Homes** — provide the drama of floor-to-ceiling glass along with weathertightness and smooth operation.



**Free Library of Pella Idea Booklets** — This up-to-the-minute collection of our very latest 6-page brochures contains over 70 pages in full color. We think it's the kind of reference material you'll find helpful time and time again. It's yours free and without obligation. Simply fill in and mail the coupon today.

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**Mail to:** Pella Windows & Doors, Dept. T30E7  
100 Main St., Pella, Iowa 50219  
This coupon answered within 24 hours.



When you create a design  
in which no two tiles will  
ever be identical, you've  
started a Renaissance.

Renaissance™ is here. The brand-new glazed ceramic tile that creates walls of such drama — other materials seem dull and repetitive by comparison. In Renaissance, every tile is unique in color and pattern. So the overall design is as original as a work of art. And just as enduring.

Renaissance outlives synthetic materials in every way because it's real ceramic tile. So the color and pattern won't fade. And with normal wear, the tiles won't scratch or stain.

Renaissance comes in a variety of colors and sizes (shown: 4 1/4" sqs. 703 Rn. Copper). And Redi-Set® pregrouted systems. Or for use with a colored grout. To find out more, visit any American Olean Color Center or Showroom or write to us at: 2417 Cannon Avenue, Lansdale, Pa. 19446 for free information and actual color

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# RECORD HOUSES OF 1977

Readers of this annual issue often ask how the twenty award-winning houses are selected. Who chooses them and on what basis? Sometimes they ask "why Record Houses?" The answers are both simple and complex. The selections are made by a panel of Record's editors during many days of lively debate in the late fall. What we look for among hundreds of submissions is not so simple. We look for houses, like this year's cover house by Gelardin Bruner Cott, that employ familiar forms and program elements but achieve a remarkable freshness of image. We look for houses like Hugh Jacobsen's renovation and addition (pp. 80-82) that hint at changing design values within the profession. Trying to put our individual biases aside we look for plan innovation and for new usages, but we are not interested in innovation alone. Each issue of Record Houses contains a number of "mainstream houses" by architects who work unselfconsciously in ageless design idioms but bring unusual skill, thoughtfulness and sensitivity to their solutions.

What we are after, in the final analysis, is a pluralistic collection—an anthology of design ideas given persuasive, three-dimensional form. We are pleased when diverse viewpoints are represented, when new faces can be included. We are especially gratified when this issue can reflect some of the challenge, the fun, the willingness to experiment that has always given—and continues to give—residential design its essential vigor and its importance.—*Barclay F. Gordon*

The Wolf residence  
 Toronto, Ontario  
 Barton Myers, Architect

There have been earlier attempts (few as successful) in Canada, the U.S. and elsewhere to blur the distinction between industrial and residential design vocabularies. Perhaps it was always a needless distinction, but it is still stimulating to see the steel columns, metal deck and the delicate tracery of open web joists transfer their precise elegance from factory to home so easily and persuasively. Inside the basic framework that these elements create is a secondary level of modification and texturing. It includes sculptured ductwork that traces powerful linear patterns throughout the house. It includes drop screens that temper the daylight at outside wall or skylight. And it also includes the entirely appropriate use of unexpected hardware and fixtures that are always within the residential designer's reach but seldom find their way into his specifications. It is a beautifully conceived house and even those cup of tea it is not will find much to linger over in its use of materials and its details.

The plan of the Wolf house is deceptively simple. It is a two-story, rectangular volume with a bite out of the center of one of its long sides—a bite which admits light and offers views from the normally "dead" waist section of such plans.

The house is lifted above the site to minimize the foundation problems that might otherwise have developed on 20 feet of new fill over a subterranean stream. The upper level contains bedrooms, baths, play area and study. Below, the principal spaces are arranged to take advantage of views to the park at the west. The closed side of the house, clad in aluminum siding, faces neighbors to the east.

In its rhythms, its textures and the handling of its details, the Wolf residence is beautifully organized and very skillfully executed.



*Architect:* Barton Myers  
 formerly of  
 A.J. Diamond & Barton Myers  
 322 King Street  
 Toronto, Ontario

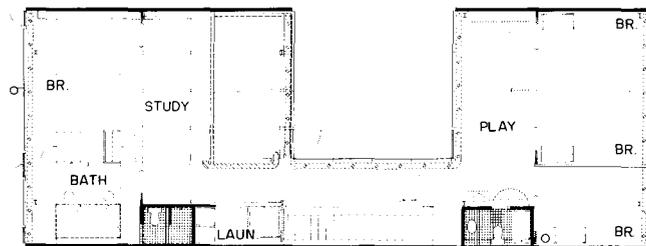
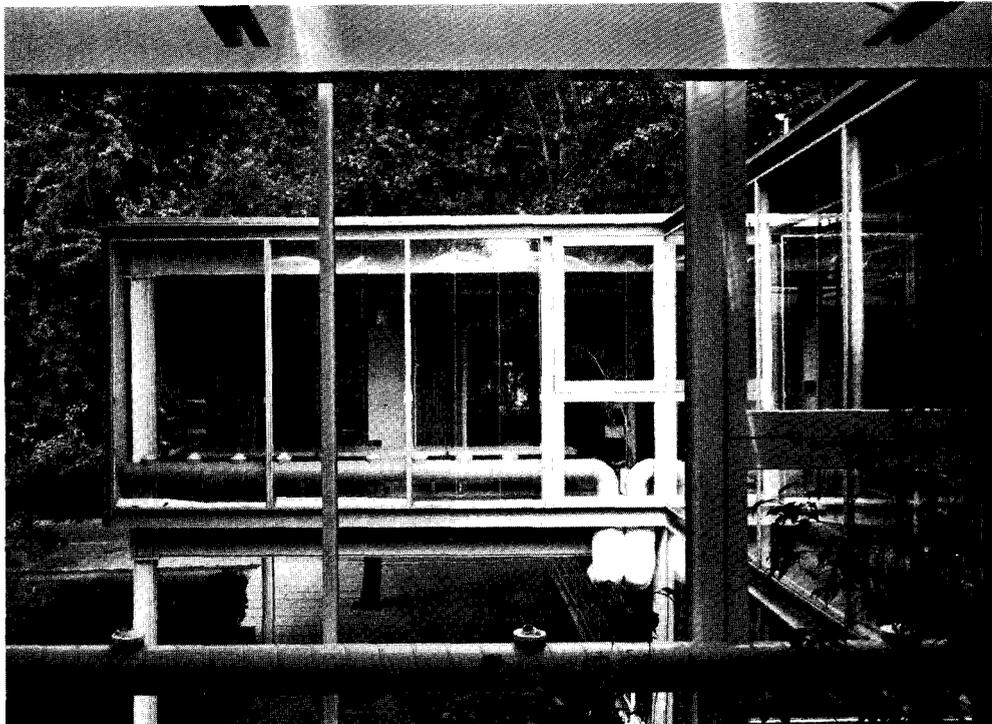
*Owners:* Lawrence and Mary Wolf

*Engineers:*  
 Read Jones Christoffersen, Ltd (structural)  
 William Trow Assoc. Ltd. (foundations)  
 G. Granek Assoc. Ltd. (mechanical)

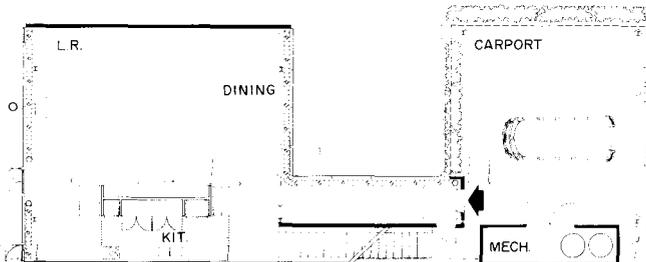
*Cost consultant:* A.J. Vermeulen, Inc.

*Contractor:* Lawrence Wolf

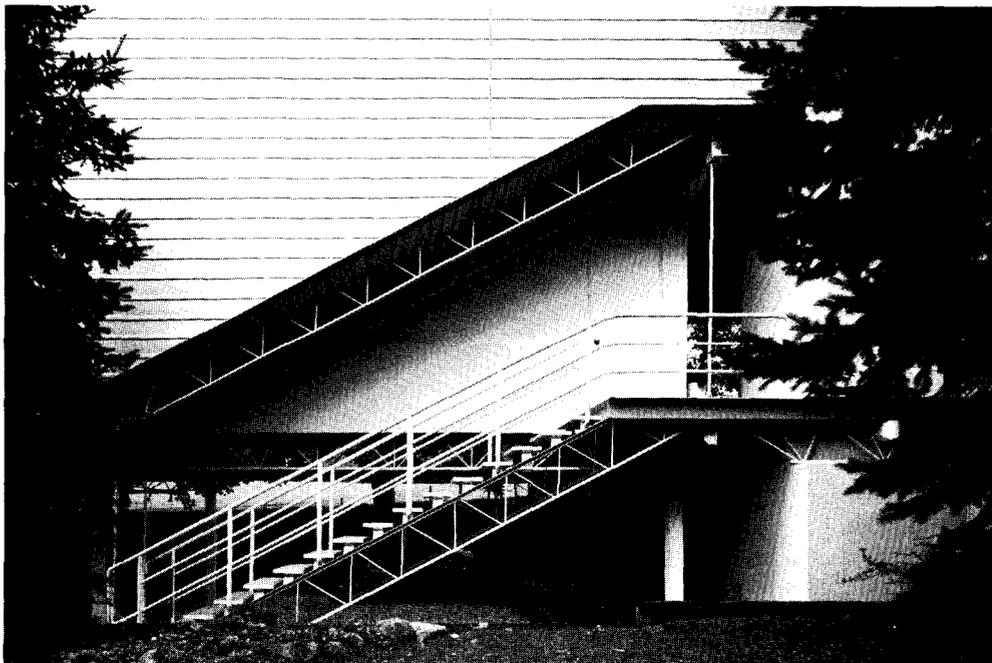
*Photographers:*  
 T. Kitajima of  
 Y. Futagawa & Associates  
 except as noted



SECOND FLOOR



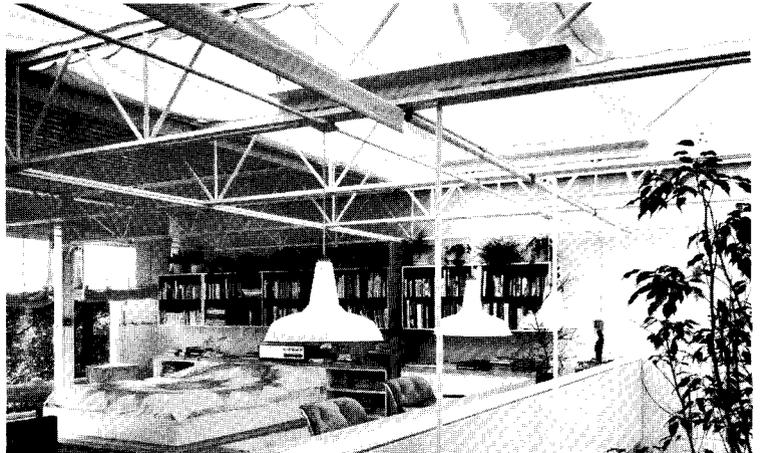
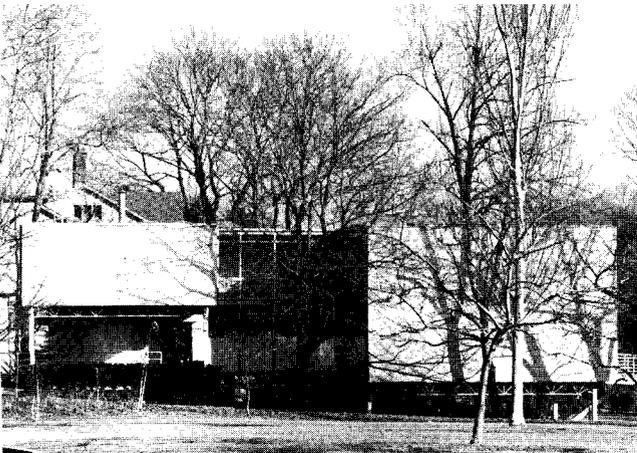
FIRST FLOOR





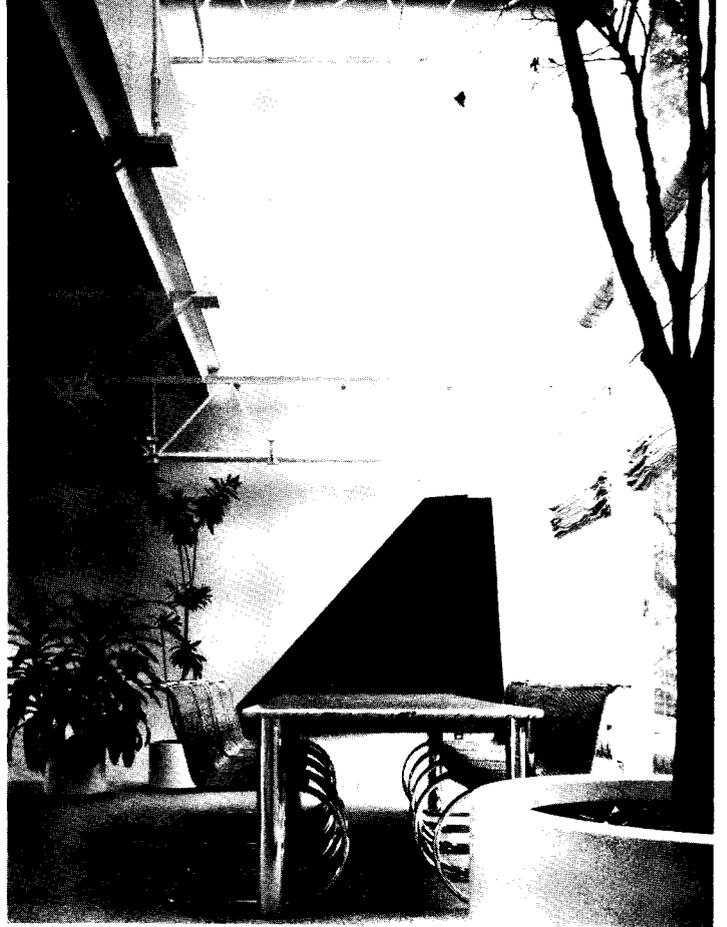


Ian Sampson





The owner's comment, in describing his vision of the house, is significant: "We saw the house as the ultimate new product, the mass market space and flexibility solution of the future."



Private residence  
Eastern Long Island  
Norman Jaffe, Architect

Perhaps at first it seems to strain for effect. Perhaps its geometry seems unnecessarily complex and its spatial development too elaborate for a simple weekend house overlooking the Atlantic. But look closely at the plan these forms enclose. The plan is real. The plan is problems solved. There is a clear hierarchy of spaces and their relationships are logically ordered. All the spaces but two small guest rooms are gathered under one powerful roof form, and the top of the stair is the point of intersection for all the major planes and spaces. And from this point, the really splendid ocean view is fully revealed for the first time. Living room, dining space, kitchen and master bedroom above exploit this view fully as does the elevated deck that thrusts out from the living-dining space over the lip of the dune in the direction of the ocean. From each of these spaces, the view extends outward all the way to the horizon.

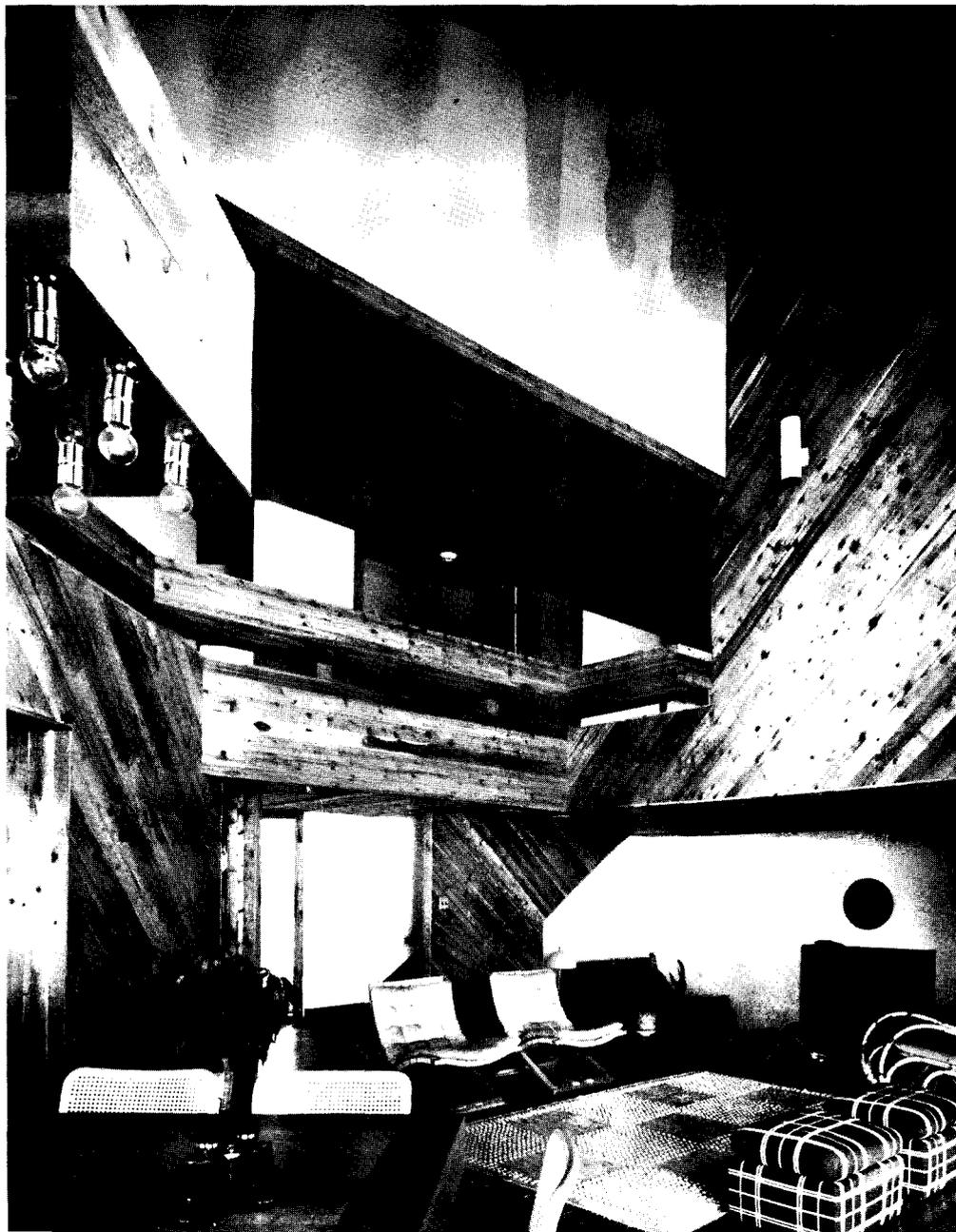
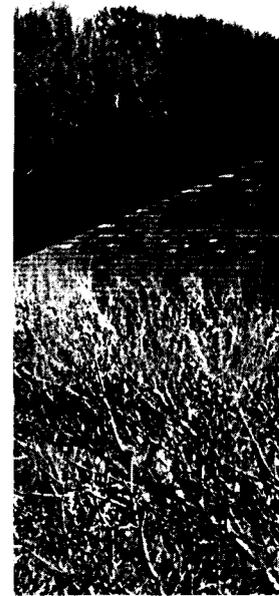
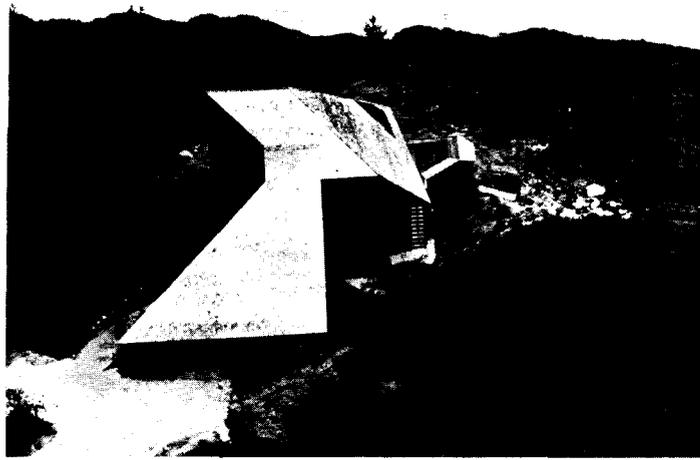
The use of a single exterior finish—cedar shingle—is eminently sensible on a site so exposed to the corrosive action of salt, of wind, of wind-driven rain. And in addition the unity of surface it achieves is important in so complex a form where the classic distinction between wall and roof is somewhat blurred.

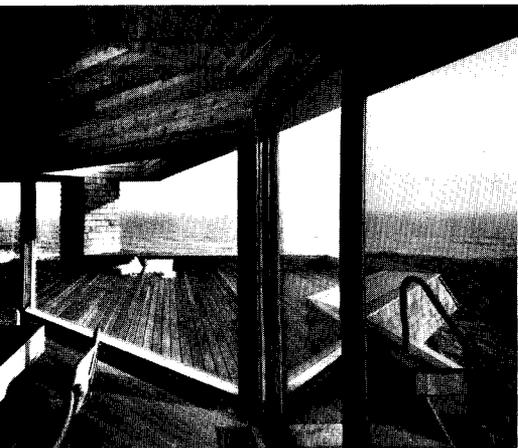
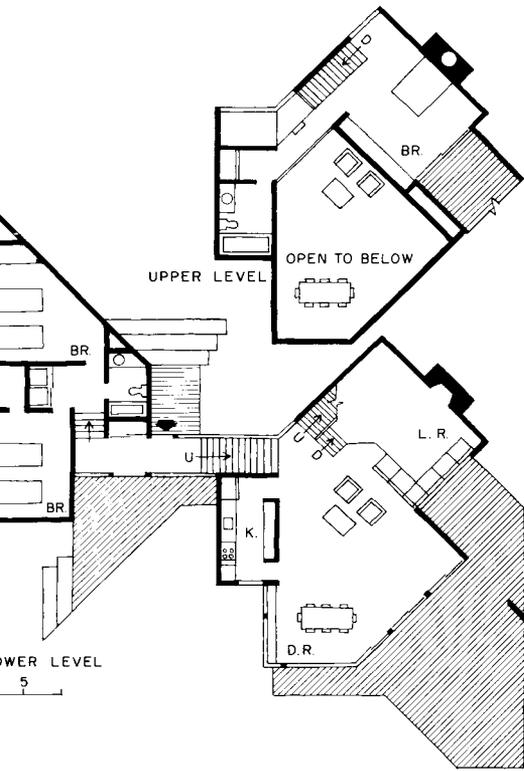
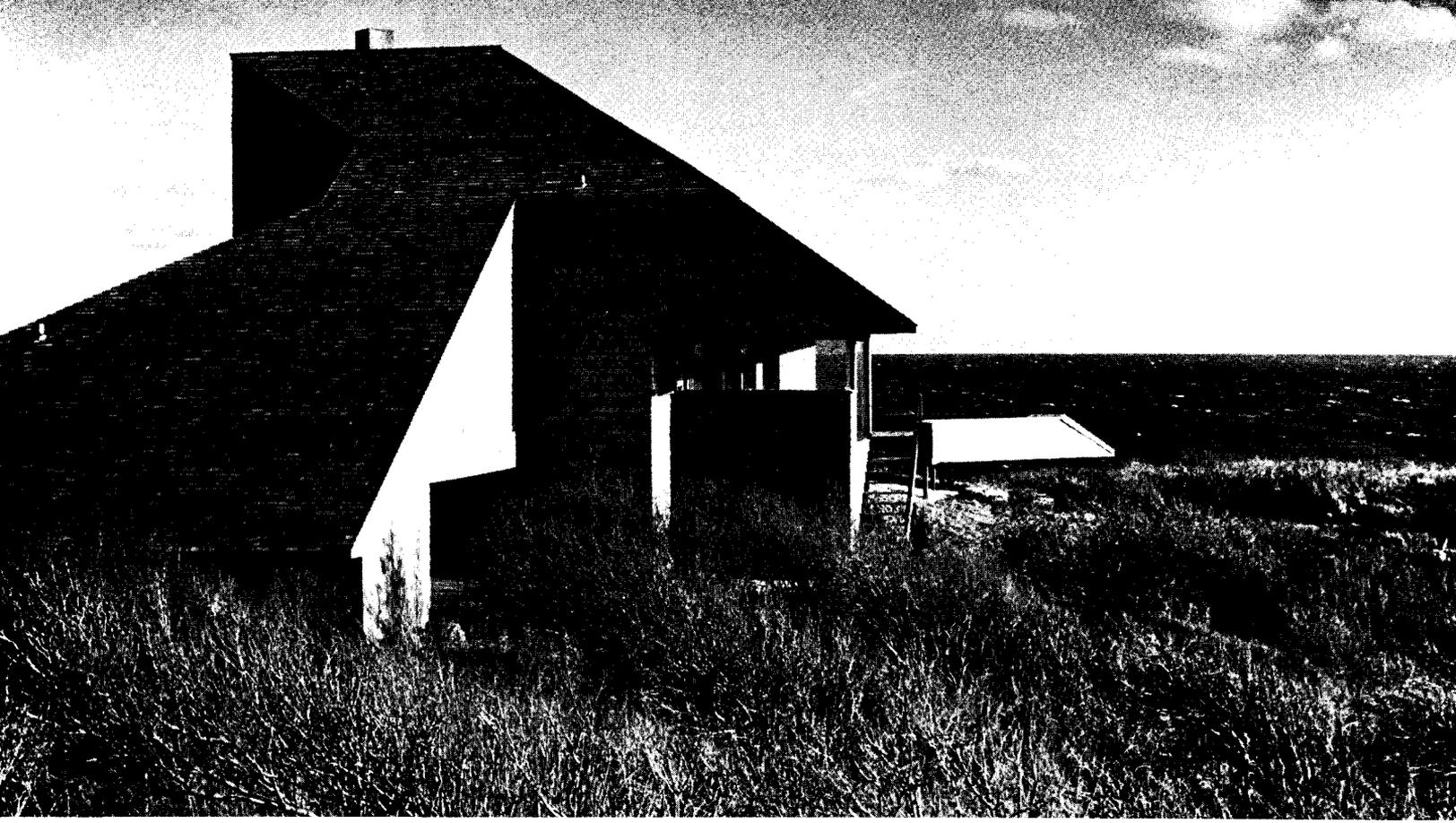
Jaffe is an architect who uses metaphor and poetic image as design tools. To him the house had to catch and reflect some of the dynamism of the dune—itsself a wave of sand in slow but constant flux. To him, the massing of the house had to express the tension created between elements that are constrained and elements that are free to soar. Jaffe has tried to bring them together in ways that excite, stir our imaginations and, metaphysically at least, remind us of those parts of our universal natures that are earthbound and those that are not.

To a surprising and welcome extent, he succeeded.



*Architect:* Norman Jaffe  
125 East 80th Street  
New York City  
*Job captain:* Kirby Grimes  
*Interiors:* Mary Eisenberg  
*Contractor:* David Webb  
*Photographers:*  
Bill Maris (exteriors)  
Norman McGrath (interiors)





## Private residence

Weston, Massachusetts

Gelardin Bruner Cott Architects

This residence is a strong composition in two distinct parts. The L-shaped portion is a neatly detailed, square-edged box of conventional stud framing and a 4-ply built-up roof behind a shallow parapet. Almost entirely closed on its two short walls and modestly opened on its long walls, the solid box contains bedrooms and studio above: kitchen, dining, den and guest room below. Enclosed on two sides by these wings is an entirely different element: a 900-square-foot living room, glazed on its outside walls and covered with a translucent roof of acrylic plastic. This elegant space rises along its ridge to a height of 22 feet where it meets the wood walls. Forceful in its own right, the living room derives additional "punch" through its high contrast with the rest of the house. The translucent roof, framed in aluminum, fills the space with diffused daylight, which can be augmented or replaced at night with artificial light from adjustable track lighting overhead.

The floor of the living room is depressed and finished in gray slate. The flexible seating units can be repositioned to suit changing needs. Most interior partitions are wood studs covered in gypsum board finished with a skim coat of wet plaster. Ceilings in the upper floor are also plastered while below, the principal ceiling material is mirror-finished aluminum.

The house sits four-square on land that dips slowly to a pond at the south. A private tennis court is located just east of the house and flowering crabapple trees line the driveway. Selective pruning and clearing was required to open up views to the pond, but no trees were removed to make way for the house.

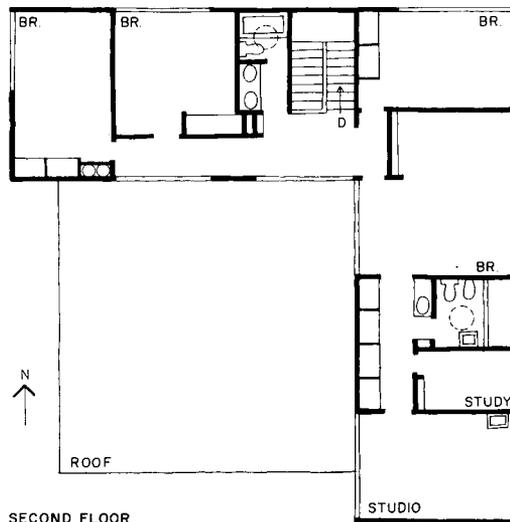


*Architects:* Gelardin/Bruner/Cott  
Cambridge, Massachusetts

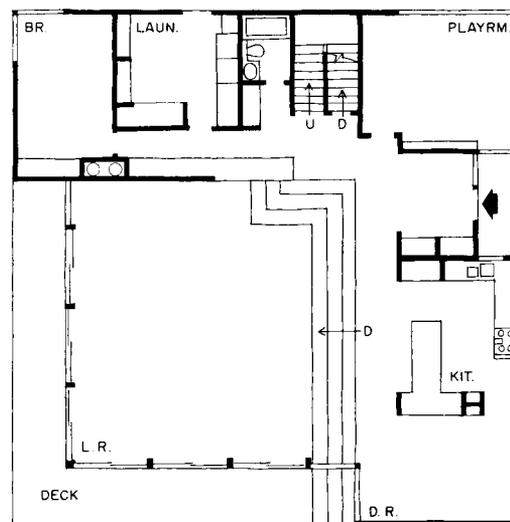
Leland Cott, partner-in-charge  
Philip Hresko, job captain

*Engineers:* Rene Mugnier (structural)  
Curtis Associates (mechanical)

*Contractor:* Reginald Nichols  
*Photographer:* Greg Heins

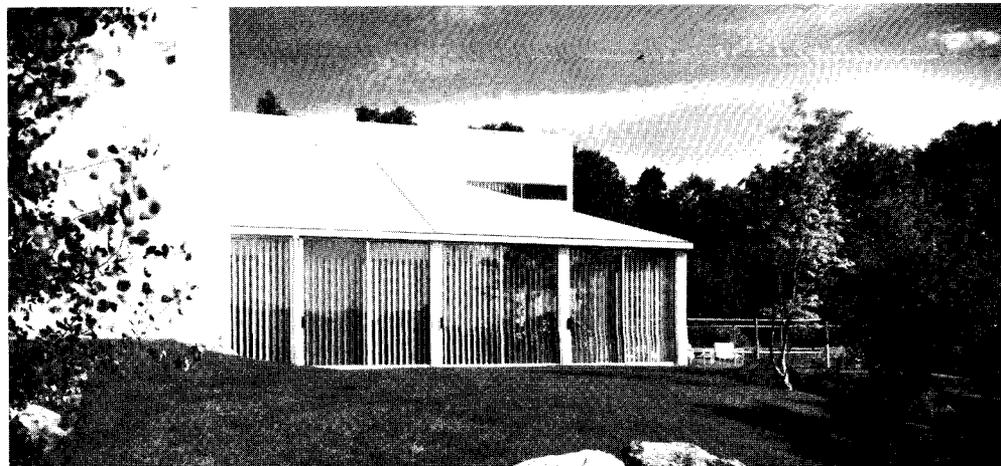


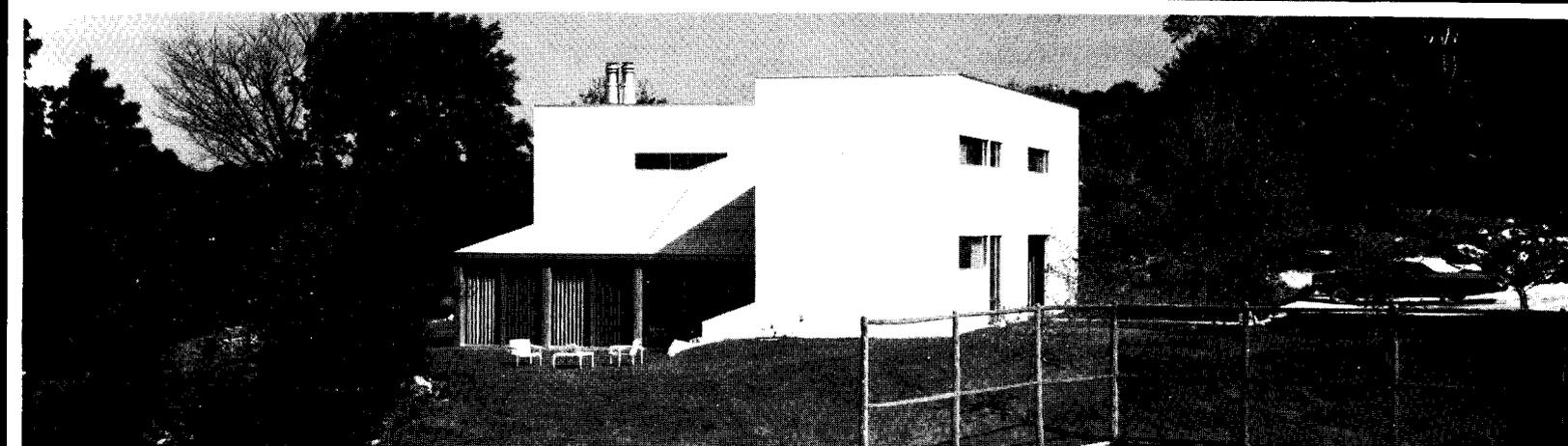
SECOND FLOOR



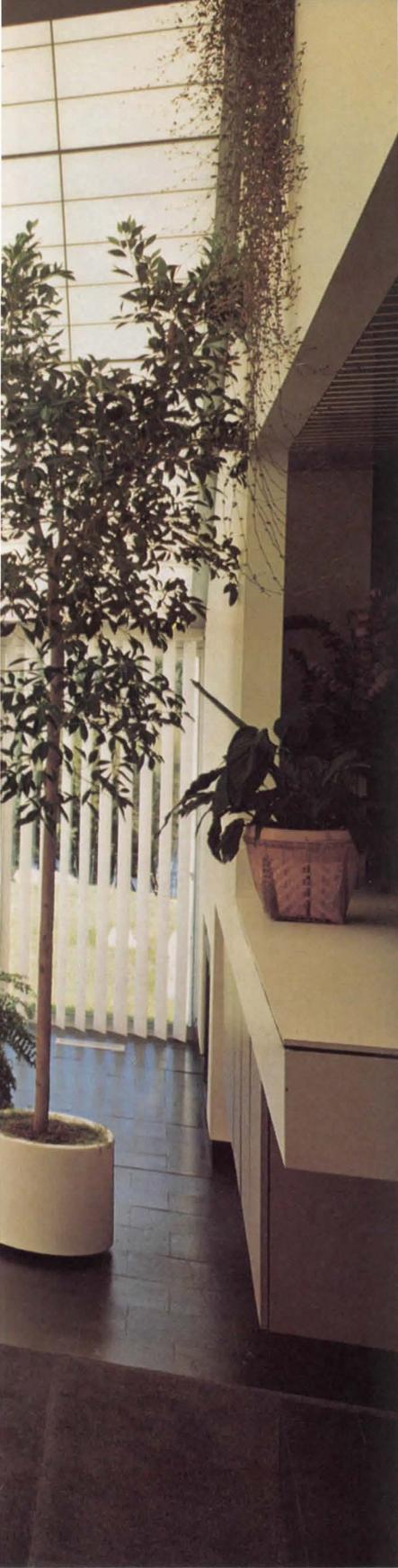
FIRST FLOOR

The site is approached from the west. The public side of the house is deliberately understated, concealing from view the dramatic living space that climaxes the design. It is a secret nicely kept.

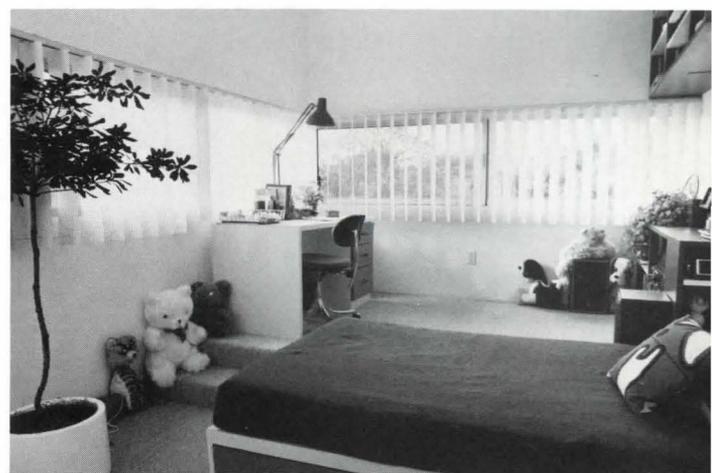








The translucent roof is supported by aluminum box beams, the longest spanning 42 feet. Aluminum is also the finish for the suspended ceiling in the kitchen (photo left). The kitchen's end wall is finished in chevron-patterned tile.



Private residence  
Albuquerque, New Mexico  
Antoine Predock, Architect

At an elevation of over 6,400 feet, this eight-acre site in the Sandia Mountains overlooks in a broad sweep the Rio Grande Valley and distant Mount Taylor to the west. For people who love the outdoors, it is a superb site, and Predock strove to maximize this potential by providing outdoor spaces in the plan for dining, recreation and watching wildlife on the flank of the adjacent mountain.

The main entry at the east, under the sloping solar roof, falls on a long axis that opens across a covered deck toward Mount Taylor. The main spaces of the house lie just off this axis in a fan arrangement that uses a central circular column as a common radius (see plan, lower level) and produces the circular form seen in the exterior photo at right. The kitchen/family room acts as a transition space, both functionally and geometrically, between the living room and the garage. Upstairs are bedrooms and a study that share a small but colorful roof garden.

On the critical faces of the house, Predock has screened out the bright sun with deep overhangs or narrow slit windows. The 950 square feet of solar collectors, inclined at 45 degrees, are part of a flat plate system that uses ethylene glycol as a medium. The solution is circulated from the collectors to a heat exchanger, then to a 6000 gallon hot water storage tank. Water in storage is pumped to fan coil units for space heating. Parallel systems are used to meet domestic hot water demands—and to heat a swimming pool (not shown in plan).

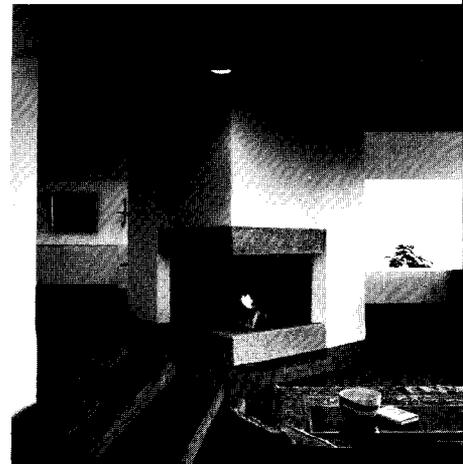
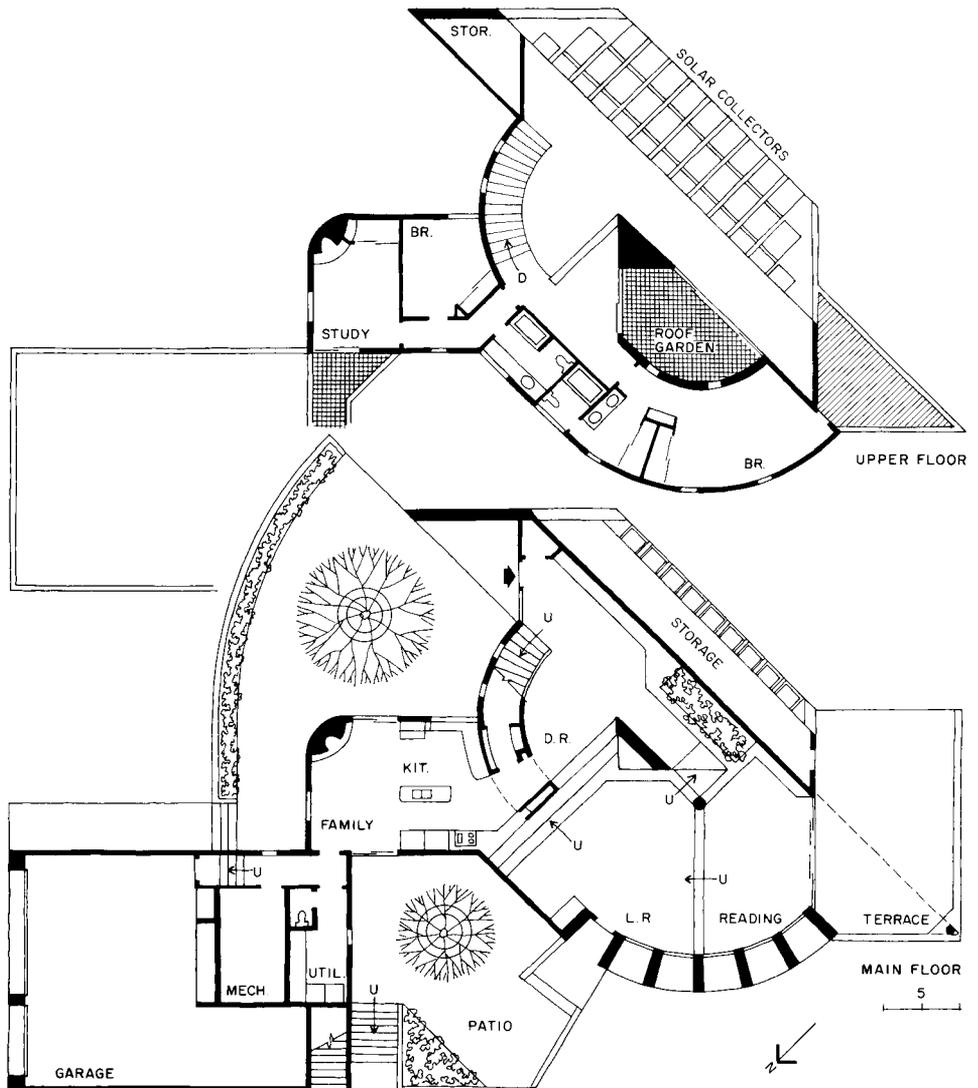
On a site so free of tree cover, in a region so sunny year around, the solar application seems sensible and efficient. The architect reports that about 80 per cent of the heat demand (both space and water) should be met by the solar system and that the "recapture time" for initial costs should be less than 15 years. Increased fuel costs could shorten this period significantly.

In its massing, the house responds to the traditional architectural forms of the region, and the admittedly difficult geometry of arc segments and triangles is sufficiently resolved to create highly interesting spaces and forms that fit this high desert site.



Architect: Antoine Predock  
300 12th Street, N.W.  
Albuquerque, New Mexico

Engineers:  
Randy Holt Associates (structural)  
Bridgers & Paxton (mechanical)  
Contractor: Homes by Marilyn  
Photographer: Joshua Freiwald





The principal interior finishes are oak strips for floors and gypsum board for walls and ceilings. Horizontal support members are either concrete or laminated wood beams.

## Erdos residence

Northern Ohio

J. Lawrence Scott, Architect

On a 13-acre site near the newly-established Cuyahoga Valley National Park, this carefully articulated house replaces a cabin the owners previously occupied on occasional summer weekends. The new structure, for a family with two daughters who now live at home, has been planned for a changing future. When new circumstances dictate, the present carport can be converted to a living room and the existing living room turned into a family room. Children's quarters are zoned away from parents' sleeping area and, because the owner often works at home, a private study has been provided upstairs in the rounded section.

The area immediately around the house is quite flat but the larger site is contoured and dips down to a stream. In establishing the pattern of openings, the architect tried to frame specific views, long and short, across the site—a device that helps establish an individual character for each interior space.

From concrete block foundations, the house springs up in lively somewhat angular massing. The construction is wood frame covered in 1 x 6-inch rough sawn cedar boards which were milled to form lap joints. The same cedar was used selectively inside where it was nailed directly to the studs. Other interior finishes include brick and gypsum board.

In order to retain the natural cedar color and character, a newly-developed clear wood finish was applied to the exterior. If it performs as expected, no appreciable discoloration will occur as a result of weathering or natural aging.

The Erdos house, its massing nicely resolved, presents unexpectedly varied elevations from each successive point of the compass.



Architect: J. Lawrence Scott

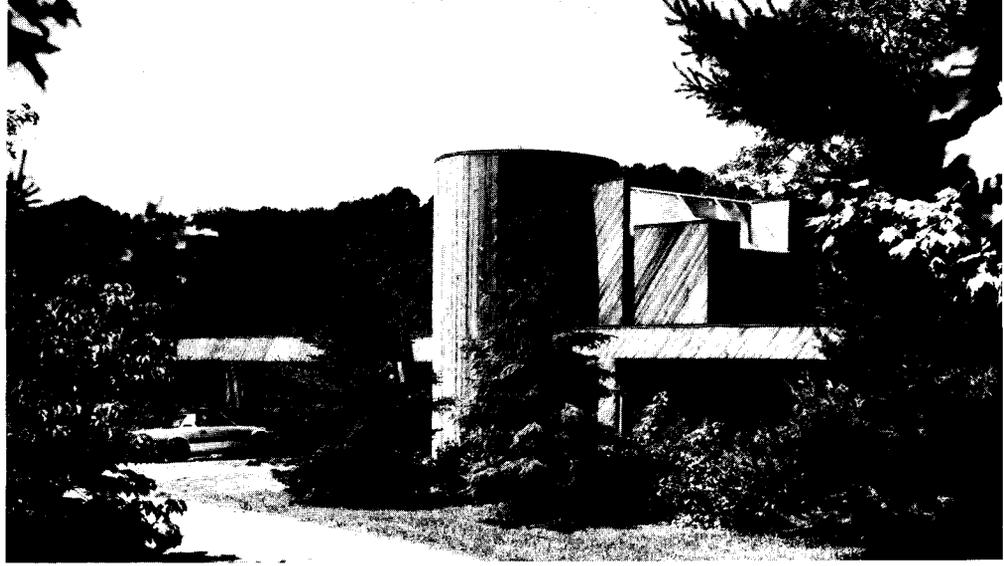
P.O. Box 151

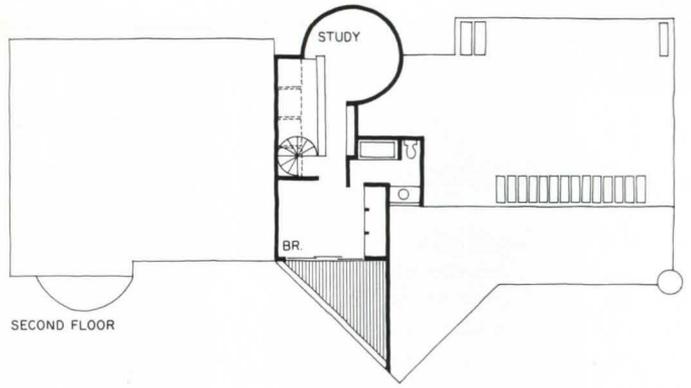
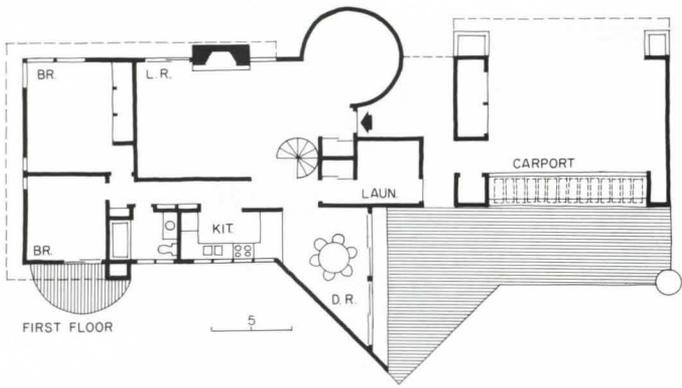
1822 Orchard Drive

Bath, Ohio

Owner: Mrs. & Mrs. William Erdos

Contractor: William Erdos





## Arango House

Acapulco

John Lautner, Architect

The effect of this weekend and vacation house, hugging a mountainside above Acapulco Bay, is about as mesmerizing as the *Margaritas* you had better not have too many of if you plan to stroll around its cantilevered terrace.

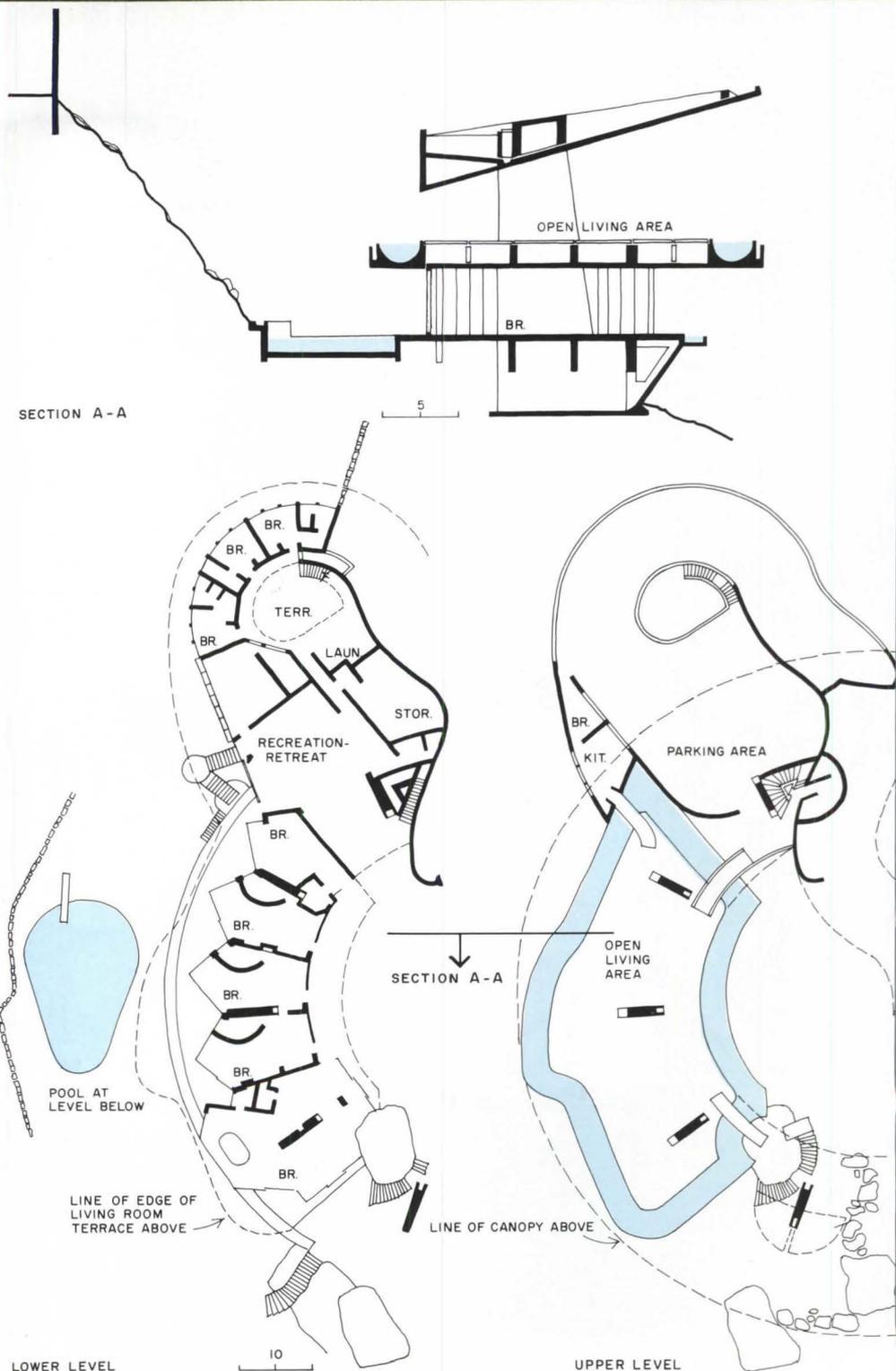
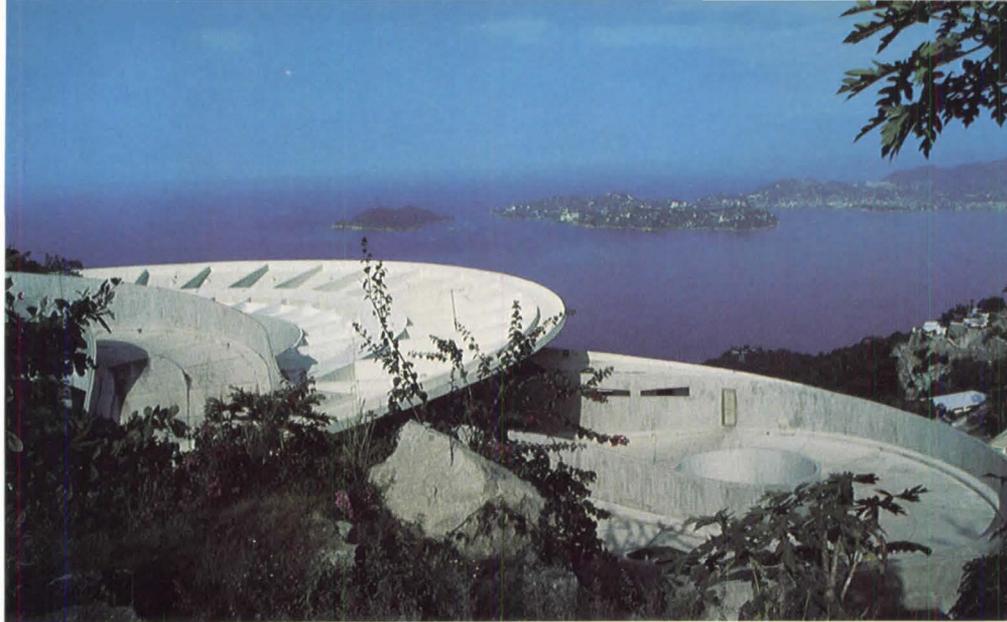
Though casually lived in, the architecture was in no sense casually concocted, as many dwellings in these parts are, to resemble haciendas, missions, or stage-sets for *Zoro*. This concrete structure, with floors of marble, requires little maintenance. An organic element of its natural and cultural setting, it gathers the Bay into an embrace that is as exciting as its relationship to the terrain.

You curl down a gentle driveway from the hill above. Boulders, flowers, and trees edge the entry beneath a colossal concrete sombrero of a roof, and this covers *everything*, meaning a vast living area terrace which is reached, from the entrance area, by a little bridge. It spans a six-foot-wide pool, a "stream" really, which runs all the way around the perimeter of the area. Looking out, the water of the Bay below and the water of the pool blend together. So visually and psychologically, you seem to be suspended between sea and sky. The plan was shaped to crop out foreground views on down the mountainside, and with the aquaeous metaphor of its curving edge, the space, served up as if on a sumptuous tray, plays on the affinity you feel with nature.

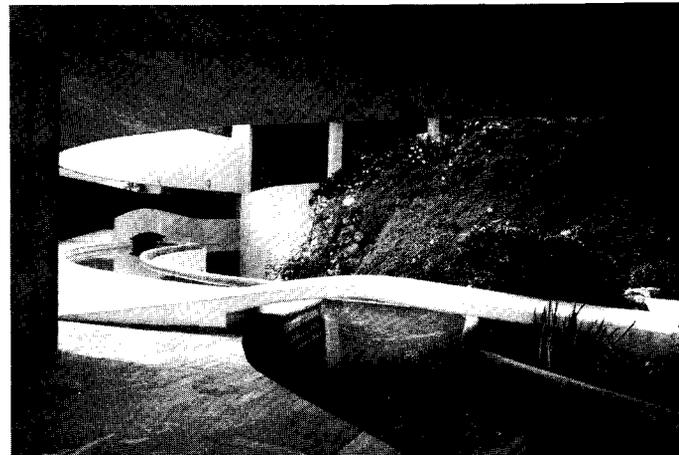
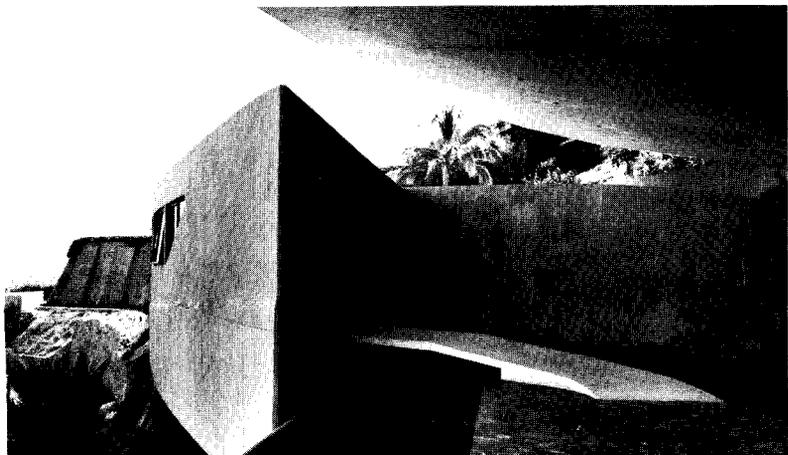
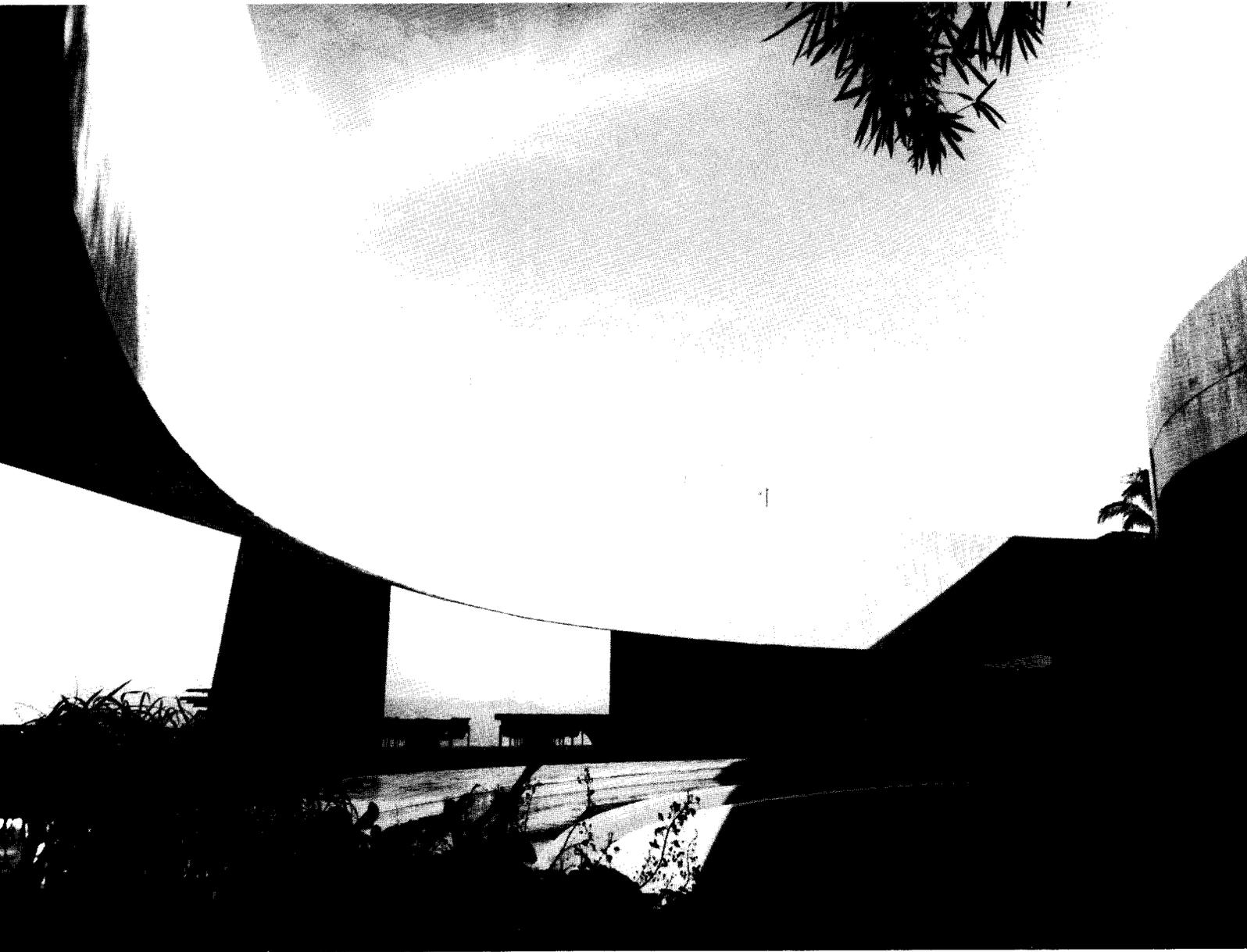
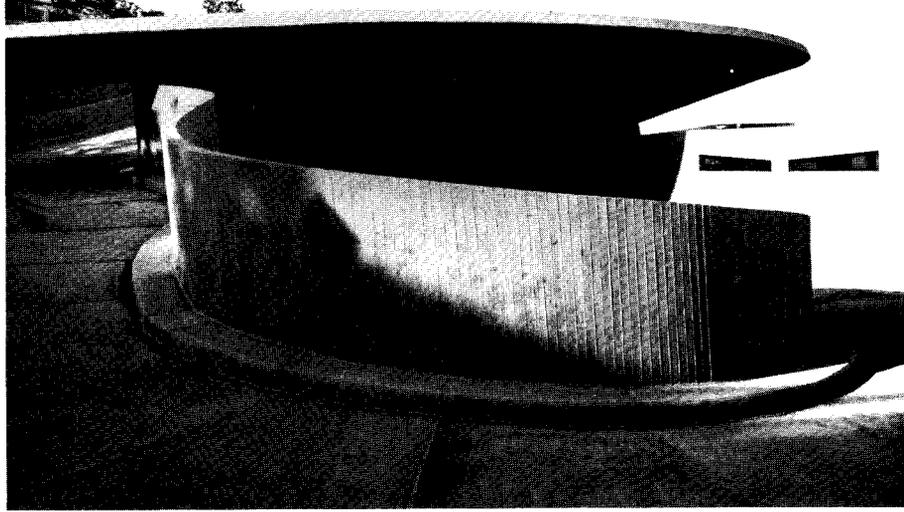
Glassed-in and louvered-in, the lower-level bedrooms—of which there are five for the family, another for guests, and three more for servants—open onto quiet terraces or, oppositely, out to the Bay. Just down a bit, reached by jutting, angular stairs, is another pool for more strenuous strokes. The whole place is good exercise, especially for the senses, and you're drinking to it.

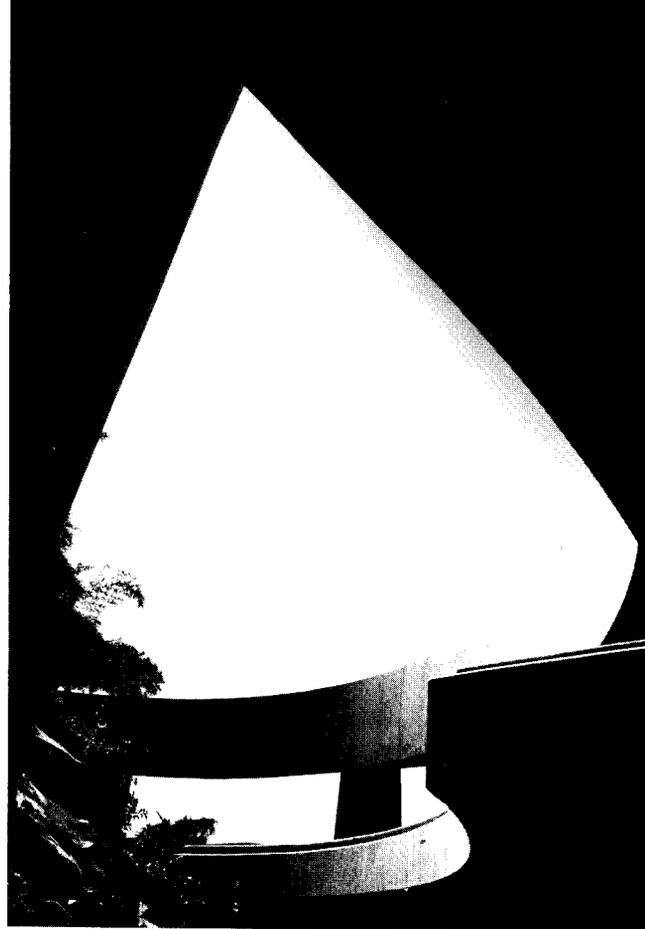


**Architect:** John Lautner  
7046 Hollywood Blvd.  
Los Angeles, California  
**Owner:** Jeronimo Arango, Jr.  
**Engineers:**  
Dirac (structural)  
Hadji & Assoc. (mechanical)  
Carlos Rodrigue (electrical)  
**Interiors:**  
Arthur Elrod, Ltd.  
**Contractor:** Mariano Mariscal  
Barroso Marhnos, S.A.  
**Photographer:** Erven Jourdan

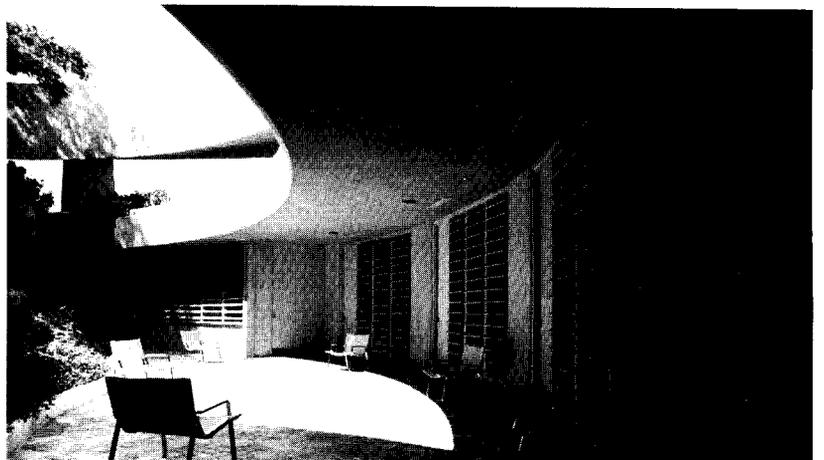








The Arango House in Acapulco is a nonstop spatial fiesta, blending site, sea, and sky. A sombrero-style roof sweeps low over the entrance drive, and high above the bayside water-edged terrace. Caressing big boulders, stairs curve down to the lower-level bedroom and recreation area, and, from its own quiet terrace, there is an enthralling view of the interplay of the concrete surfaces above.



Private residence  
Westchester, New York  
Richard Meier, Architect

The owners already had a small and no-longer-adequate house on this property when they commissioned Richard Meier to help them examine their building options. After study, the decision was taken to treat the new structure as freestanding and self-sufficient, but to retain the existing structure as a pool house and guest annex.

As privacy requirements on this thickly-treed site were scant, Meier strove to make the new house as open as possible. The entry is on the uphill side across a narrow, playfully detailed bridge (photo right). From this arrival point, overlooking the main living spaces, the entire interior volume is revealed—as is the relationship between the house and its sloping site (photos next page). The Meier design idiom—the white planar surfaces, the exquisite pipe rail sculptures, the absolutely minimal detail—are all here in their now familiar forms but with at least one important variation. In this house, the architect has introduced a series of gentle baroque curves that play against the otherwise severe rectilinear geometry with much more than mere esoteric effect. The deck, extending the master bedroom to the outside, is one such curve. The imprint on the fireplace breast is another. The main stair, leading from the entry landing to the living room is a third. The stair's gentle curve carries the visitor around a protruding pipe column, heightening its presence, and putting visual pressure on the living room space. The flow of space through the rest of the house is almost uninterrupted except that the upstairs study is kept rather private.

This house makes a family with the Smith, Weinstein and Douglas houses, all published previously in ARCHITECTURAL RECORD between 1969 and the present. To Meier, they represent a completed body of work, a theme with variations extended and examined rather fully.

Any new houses, says Meier, will explore some new themes.



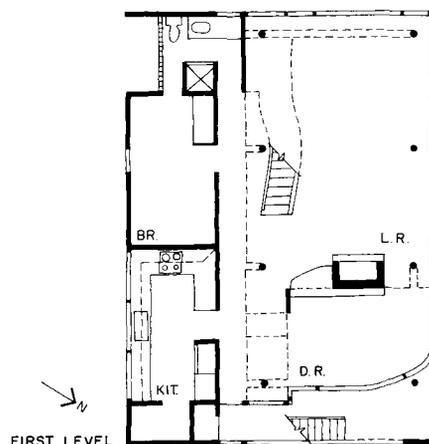
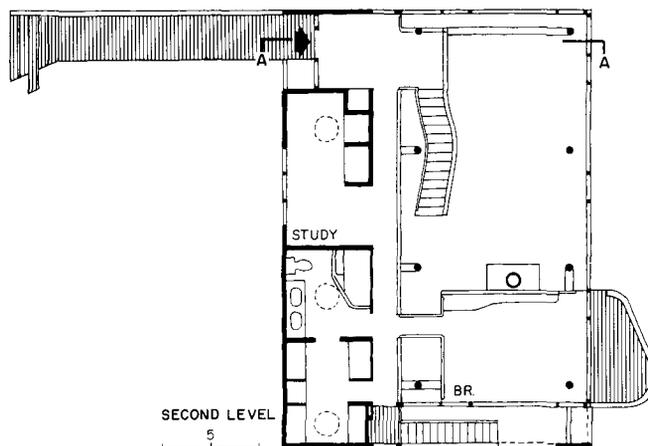
Architect: Richard Meier & Associates  
136 East 57th Street  
New York City

Engineers:

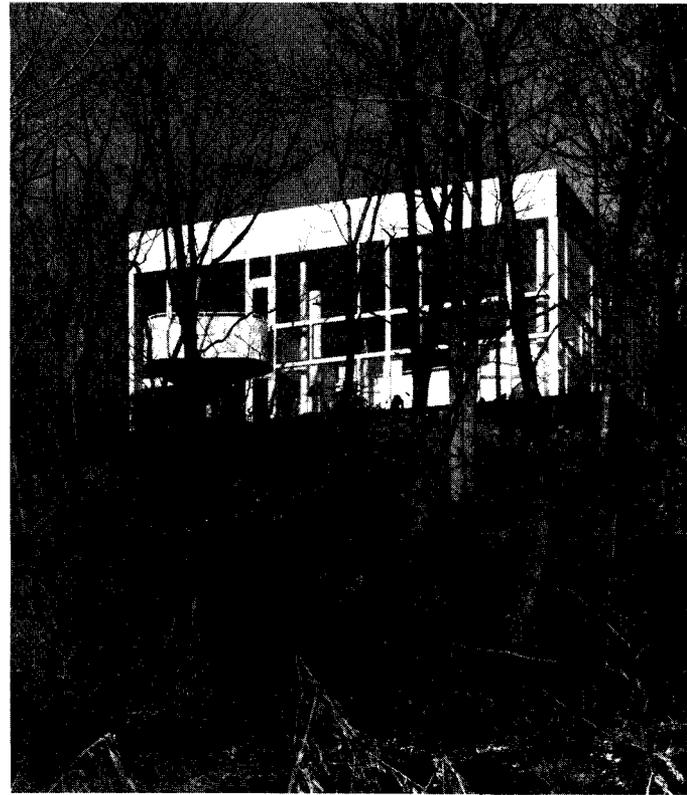
Severud Perrone Sturm Bandel (structural)  
Thomas Polise (mechanical)

Contractor: Walmara Construction

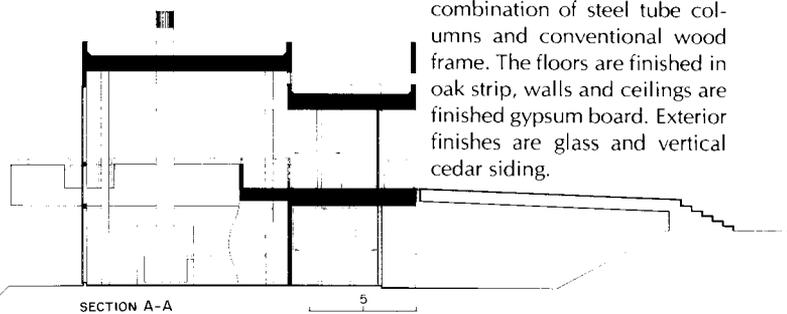
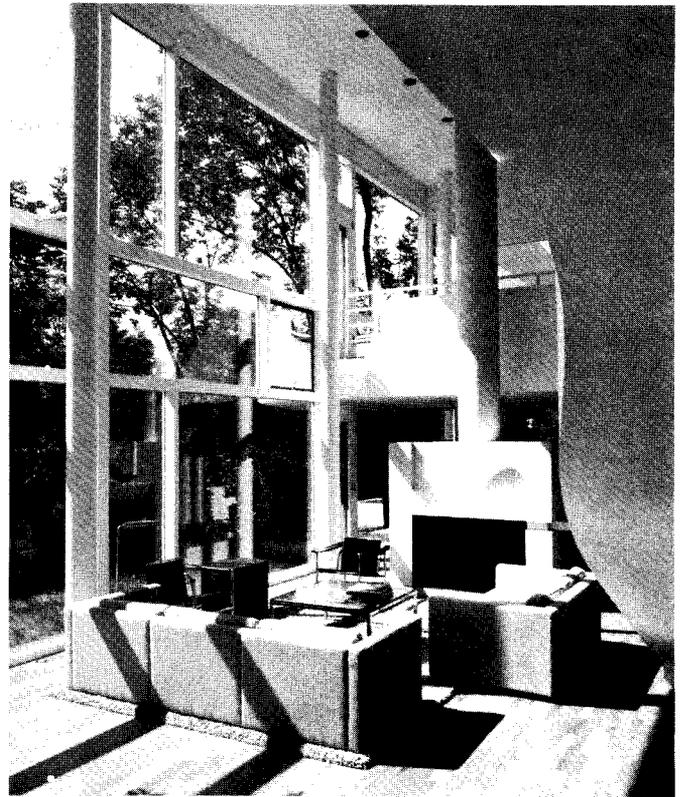
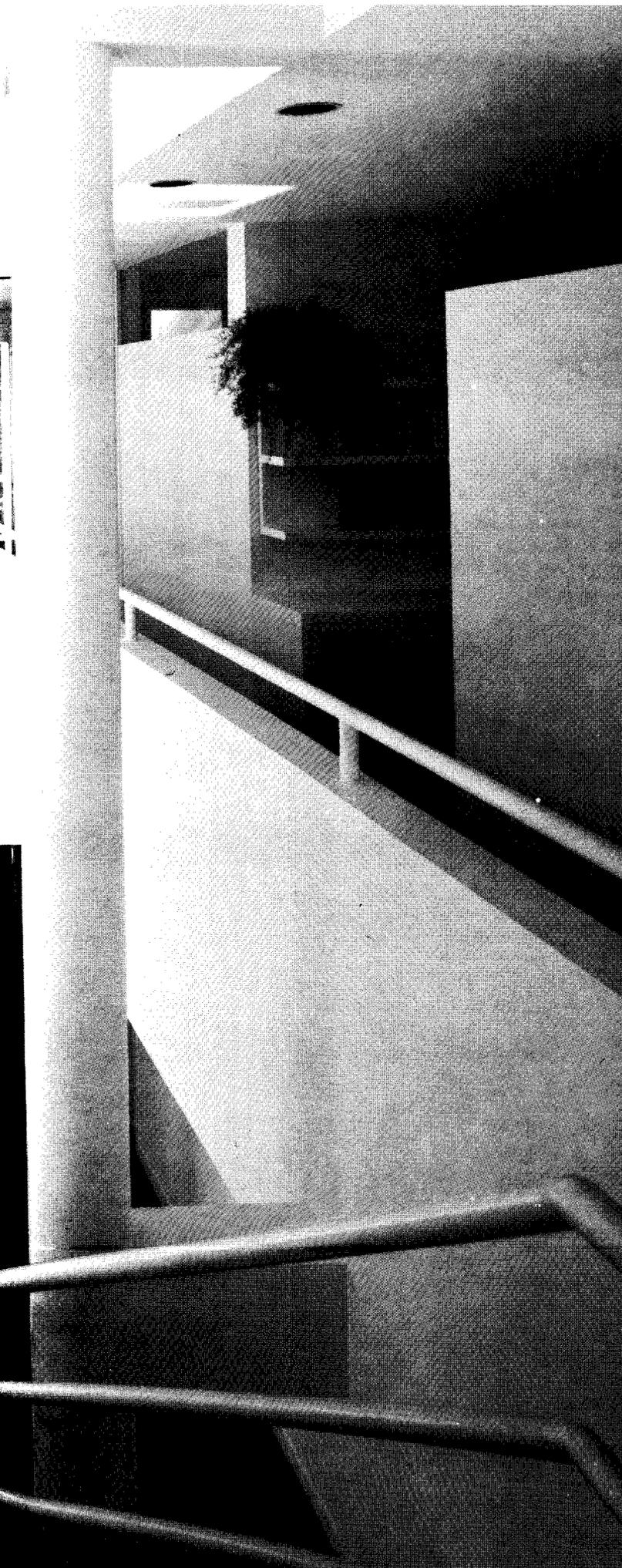
Photographer: Ezra Stoller © ESTO



The white wood surfaces catch and reflect the light brilliantly. In the view (photo lower right) the unlighted end wall frames the interior and gives the house a striking transparency.







The structure in this house is a combination of steel tube columns and conventional wood frame. The floors are finished in oak strip, walls and ceilings are finished gypsum board. Exterior finishes are glass and vertical cedar siding.



## Chiu residence

Vancouver, British Columbia

James K. M. Cheng, Architect

This 90- by 120-foot lot in a suburb of Vancouver is bounded by a street to the north, existing houses to the east and west and a pocket of city-owned parkland to the south. Architect Cheng's task was to insert a house for a family of four into the sloping site, disturbing the terrain and its natural growth as little as possible while maintaining the privacy its thick tree cover promised. The exterior photos suggest how successfully the house was positioned and masked by existing trees.

The plan is simple and unforced. The entry and secondary spaces are aligned along the largely closed north side. The principal spaces open to the south—to views of the parkland and to the city skyline beyond. Upstairs, the master bedroom at the east of the house is linked to the western bedrooms by a bridge that overlooks the double-height living room. A large skylight over the bridge balances the light from the large window openings in the living room. The decks extend the house southward toward the view and their 45 degree cutoff reflects the line of sight to neighbors at the west. The quarter turn of the masonry chimney stack diminishes its apparent mass and projects these 45 degree angles into the vertical plane.

The exteriors are finished in 1- by 4- inch resawn cedar boards applied vertically over a conventional platform frame. The same material is used inside for ceilings. The floors are oil-rubbed oak strip and match the exposed laminated beams, window trim and fireplace lintel. Most of the partitions are finished in gypsum board painted white to catch the shifting shadow patterns and brighten the interiors on dark Vancouver days. Artificial lighting includes both adjustable and recessed fixtures, both types located to augment the natural light.

The inherent modesty of the house, its design subtleties and careful detailing notwithstanding, kept costs moderate. It was built for about \$30 per square foot without land, fees and furnishing.



Architect: James K. M. Cheng

1345 Laburnum Street

Vancouver, B.C.

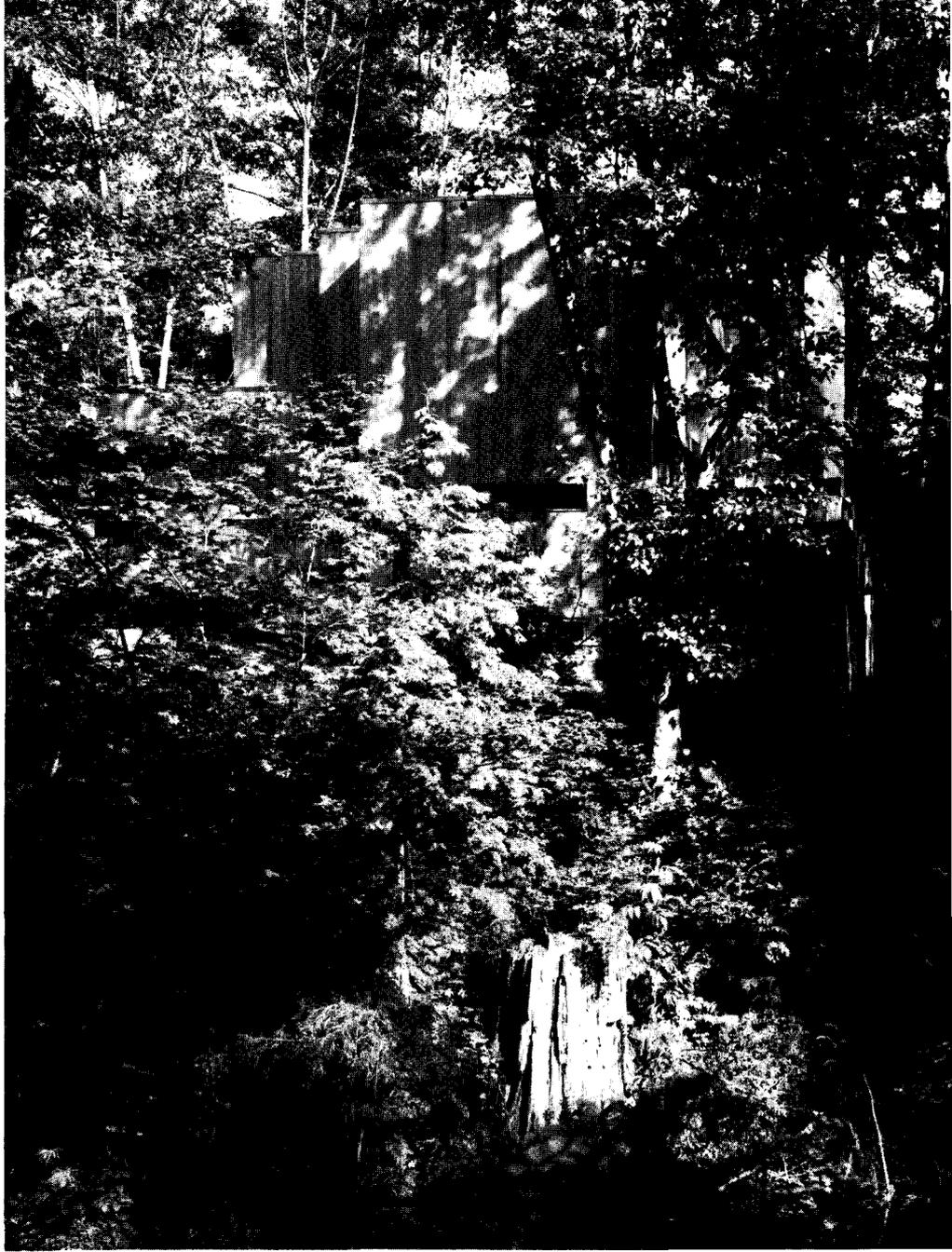
Owner: Mr. & Mrs. Stephen Chiu

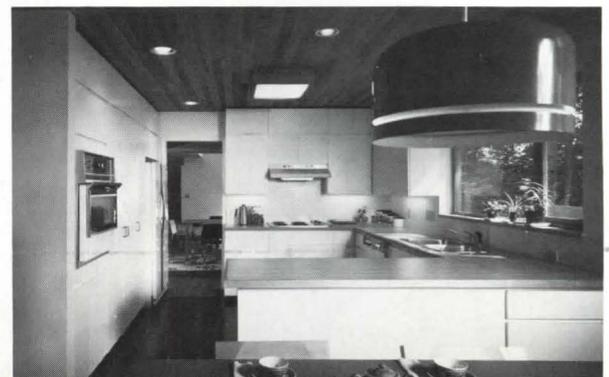
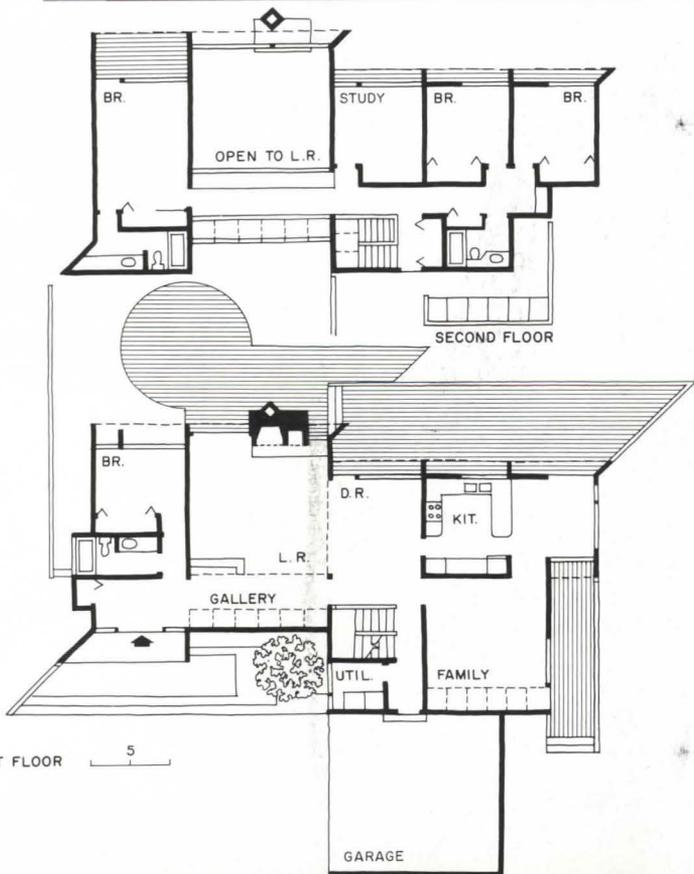
Engineer:

A. Robert Taylor (mechanical)

Contractor: Cervenka Construction

Photographer: James K. M. Cheng





## Maxey residence

Wayne County, Pennsylvania

Lyman S.A. Perry, Architect

A Philadelphia lawyer and his family commissioned Lyman Perry to plan this house for their vacation and weekend use. The open-field site slopes sharply to the south and east offering, as it does so, expansive views of the Upper Delaware Valley. An old stone fence, neglected and crumbling, cut east-west across a portion of the hillside. Perry had the fence rebuilt and generated the stepped section of the house by using a portion of the fence as a retaining wall. The expanded saltbox forms are a response to its rural setting, its modest budget, and the requirement to throw off snow in a region of severe winter storms.

The plan is tightly organized around the two intersecting axes of circulation. The lower levels contain living room and kitchen as well as two bedrooms and bath. Bedrooms and a small study occupy the upper level and the upstairs circulation space overlooks the living room (photos below). Both upstairs and down, the circulation spaces are terminated with large glazed openings that provide orienting views to site, fill the interiors with natural light, and are protected by sliding wood panels during inclement weather or when the house is not in use.

The structure is post-and-beam with tongue-and-groove cedar decking. For greater strength and added insulation the stud walls are framed in 2 x 6 members and clad in vertical cedar siding. Floors on the lower level are finished in quarry tile that runs a color range from red-brown to purple.

The Maxey house is a nice example of what can be accomplished on a controlled budget (\$25 per square foot) by a designer sensitive to the site and to his client's needs. Not prepossessing, not polemical, not overly fussy, it re-arouses our interest in "timeless" forms and in the simplified lifestyle these forms have long expressed so persuasively.



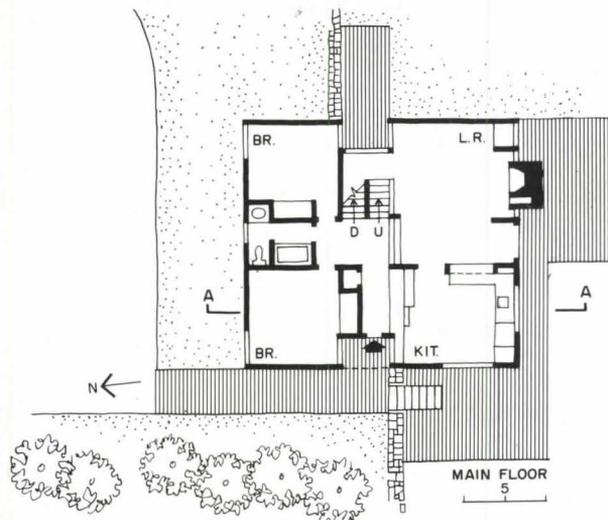
Architect: Lyman S.A. Perry  
311 North Newton Street Road  
Newton Square, Pennsylvania  
Owner: David W. Maxey  
Engineers:  
Keast and Hood (structural)  
Contractor: Norella Brothers  
Photographer: Positive Two Studios



SECTION A-A



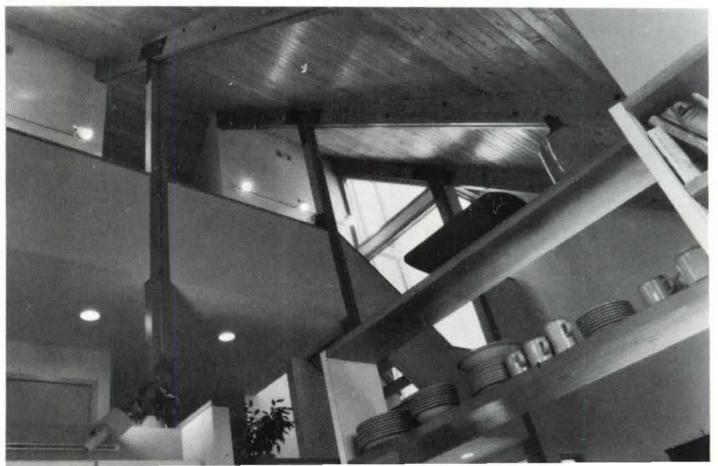
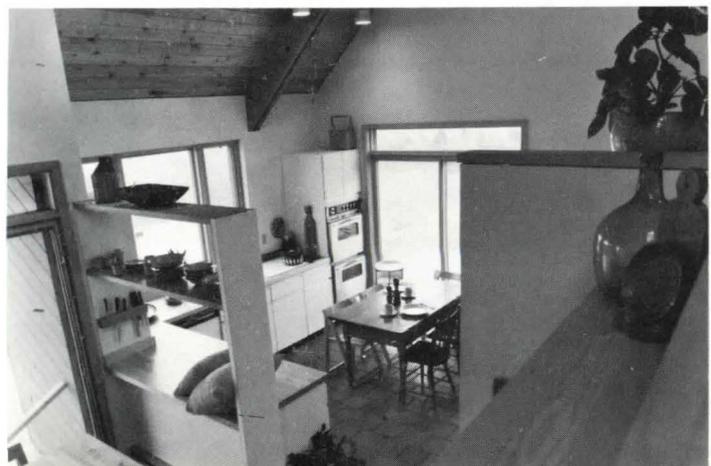
UPPER FLOOR



MAIN FLOOR



As the interior photos below clearly indicate, the spatial development of the house is vertical with overlooks and see-throughs used to emphasize this verticality. Not shown in plan is a detached, two-car garage with work shed.



Chapell residence  
Eastern Long Island  
Donald Chapell, Architect

The tall pines with their characteristically abstract profiles were both an amenity and a starting point for the design of this year-round vacation house that architect Donald Chapell built for his own use. To retain as many trees as possible—and to keep them as close to the house as he could—Chapell had to generate an intricate, multifaceted plan shape and develop it carefully for privacy and view.

To an unusual degree, the house is a single large space with alcoves—alcoves that can be closed off when necessary by sliding doors. On the lower level, the living room, lined on two sides by glass, is flanked on the other two sides by kitchen and master bedroom. Two more sleeping spaces are located upstairs and are linked by a bridge over the living room—a bridge that also serves to shade the sitting area below from direct sunlight admitted through the large expanses of glazing to the south. Even larger openings occur on the north and provide a balanced, glareless daylight as well as views to the site.

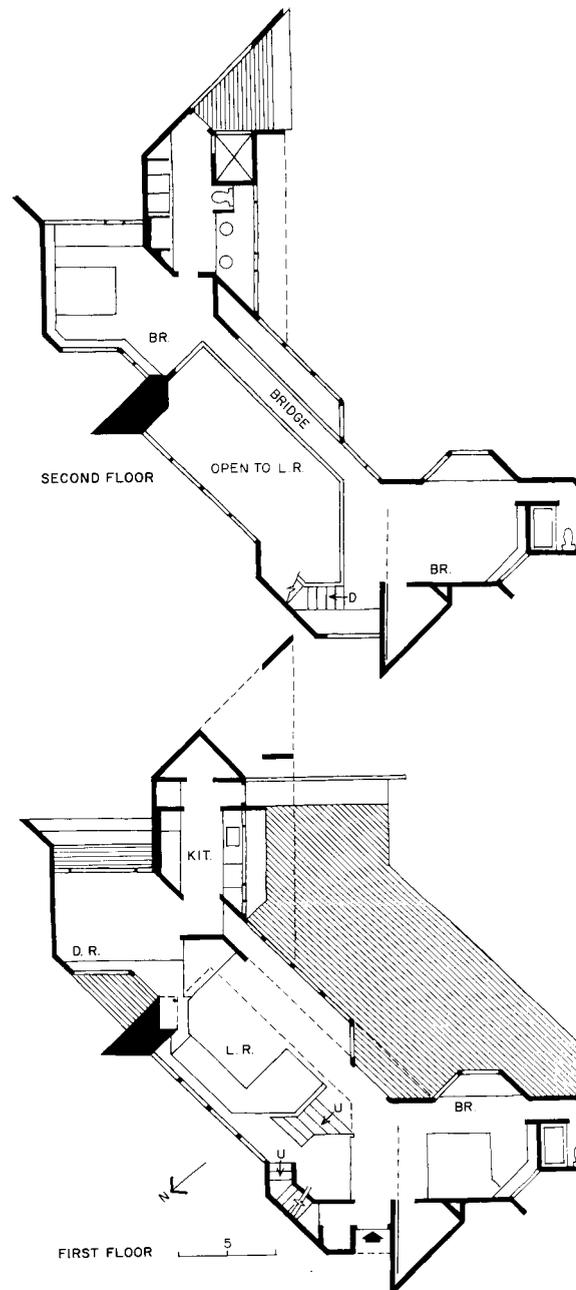
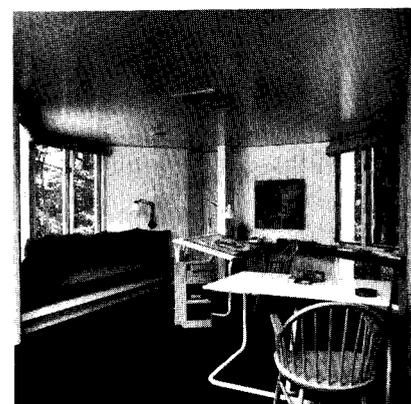
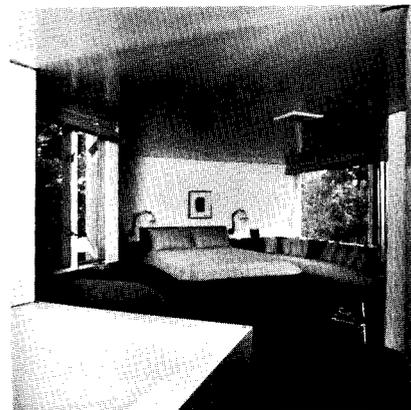
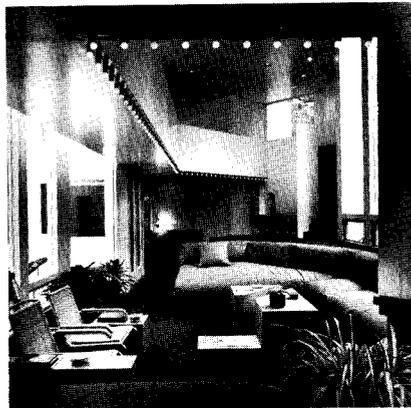
The house is framed in wood stud and finished in cedar siding laid up vertically. The scale and texture thus created are welcome on the broad planar surfaces but do not interfere with the shifting patterns of shadow cast by the pines overhead. The same siding is used at various places inside for continuity and texture.

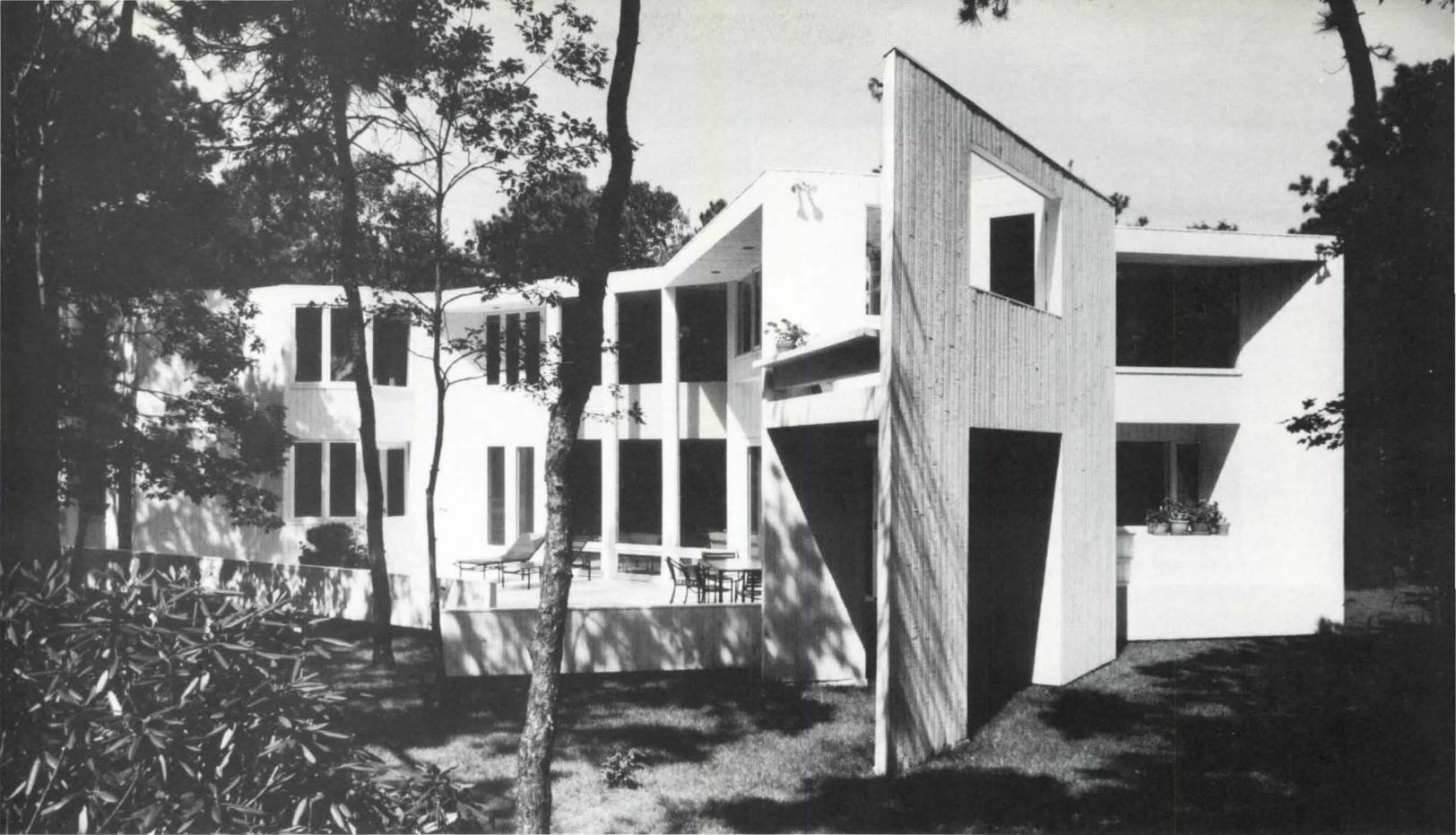
For summer comfort, the house is open and cross-ventilation is carefully provided. Windows are recessed not only to protect them from the sun but so that they can be left open during rainy weather without disturbing the regular air flow through the house.

The Chapell house is fun. It is spatially lively yet easy to maintain. The principal furnishing elements are built-in without sacrifice to flexibility and the house can be used and enjoyed by owner and occupants in a variety of ways.



Architect and owner:  
Don Chapell  
24 East 73rd Street  
New York City  
Contractor: John Caramagna  
Photographer: Bernard Askienazy





Strings of red light bulbs (visible in the uppermost of the three small photos at left) are part of a larger lighting sequence that gives the interiors a warm rose glow during the evening. From outside on the deck, they make long, linear patterns that suggest, to the architect-owner, images of airport runways at night.

## Lieto residence

Westchester, New York

Walter Brown and

Lawrence Jacobs, Architects

From higher up on the hill (photo opposite) where neighboring houses overlook it, the Lieto residence presents a carefully studied and articulated series of shed and pyramidal roof forms. This high degree of particularization expands the house visually and suggests—but only suggests—the spatial hierarchy within. Entry is from the downhill side. Stairs lead from the entrance up past the sunroom to the double-height living room under the largest of the three pyramidal roofs and then up four more steps to a den that doubles as a guest bedroom. The master bedroom, with dressing and bath complex, occupies the uppermost level. Thus the spatial development of the house is a series of interconnecting spaces that become more private as they step up the hillside. And only from the upper level is the entire volume of the house made visible and comprehensible.

The Lieto residence is of a house of somewhat indeterminate scale owing chiefly to the wide range in the sizes of window and door openings. The windows were designed to frame specific views of the site, and most openings are tall and slender because the surrounding tree clusters are so vertical.

The hillside wraps partway around the house to form the beginnings of a topographic bowl into which the house is carefully set. There is a sense of partial enclosure by the site forms that creates an active relationship between house and setting. Decks project on three elevations to anchor the whole composition.

The over-all image is slightly Romantic—but if it owes something in its materials and its picturesque massing to the American Shingle Style, the debt is not great. The Lieto house develops logically from its own design assumptions—assumptions like these: small things can be as complex as big things; neighbors do not want to look down on flat, built-up roofs; and historicism still has an important place in contemporary residential design.



## Architects:

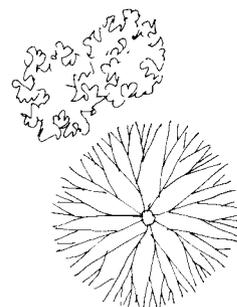
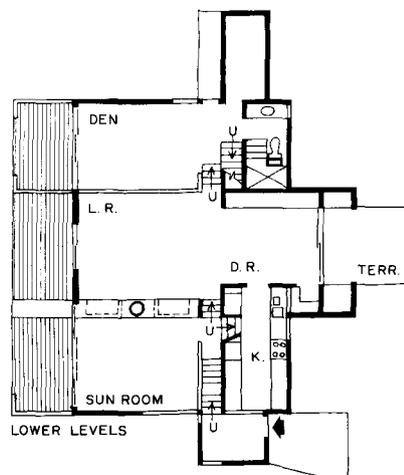
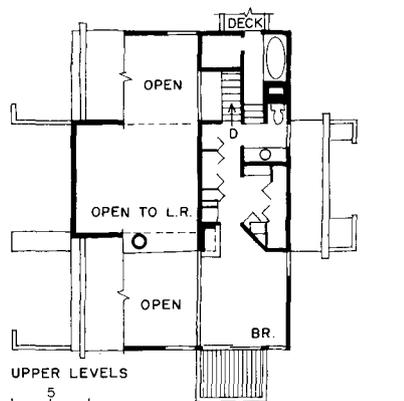
Walter D. Brown and  
Lawrence R. Jacobs  
35 Mercer Street  
New York City

## Owner:

Mr. & Mrs. Edward Lieto

Contractor: Joseph Loria

Photographer: Lawrence D. Queen









The rooms are oriented to ensure maximum sunlight in the sun room (left, above) and an easterly view for the dining space. The den (left, below) can be closed off with an operable curtain that is hidden in a pocket when not needed.



Residential remodeling  
and addition,  
Chevy Chase, Maryland  
Hugh Jacobsen, Architect

Few readers will recognize Hugh Jacobsen's touch in the exterior of this remodeled Victorian house in a suburb of Washington, D.C. The original portion of this house was built in 1871 as an outbuilding to a larger house of similar style. The main house was long ago erased by a change in the street plan, but the small house remained, surviving several owners and a series of modest alterations.

When the present owner purchased the property in 1975, Hugh Jacobsen was retained to make a new addition and to thoroughly modernize the interiors. But because the neighborhood was old, the corner site prominent, and the Victorian character of the design so lovingly preserved through earlier alterations, Jacobsen carried out the new exterior work using the old mold—or carefully studied reproductions of that mold. The original entry with its covered porch was removed. A floor-to-ceiling bay window was substituted and then repeated on the new wing. Window trim, fenestration and eave details were carefully researched as were paint colors used in small country houses of the 1870s. Both in the old exterior and in the addition, the ethos of the earlier era was preserved, including the promise of well proportioned, carefully developed spaces within.

On the inside, however, the Old Queen would not have found herself at home. The house is fully air conditioned and the interior development of the spaces, their arrangement, their furnishing are pure Jacobsenian. Starting with the glass entry link, and continuing across two floors, the house is contemporary and equipped with all the appurtenances of modern life.

There is always a special feeling about houses in which the old and the new are beautifully harmonized. Here this harmony is achieved very purposefully through a process of historical allusion that, as recently as five years ago, might have been unthinkable for most architects and even today takes courage and sensitivity.



Architect: Hugh Newell Jacobsen  
1427 27th Street, N.W.  
Washington, D.C.

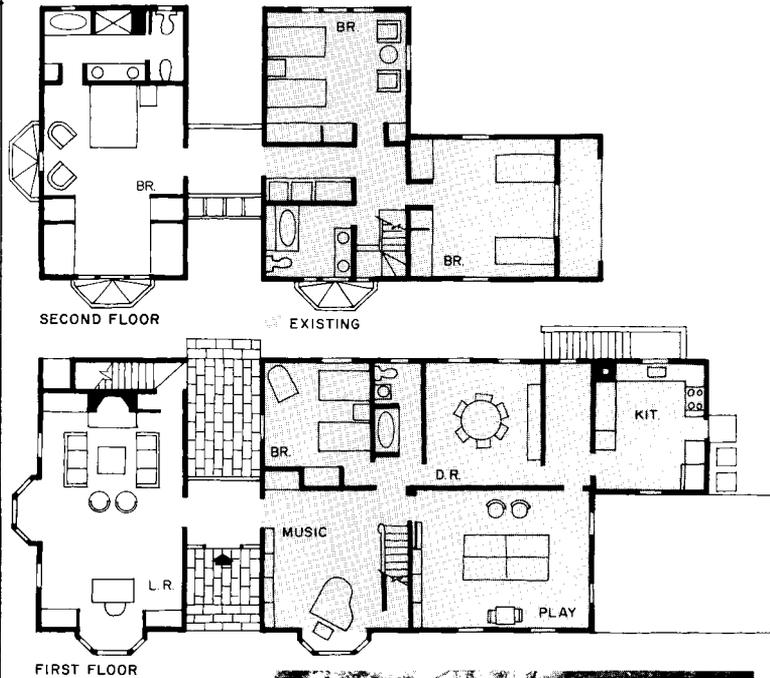
Engineer:

Kraas & Mok (structural)

Contractor: Owner

Photographer: Robert Lautman

Courtesy of House & Garden © 1977,  
Coude-Nast Publications, Inc.



The small photo (above) shows the original portion of the small house. The entrance, across a porch, leads into what is now the music room (photo lower right). The living room (photo below) and bedroom above make up the new addition.





Private residence  
Arlington, Virginia  
Arthur Cotton Moore  
Associates, Architects

As you approach this house from the road, its forms create a great sense of expectation. Its long solid wall planes, set at the peak of a wooded bluff near the Potomac River, offer no clue to what lies beyond—and form what is understood to be a strong dividing line between the outside world and the family spaces beyond. The complex of roof shapes and the skylights suggest some spatial spectaculars beyond that solid wall.

All those impressions are confirmed when you enter through the narrow entrance notch. Inside, the entry space widens out to a dramatic window wall framing views of the forest and hillside. This great central space (photo lower right) serves as a commons, separating the two main volumes of the house. The adult wing (top in plan) includes the living room, the library, and (upstairs) the master bedroom and guest room. The second zone includes, on the upper level, the children's bedrooms; and on the lower level, a separate living room for the children, the kitchen, and the dining room. At the upper level, these two wings are joined by a bridge across the common space; and access to the upper levels is by a strongly sculptured stair to the bridge.

A third volume—the garage—is linked with the main spaces by a long greenhouse/pavilion—a part of that long diagonal seen from the entry side. The greenhouse and garage—and on the downhill side a promenade deck and circular overlook with built-in benches—frame the major outdoor space: a large terrace and swimming pool area.

Thus the expectations raised on the entry side are realized: A beautifully zoned house with very private areas for both parents and children, and a considerable choice of indoor and outdoor commons spaces—all enlivened by surprising spatial configurations and light from unexpected sources.



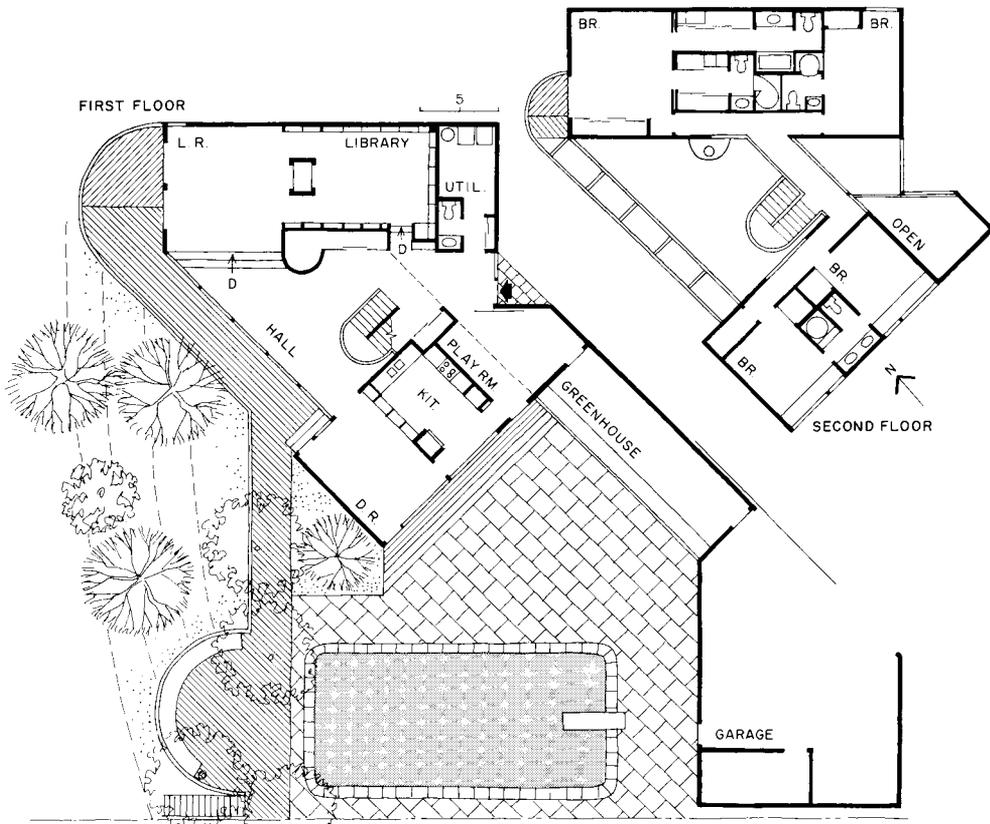
Architects: Arthur Cotton Moore Associates  
1214 Twenty-Eighth Street, N.W.  
Washington, D.C.

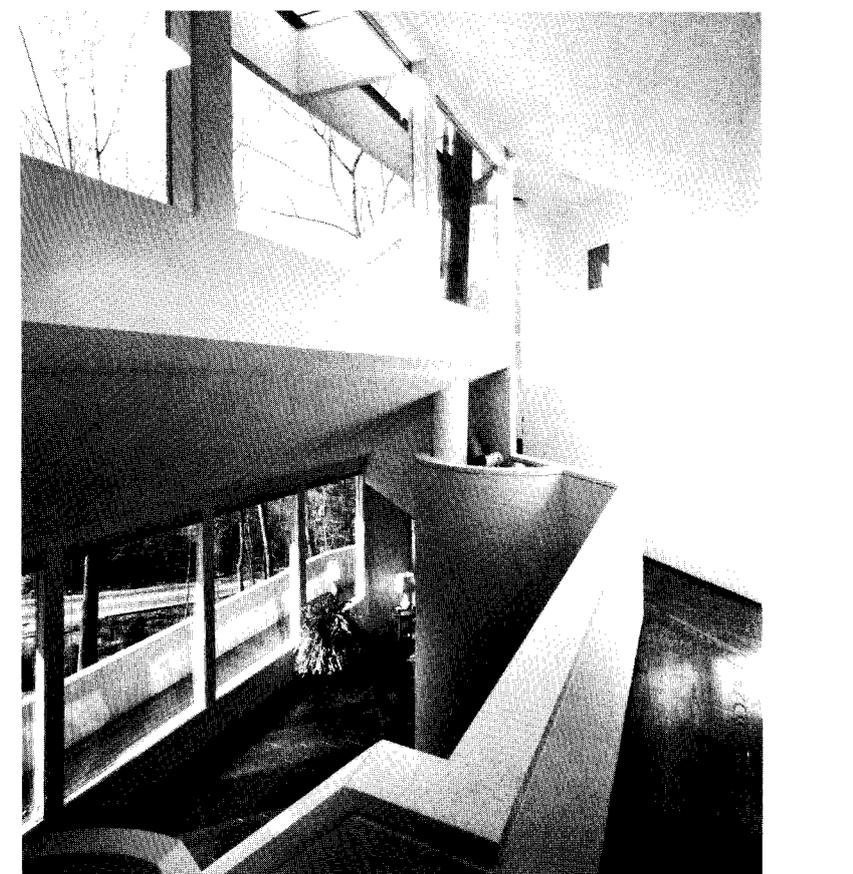
David C. Cox, associate-in-charge

Engineers:

Carcatera & Associates (structural)

Photographer: Ronald Thomas





House on the beach  
Eastern Long Island  
Hobart Betts, Architect

Eastern Long Island is dotted with weathered beach houses clad in the region's traditional wood shingle. Some are cast in a nondescript cottage style like the small, hip-roofed structure that occupied this site when the owners decided to build anew. The soundness of the existing structure and its potential usefulness in an expanded plan levied against razing it. The architect's task, therefore, became one of incorporating the older structure—both visually and functionally—into an enlarged overall plan that included new living spaces, bedrooms, kitchen, entry and access to the beach.

The new work is freestanding, set apart from the existing structure but linked to it at the upper level by a narrow section of deck. On this upper level, the architect has placed kitchen, dining, living spaces and master bedroom. The living room, at the center of the plan, is framed in four arches, three of them blind (see interior photos, next pages) and the fourth glazed and facing inland. This glazed opening is recessed (photo top right) but revealed on the elevation through an even larger arched opening. On the beach side, the living room opens generously to a deck. From this highest volume in the house, the roof slopes downward east and west, ending in small projecting wings cut back at 45 degrees in plan.

The lower level, where privacy is more important than view, contains garage (existing), entry, bedrooms and baths (new). The beach side, under the large deck, is windowless. On both levels, circulation is carried to the perimeter of the plan while living spaces are drawn toward the center.

As in other houses by Betts, barn doors, hung on rails, can be drawn across the large window areas when the house is not in use. And like his other RECORD HOUSES, the planning is carefully ordered and the detailing well analyzed and visually expressive. But the elaboration of the forms is more vigorous here, the spatial development more complex and intricate.

It is a playful house with its own distinct personality but it makes an earnest effort to respond in form and finish to what was already there.

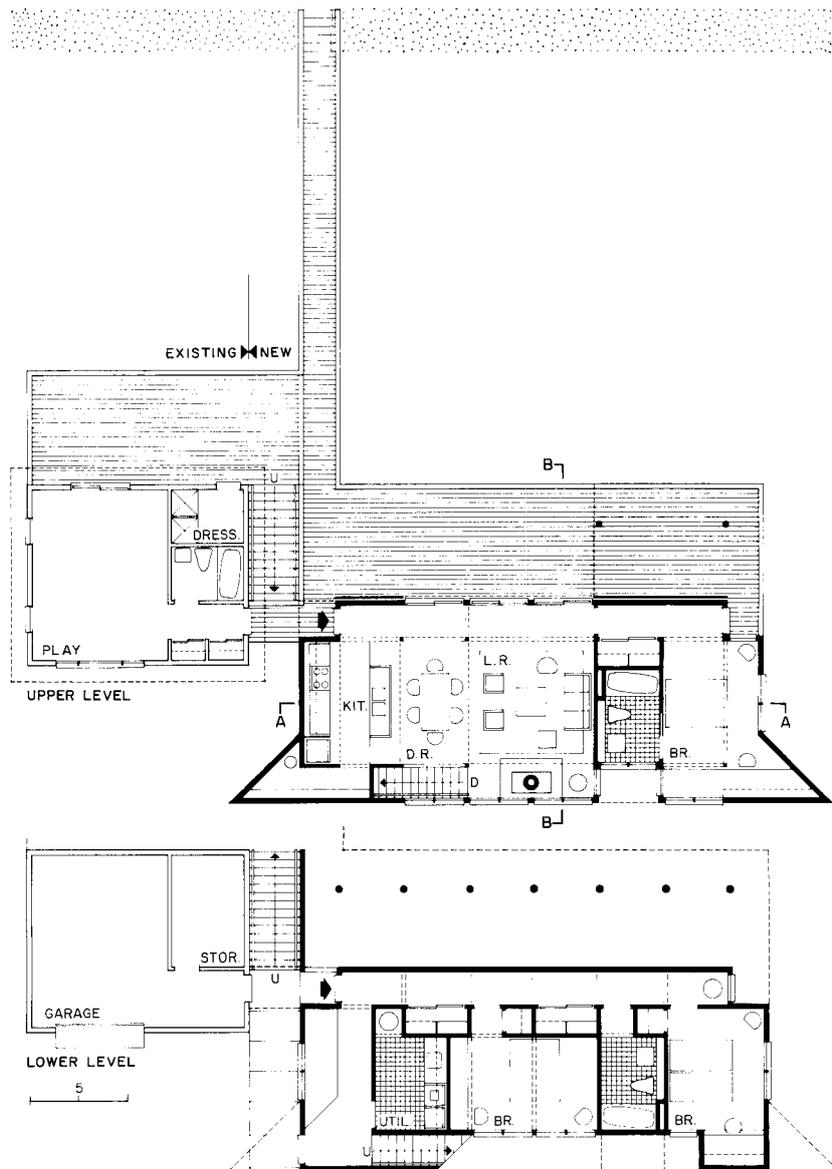


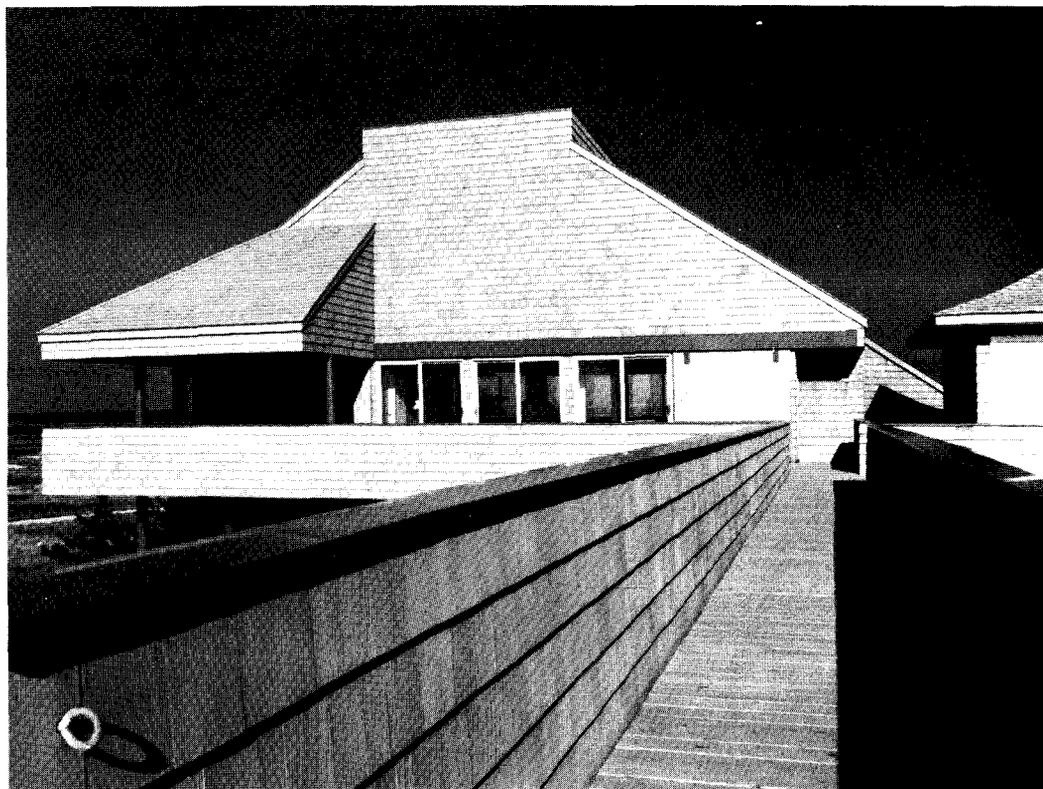
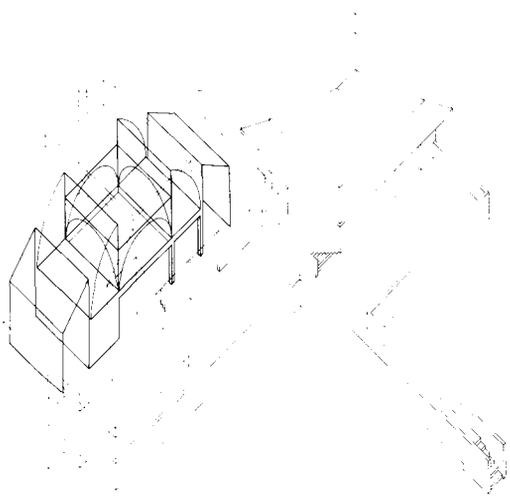
Architect: Hobart Betts Associates  
41 East 57th Street  
New York City

Engineers:  
Gleit Olenek & Associates

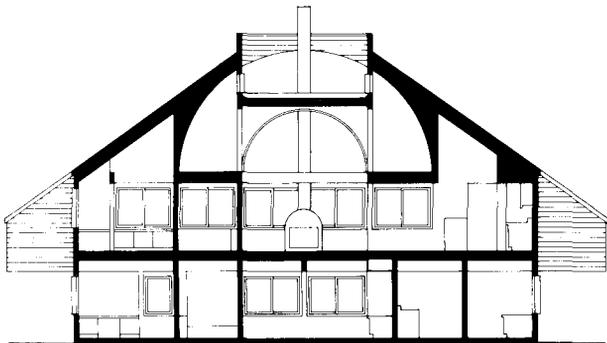
Contractor:  
Harold R. Reeve & Sons, Inc.

Photographer: © David Franzen

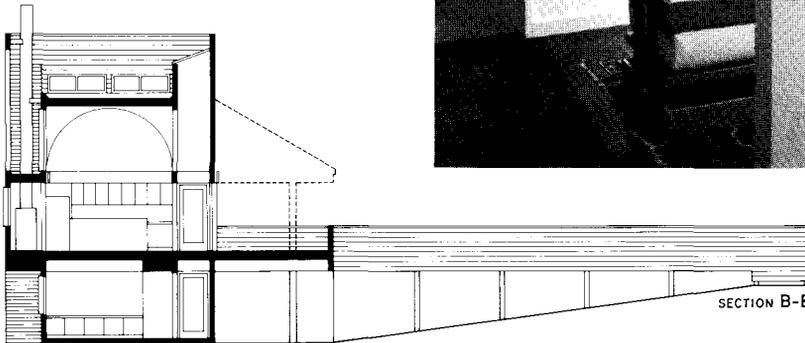




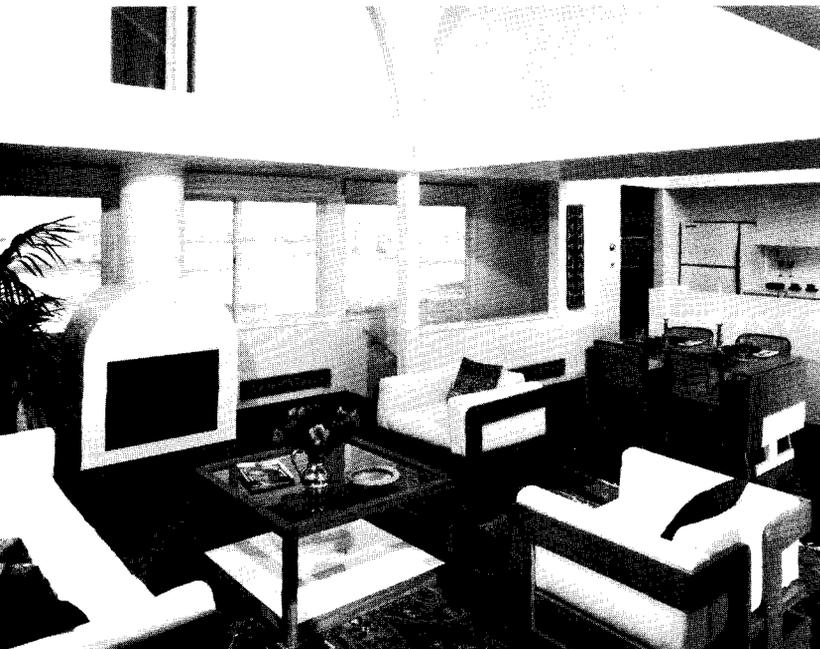
On the ocean side of the house (section below) a narrow bridge leads bathers to the beach. Clad in shingle like the house, it also anchors the house visually by establishing a strong tie to the line of primary dunes.



SECTION A-A



SECTION B-B





## Ball residence

Omaha, Nebraska

Neil Astle, Architect

Under an almost complete umbrella of deciduous trees, the Dale Ball residence sits comfortably on its gently sloping site and opens in an extended downhill vista towards a recreation park to the northeast. Neighboring houses on either side are almost completely masked by trees and heavy site vegetation.

The falling contours are absorbed by three platforms in a stepped sequence that separate the plan into three zones. Circulation spaces extend laterally to mark these divisions and, as further reinforcement, these corridors are skylighted with acrylic vaults. The changes in floor level (see section next page) allow graduated ceiling heights for various spaces.

The house is framed in post-and-beam using 2 x dimensioned cedar for structural members, and cedar boards as a wall finish both inside and out. The intersection of posts and beams is simply but convincingly detailed using negative joints and neatly exposed bolt connections. The floor is a slab on grade and dressed in brick paver of dark brown hue.

The massing retains interest by stepping back on three elevations to enclose small courts—courts that provide additional outdoor space and, in one case, preserve a specimen tree that might otherwise have been lost. Equally important, a visual distinction is maintained between structural grid and infill panel even where the two are in the same material. Louvered panels, also in cedar, provide a textural counterpoint to the siding.

The large doses of daylight that reach the deepest interior areas give these spaces and surfaces a richness, a warmth and a tone that the plants play on and augment. From almost any vantage, the spaces are lively and expressive—and all the elements that contribute to the character of the Ball residence were achieved using the simplest of means.



*Architects:* Neil Astle & Associates

553 N. 86th Street

Omaha, Nebraska

*Owners:* Dale and Sylvia Ball

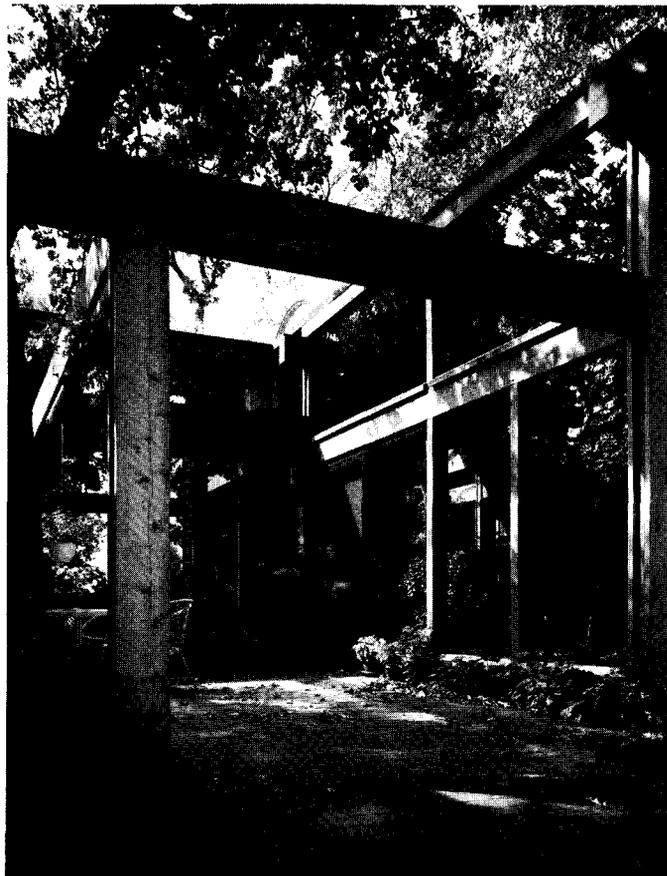
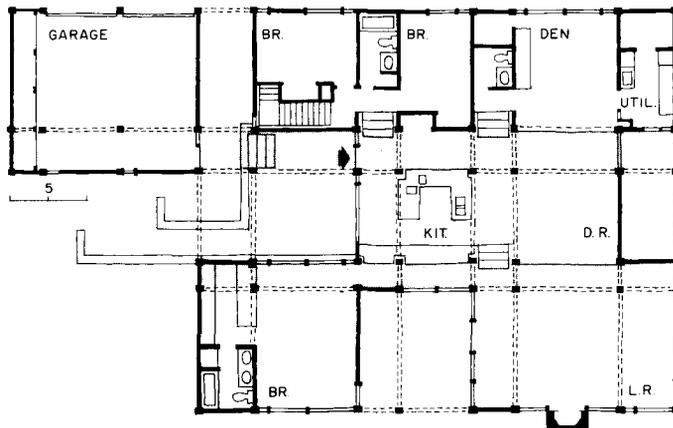
*Engineers:*

Raymond G. Alvine & Associates

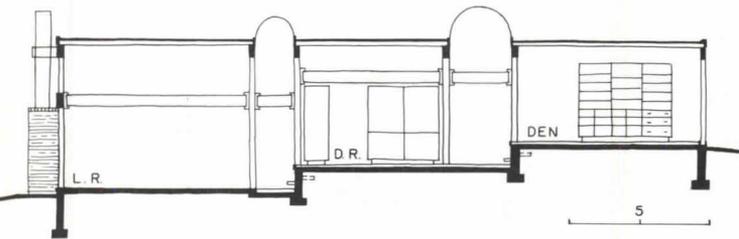
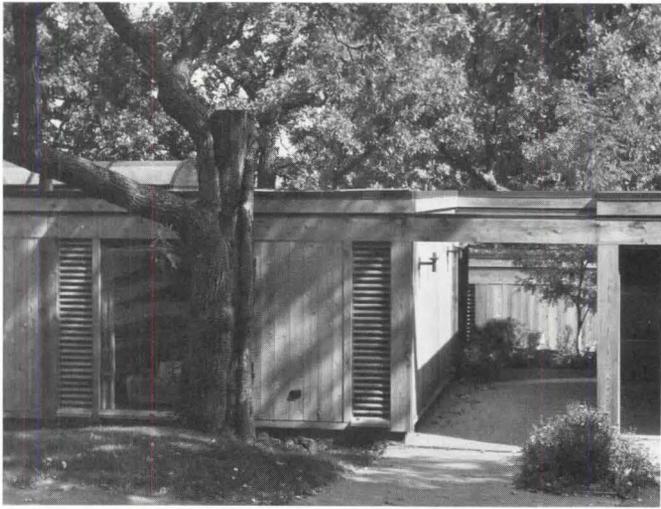
(mechanical)

*Contractor:* Midlands Corporation

*Photographer:* Joel Strasser







The tree cover has been carefully preserved (photo above and previous pages) to shade the large glazed areas in summer to reduce heat buildup. In winter, the warming rays enter the house unfiltered and help provide supplementary warming for comfort.





## Private residence

New York State

Crissman &amp; Solomon, Architects

This site in mid-New York State was ideally located for a doctor whose medical practice was split between two communities. It lies halfway between the two on beautifully rolling acreage that dips down through woodlands and pasture to a small lake. The existing house, however, was functionally unsuitable for the doctor and his family. Various alternatives were studied, including demolition and rebuilding at the same location or elsewhere on the property. The sensible solution was a major addition and an almost complete renovation of the existing house.

By careful staging, the project was carried out with the least possible disruption. Work began on the new addition. While the owners were away on vacation, the contractor renovated the existing kitchen. Work on the addition resumed and the connections to the existing house (including a new deck) were completed. Now free to occupy the new addition, the owners vacated the old living room which was then converted to a master bedroom and dressing suite. Nearly every space in the existing house has been renovated with the aim of not just modernizing—but acknowledging the spectacular setting.

As the plan reveals, the house was not easy to add to. The new spatial requirements more than doubled what was existing, and adding on in single-story increments would have made the already pancaked scheme far too linear and extended. The two-story block at one end, though it created inevitable problems of scale and massing, was functionally indicated and the architects expressed the new work for what it was—new work, not an addition slipped unobtrusively into the original.

The heating system is zoned to allow for future shrinkage. When the owner's children are grown and gone, the older portion of the house can be closed off or used minimally.



*Architects:* Crissman & Solomon  
44 Hunt Street

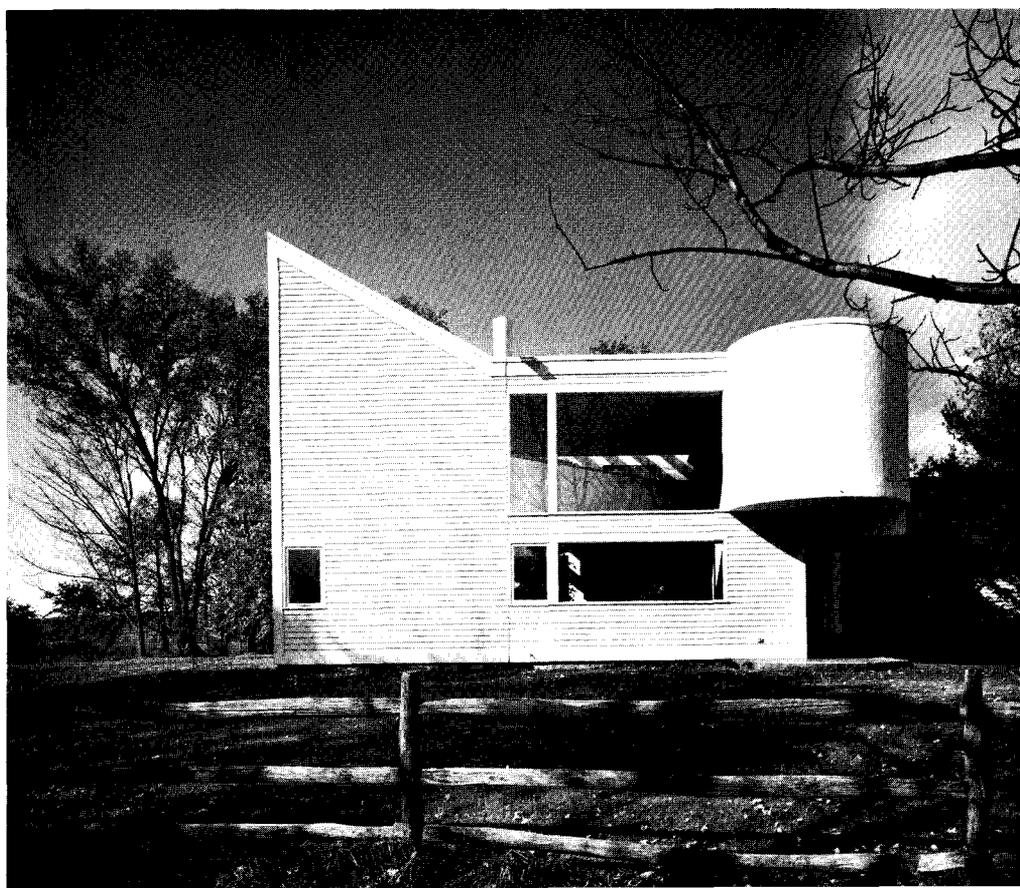
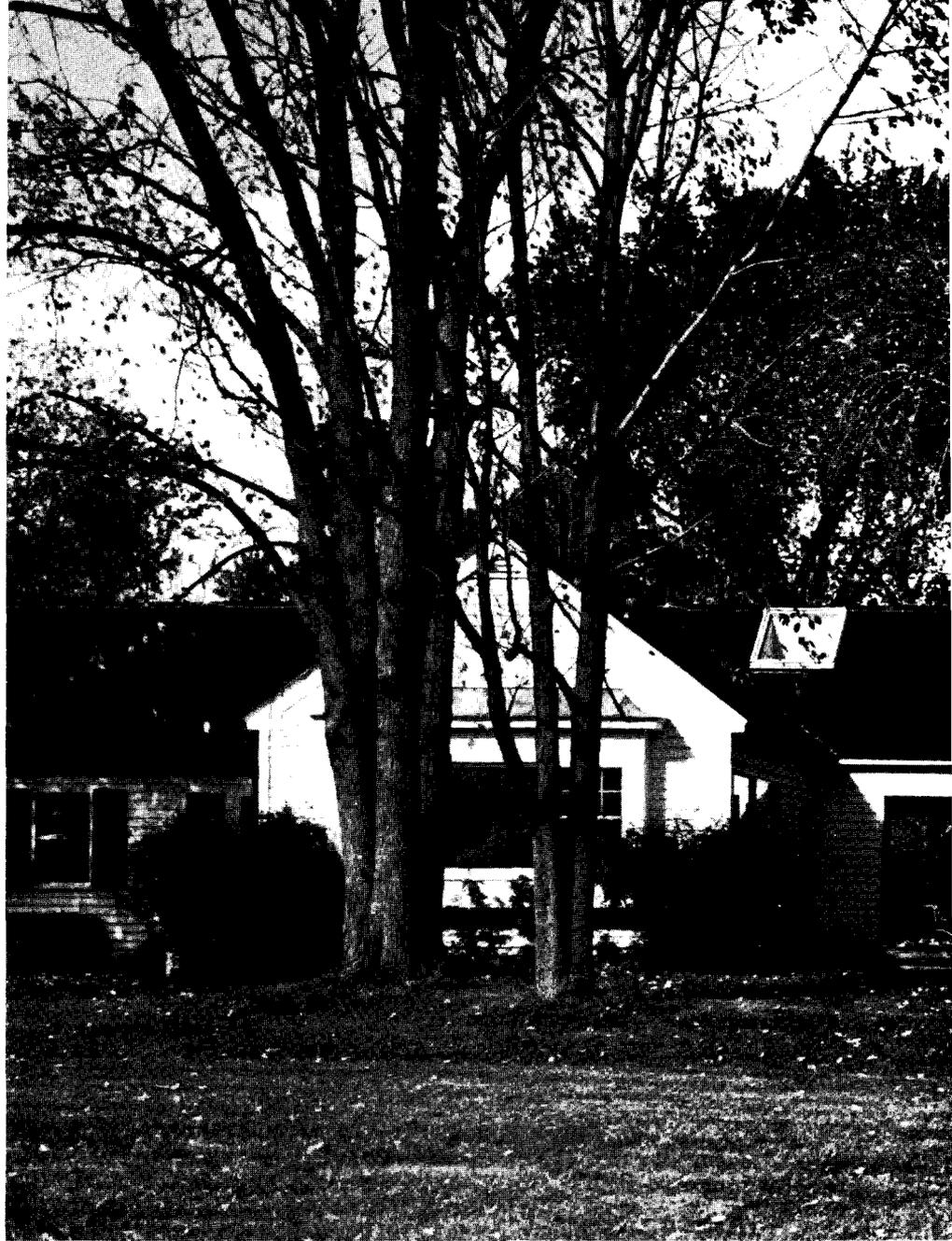
Watertown, Massachusetts

*Engineer:* Eugene Hamilton

*Landscape architect:* Lucy Tittman

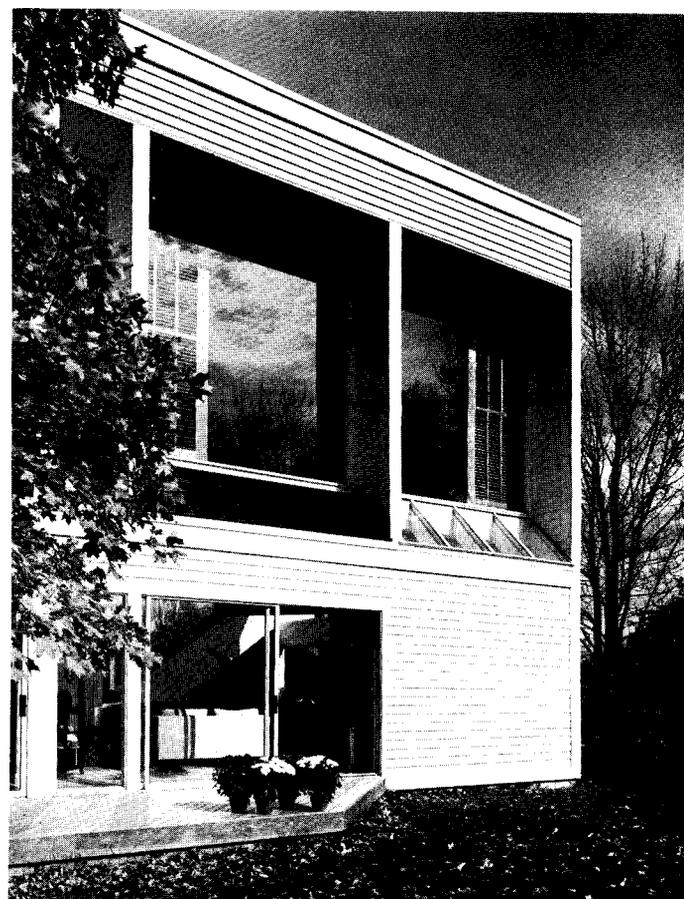
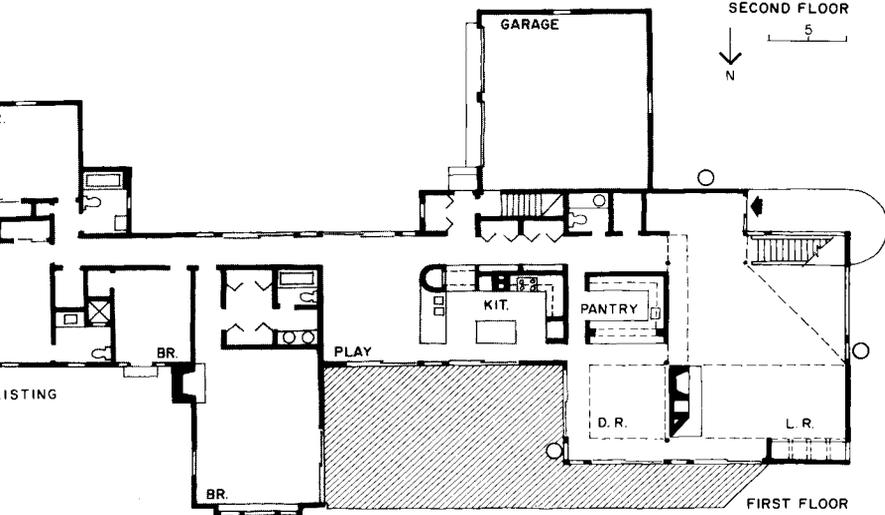
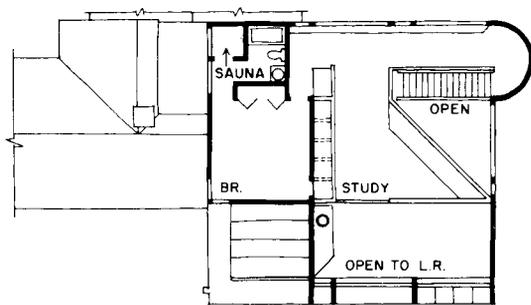
*Contractor:* Gilligan Brothers, Inc.

*Photographer:* © Steve Rosenthal

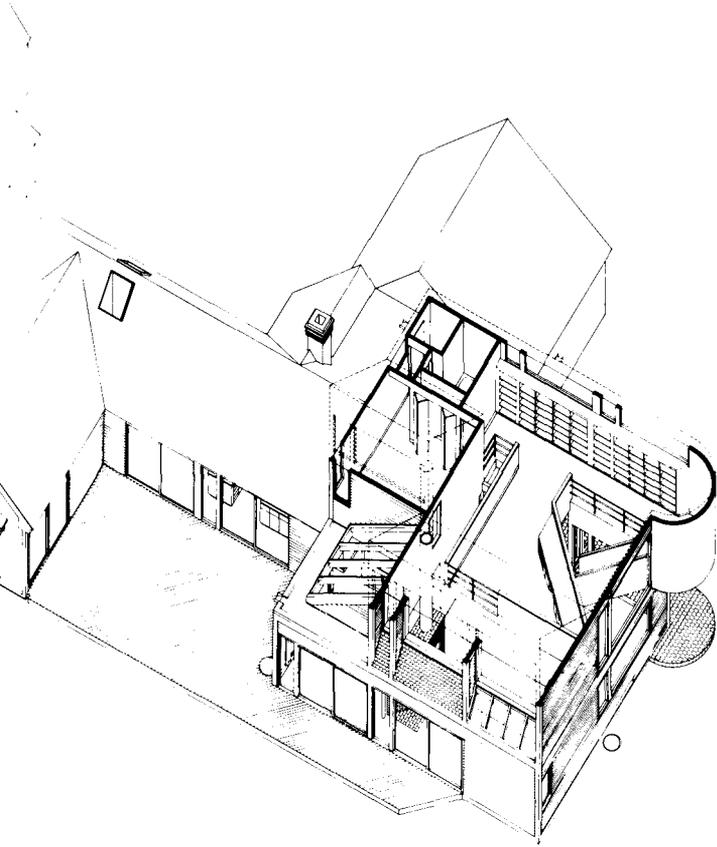




The large openings on the upper level of the new addition are recessed to control the sunlight admitted. Further control is provided by 3- by 10-foot operable sunscreens (photos above and at right).







A canopy of tall trees protects the sloping glass roof over the new dining area (photo lower right).

## Vacation house

Puget Sound

Richard Cardwell, Architect

Dense with vegetation, the site is a narrow strip that separates a freshwater pond from a gravel beach facing Puget Sound to the north. The architect's intention was to site this year-round vacation house as far back from the beach as possible, opening views north and south through the thick natural cover.

The plan is appealing in its simplicity. Half the house is set off for living, dining, relaxing—in one space that incorporates both views. A food preparation area is set along one wall and can be screened off with two sliding barn doors. The other half of the house includes the two bedrooms separated by two baths. Space for a small laundry, accessible from outside, is borrowed from both bathrooms. This whole section of the house, as well as the north portion of the living room (left in plan), is sheltered by a pitched roof. High clerestories under the roof pitch bring diffused daylight into the bedrooms and baths and provide closely-framed views into surrounding treetops.

All glass is fixed with ventilation panels above the windows in the living area and above the soffit line in the bedrooms. Oak strip floors have been lightly sanded and oiled. Inside and out, the principal finish is rough-sawn cedar applied vertically over a standard wood frame. Barn doors, mounted on long rails, provide an easy means of closing the house when not in use or protecting its occupants from the severe storms that occasionally make their way down the Strait.

The same modesty and restraint that characterizes the house design was applied in choosing plant materials. Everything is indigenous. Sword ferns, vine maple and aspen, among others, were transplanted from the nearby woods to mend the minimal scars left by construction.



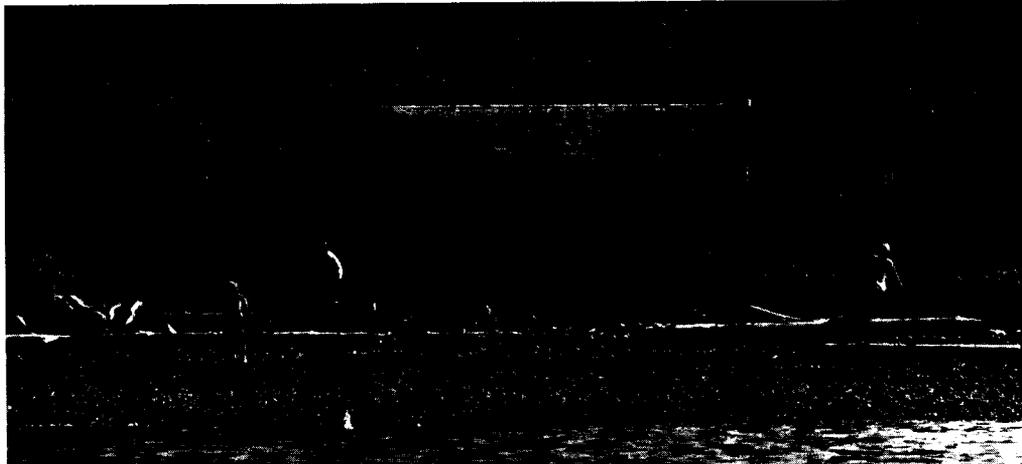
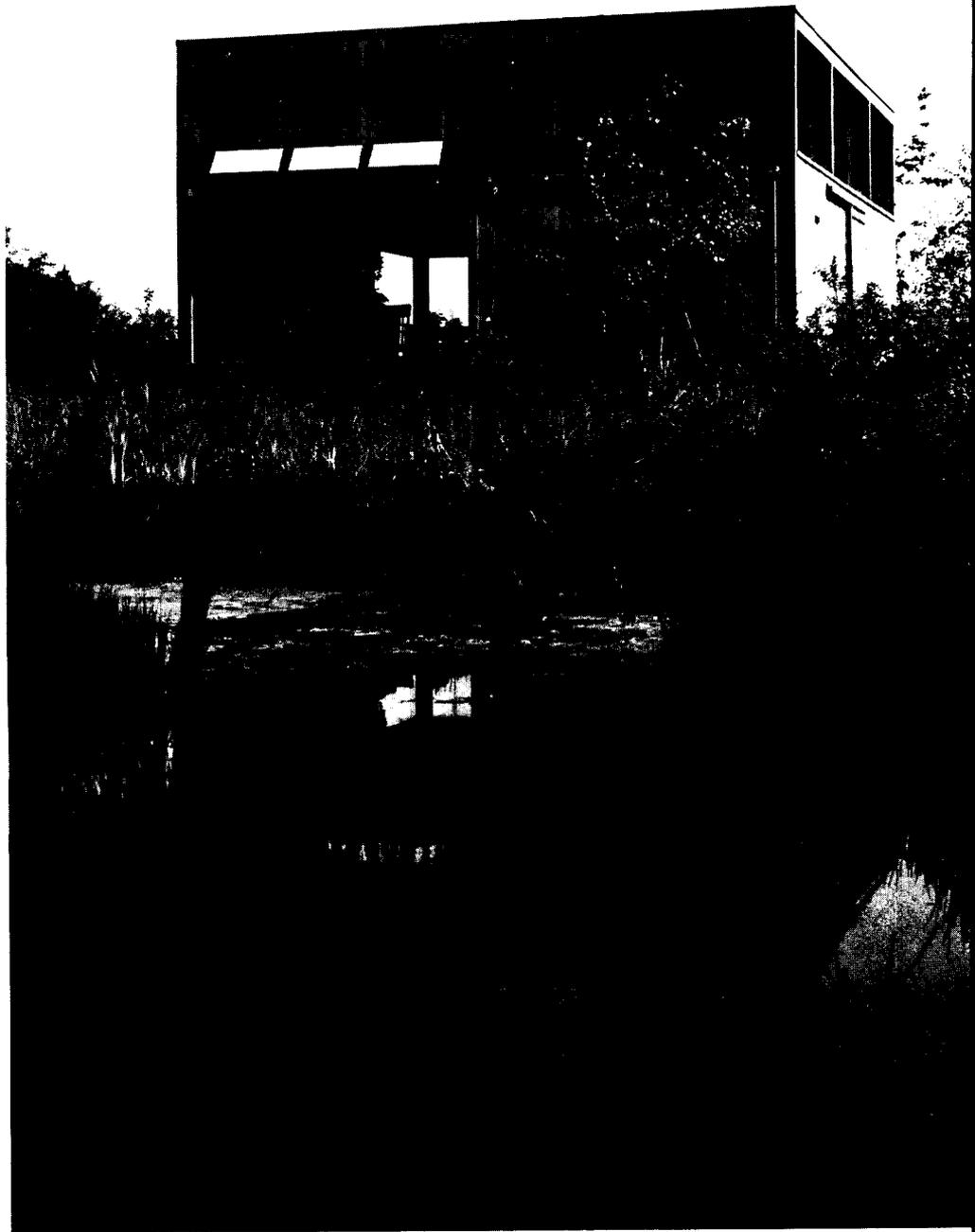
*Architect:* Richard Cardwell  
Pier 64

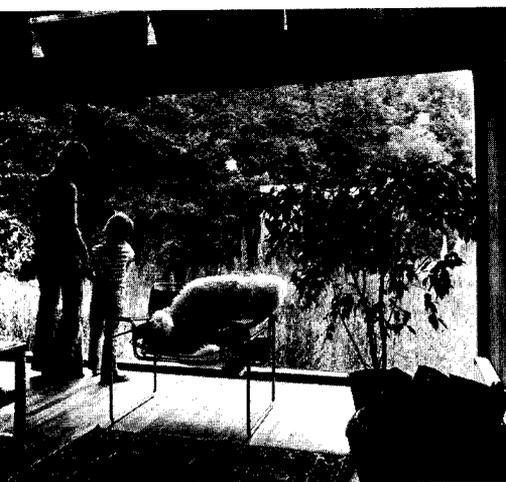
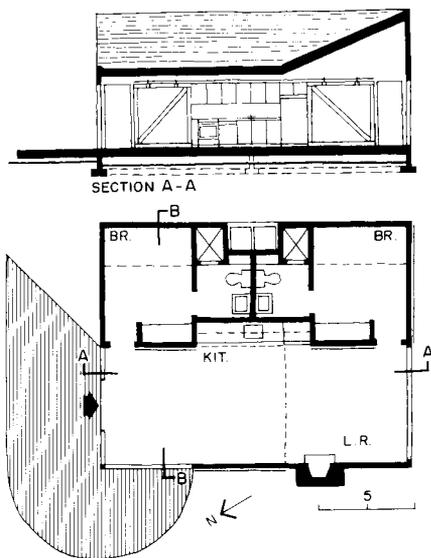
Seattle, Washington

*Owners:* Mr. & Mrs. H. H. Griggs

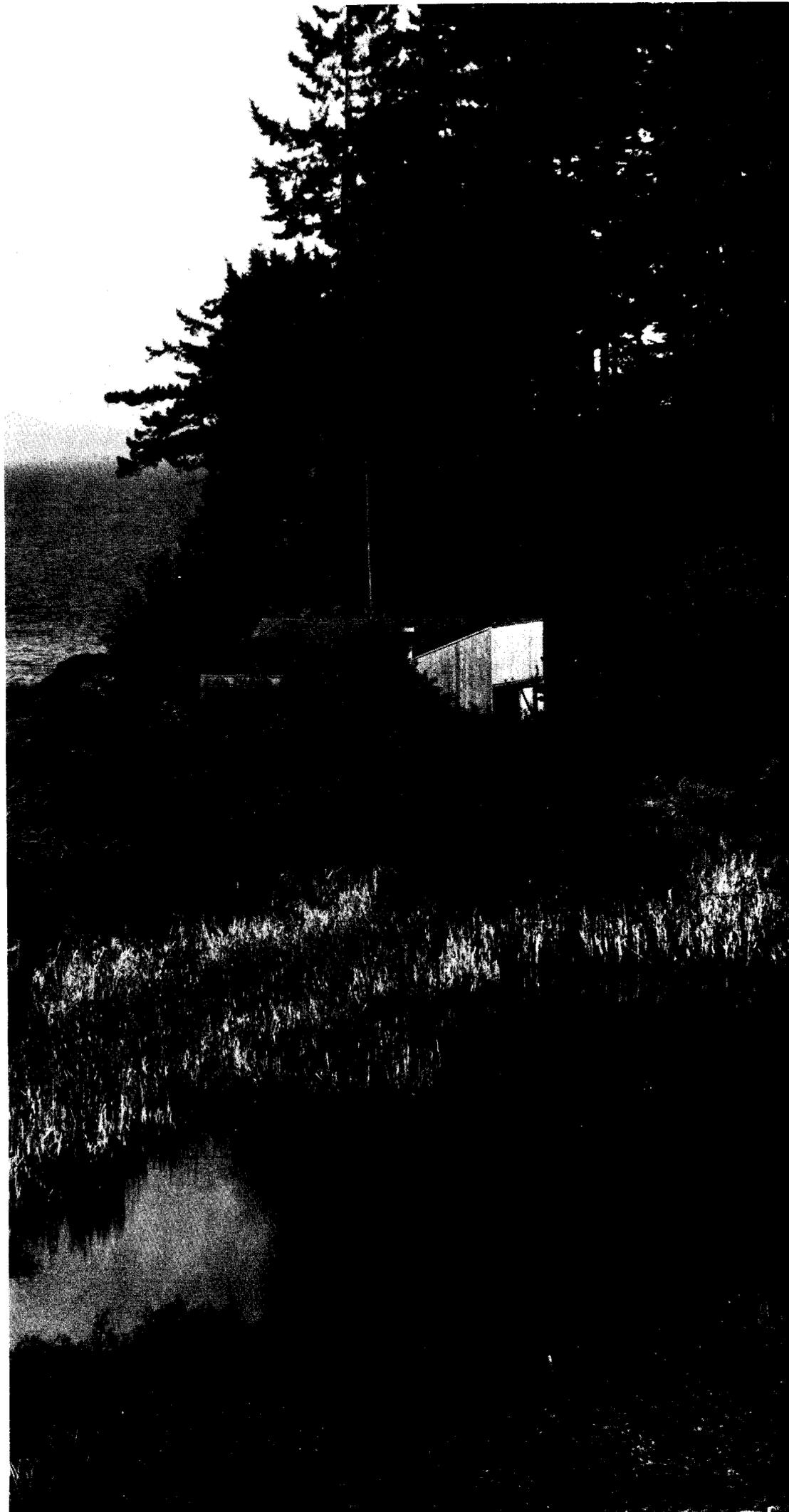
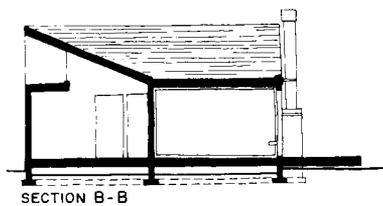
*Contractor:* Nelson Lumber

*Photographer:* Larry Hutson





The roof pitch turns 90 degrees over the owner's bedroom creating an interesting geometry not easy to read in every elevation. Photo at far right is taken across the freshwater pond toward the Straits.



Gray residence  
 Santa Barbara, California  
 Warner-Gray, Architects

A house of immaculate, precise lines, this is an elegant expression that befits both entertaining and the down-to-earth functional necessity for a family of six. To fill the spatial needs for both privacy and interaction of family members, architect Paul Gray (of Warner and Gray architects) designed his own house as a "progression of spaces that move from large gathering areas to smaller more private ones, laced together with hallways."

To enhance privacy, the spaces are separated according to their function, reaching out in three directions from the entrance (upper right). The bedroom wing (right) which consumes the bulk of the 4,200 square feet, is to the north and is part of the family-centered areas, while the formal living room is completely set off to the south. This portion has the dominant geometric form of the house—the shed roof—angled to accommodate the yet-to-be-installed solar energy collector panels.

Because the house is located on a three-acre hillside site near the coast, the house is oriented to frame views in all directions—to the north, the mountains; to the south, the ocean; and surrounding the house, eucalyptus trees.

An integral part of the crispness of the design is the subtle separation of horizontal and vertical planes. Viewed from the exterior, the house appears to "float," being slightly raised on a concrete slab foundation and is recessed from the perimeter walls: this recess is visually emphasized by use of dark-colored stones around the base. This idea of articulation is expressed in the interiors through reveals at the junction of walls with floor and ceilings, painted a dark color, again for emphasis.



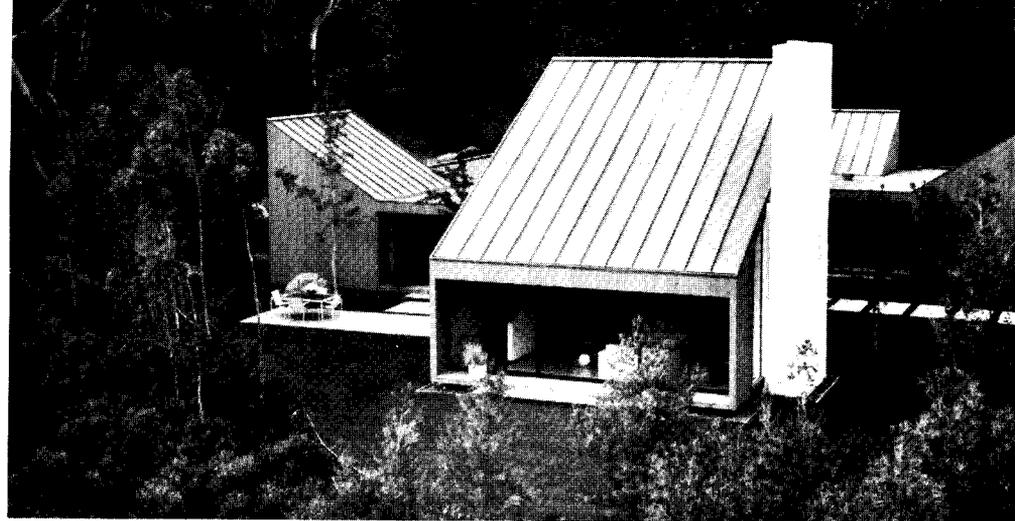
*Architect:* Paul Gray  
 of Warner-Gray  
 1225 Coast Village Road  
 Santa Barbara, California  
*Owners:* Mr. & Mrs. Paul Gray

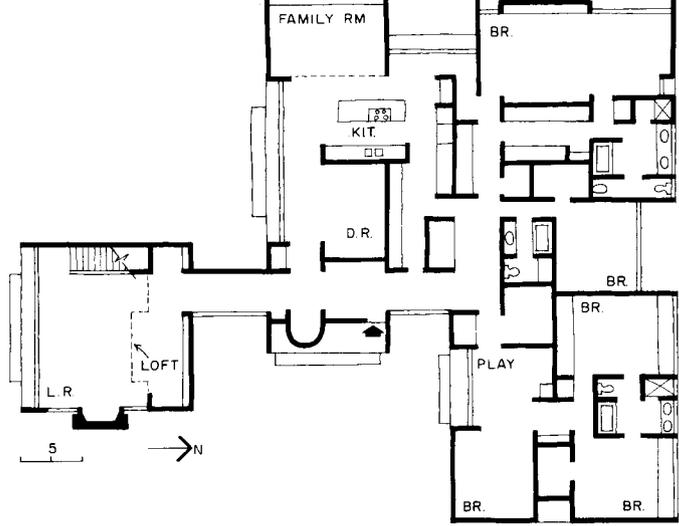
*Engineers:*  
 Theodore Anvick (structural/foundation)  
 Leo Kummer (mechanical)

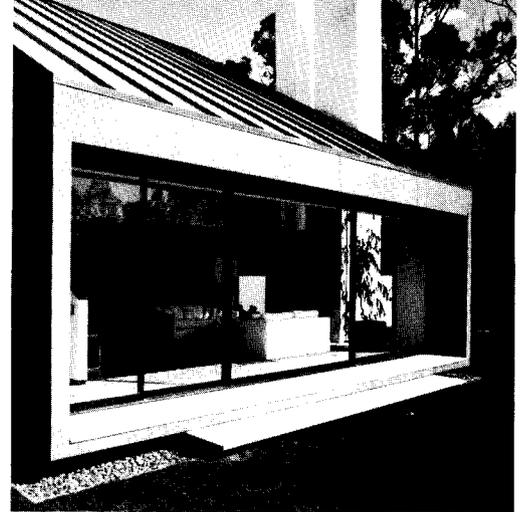
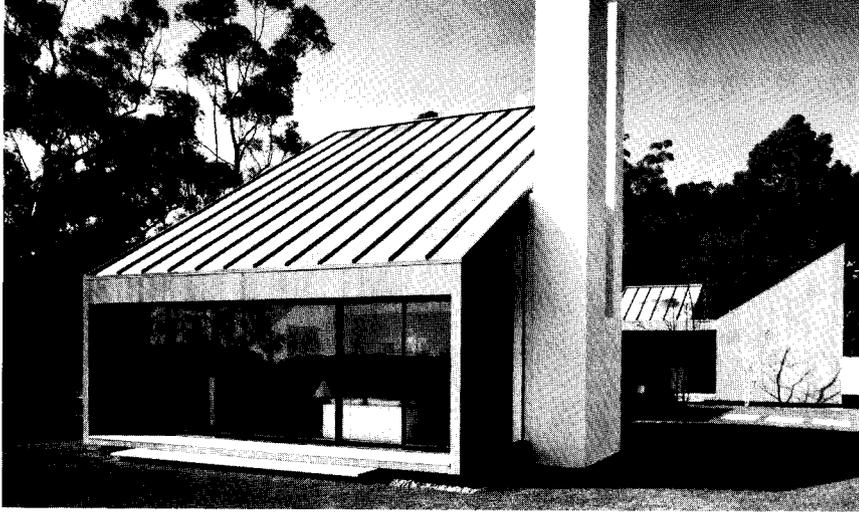
*Landscape architects:*  
 Richard Harrington, Dick Gilbert, Paul Gray

*Interior design:*  
 Paul Gray, Jack Warner, Gwen Warner

*Contractor:*  
 A. O. Pieper (general)  
*Photographer:* Charles White









One strong visual element in the design is a split fireplace (all photos left) which frames views of trees from the living room and maintains the proper scale for that section of the house, both inside and out. Of necessity, long hallways connect the multitude of rooms, but there is always a vista opened at the end, such as seen along the kitchen corridors (top and bottom). Clerestory windows abound, including in the family room (right).



Bruder residence  
New River, Arizona  
William Bruder, Architect

This modest house, carefully sited in a relatively empty stretch of desert north of Phoenix, was designed by its owner and constructed with the help of friends in just over a month, using the simplest kinds of materials and details. A good deal of forethought and invention went into its planning, however. The result is an unusually expressive small house and studio that are fine-tuned to the climate and constructed for under \$13,000—or roughly eleven dollars per square foot.

The house is conventionally framed in wood stud with 2 x 10 floor joists supporting a fiberboard subfloor. The roof structure is composed of 3 x 8 fir beams on four-foot centers. Insulation is applied throughout: four-inch batts in the stud walls and a two-inch thickness of rigid urethane under the red roll roofing. The exterior, though, is unexpectedly clad in galvanized metal sheet. Because it is corrugated and matte finished, it does not throw off eye-searing reflections under the bright sun. Instead, it produces softly-glowing reflections of the surrounding desert—reflections that change perceptibly as the days and seasons pass.

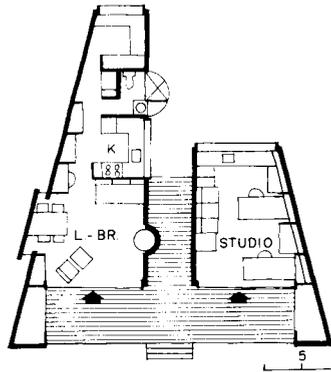
To the right in the plan (above) is a small drafting studio with two work spaces. Opposite the studio, across the entry breezeway, is the main living space, which also doubles for dining and sleeping. It backs against a kitchen, bath and dressing area. Nearly every space is detailed for multiple use.

Unifying the two halves of the structure is a generously-scaled, trellised deck that faces a deep arroyo and undisturbed natural desert beyond. Here is the outdoor center of activity, a space for a wide variety of uses day or night. This north exposure is completely glazed while the openings on the other three elevations are sharply controlled against the sun.

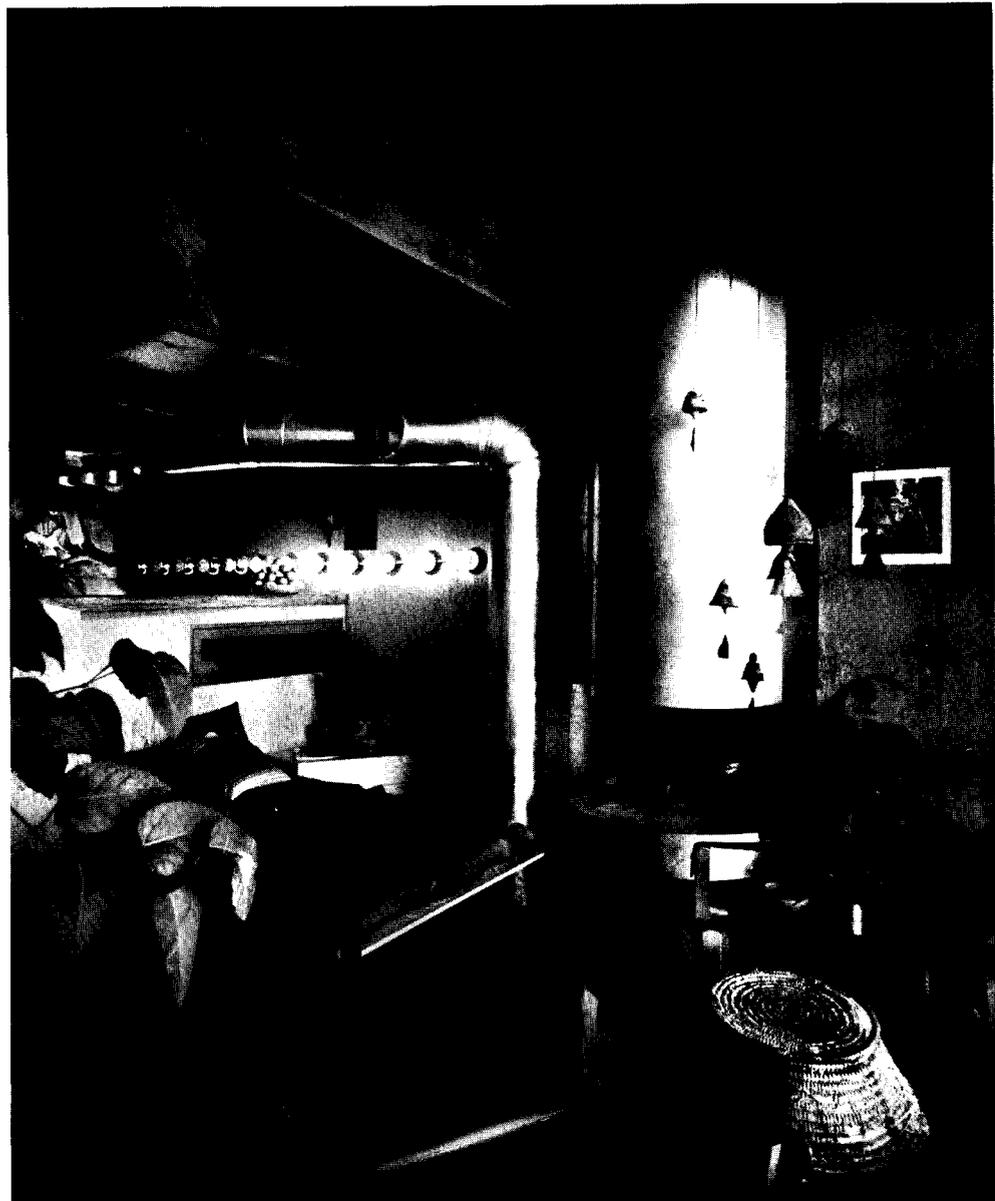
Space conditioning is achieved by an evaporative cooling unit with exposed ducts and a fireplace augmented by portable heaters for winter evenings.

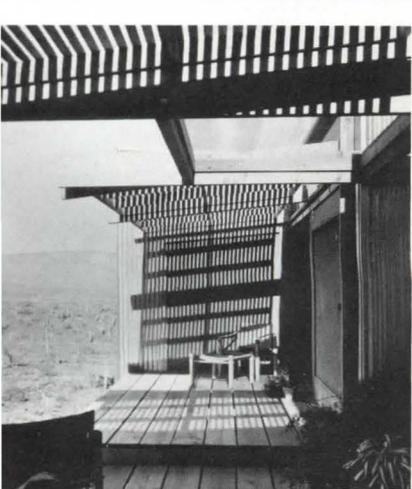


Architect and owners:  
Mr. & Mrs. William P. Bruder  
Black Canyon Stage  
New River, Arizona  
Photographer: Neil Koppes



The shallow pitch of the roof is echoed in the tapered plan shapes which open to the north. The large glazed opening is shielded from the sun by an overhead trellis that casts elaborate shadow patterns across the deck and side walls.





Private residence  
Northern Florida  
William Morgan, Architect

As most recently discussed in *RECORD HOUSES* for 1976 (page 107), architect William Morgan has long been an exponent of buildings that blend with the landscape by bringing the surrounding terrain up around and even over them. This is not to say that the resulting forms do not have a definite presence; he will quickly draw comparisons to the ancient monumental architecture of local Indian tribes, which he points out was not that much different in sophistication than say that of the Incas—or even Egyptians in the Middle Dynasties. One of the real fascinations in Morgan's buildings (including houses) is that they are at once monumental beyond most peers and exceptionally respectful of their natural surroundings.

Located on an Atlantic beach of northern Florida, this latest "earthform" house has been designed for a couple with three children, and—in recognition of its site—bears marked differences from Morgan's earlier houses, which tend to be enclosed by their bermed surroundings. The more open qualities demanded by the location are achieved by an opening of the side toward the ocean. Here, the local norm of an often prosaic and "tacked-on" screen-covering for the swimming pool becomes part of the basic form. It reveals the panorama of the beach in a startling and dramatic contrast to the enclosed interior and exterior spaces, experienced on entry.

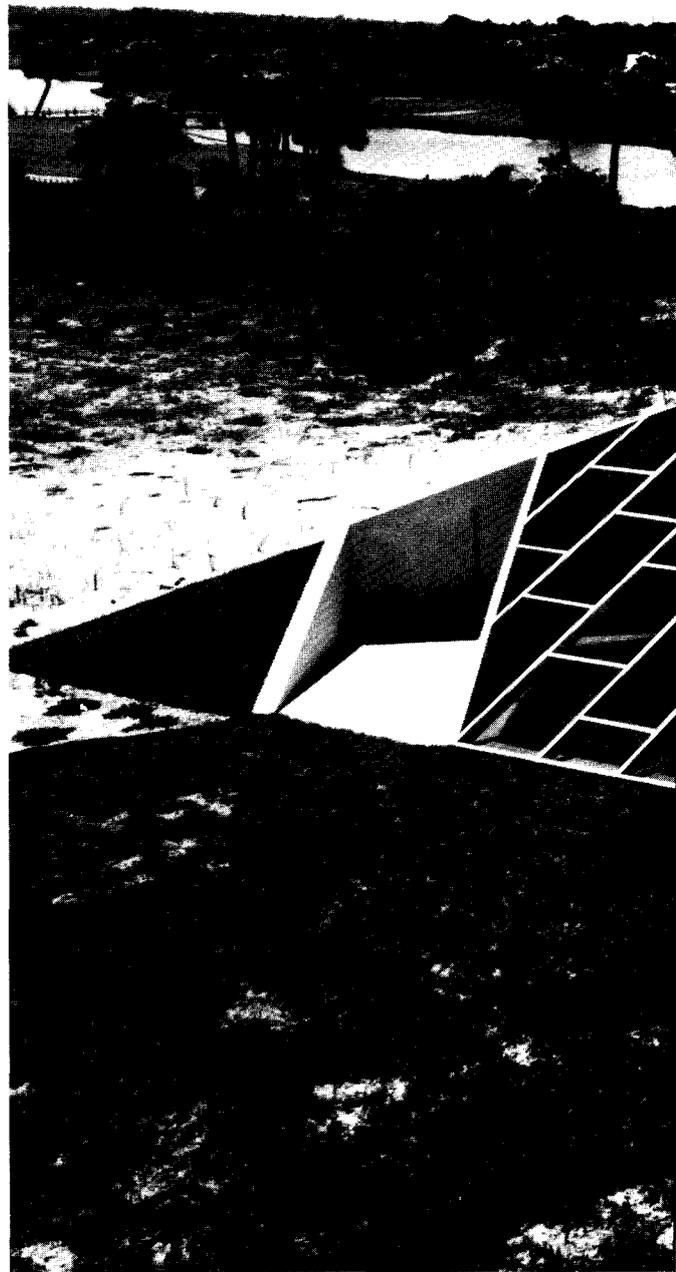
Besides a bedroom and a convertible study-guest room on the first floor, there are three bedrooms on an upper level, which share the living areas' views—berms on the side and front of the house form protective enclosures for the entrance court—partially concealing the cars within, and for courts off of the lower-level bedroom and study—one of which is partially roofed by a solar heater. This house contains 2,800 square feet of enclosed space.



*Architect:* William Morgan  
220 East Forsyth Street  
Jacksonville, Florida

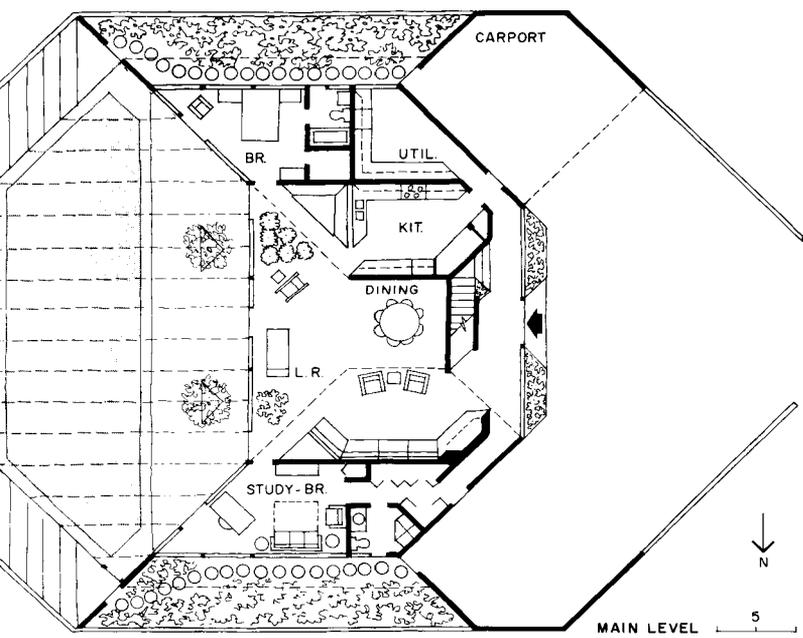
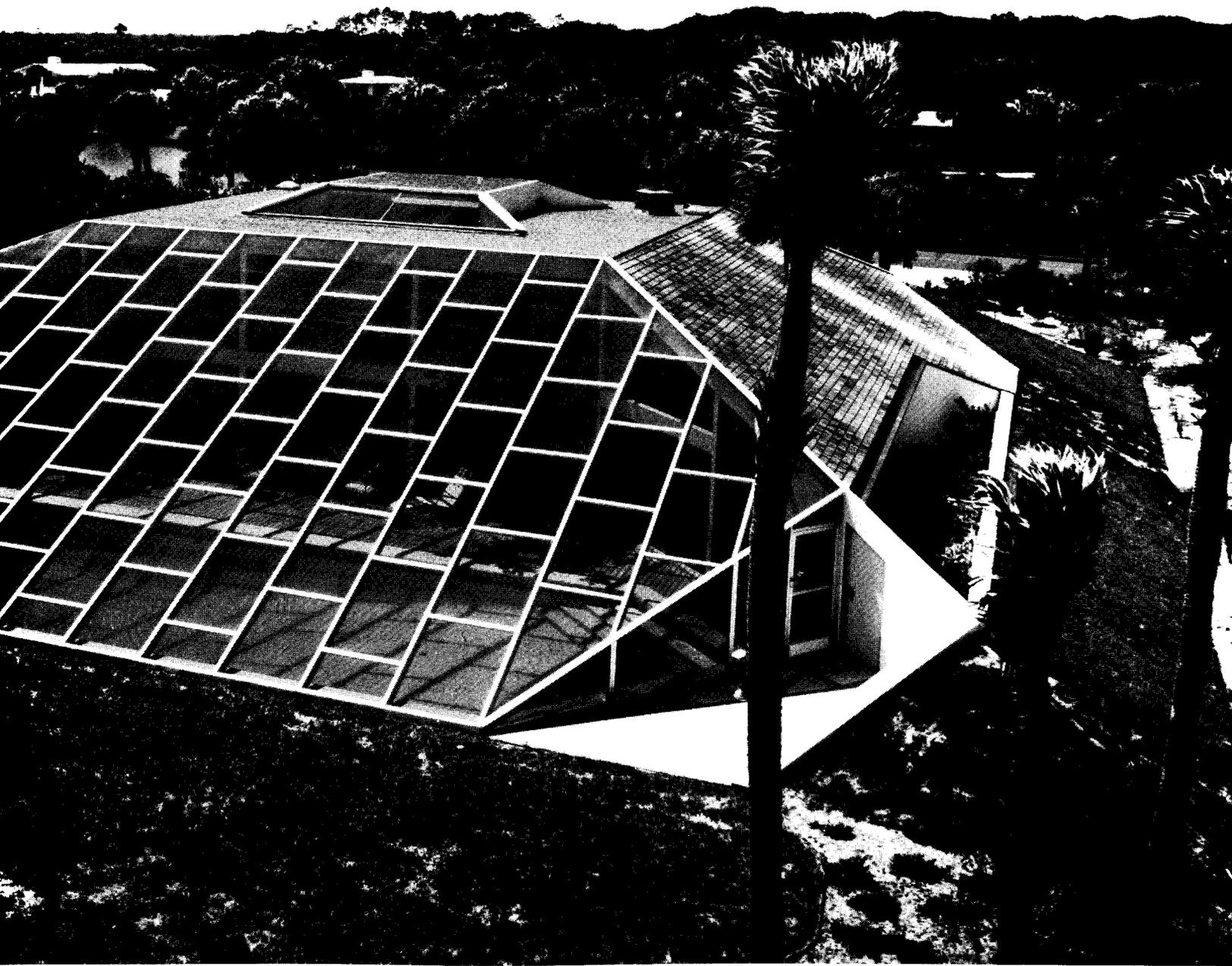
*Engineers:*

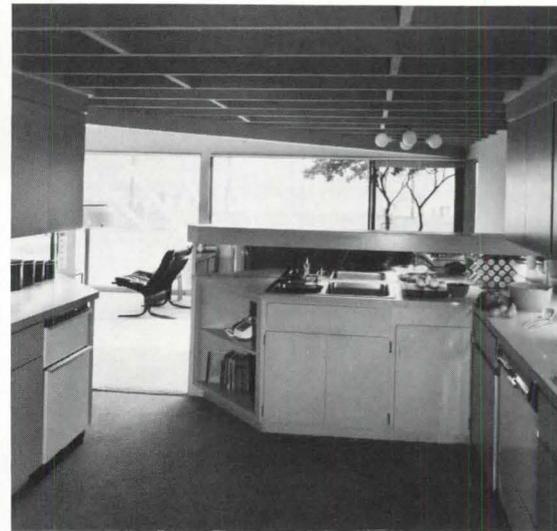
Haley W. Keister Associates, Inc. (structural)  
Roy Turknett Engineers (mechanical)  
*Contractor:* Dave Plummer Construction Company



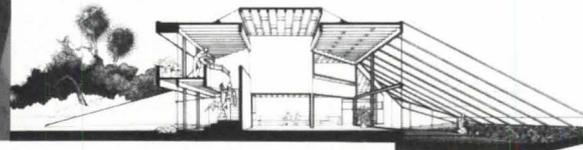
This "earthform" house carries architect William Morgan's concepts developed inland to the beach. It provides both a sense of openness to ocean views and protection.







Both the retaining walls for the berms and the screen enclosure visually extend the enclosed area of 2800 square feet.



# APARTMENTS OF THE YEAR

The selection process for apartments is much the same as for houses. We look for freshness, as in Coconut Grove (pages 112-113) where Apogee 1 Townhouses test the local market with innovative siting and design development. We look for market-wise imagery, as in Fisher-Friedman's design for Whalers' Cove (pages 124-126) where historic images of New England do not conceal a contemporary, thoughtful use of California waterfront. Most of all, we look for quality.

Confusion has sometimes arisen in the past about the suitability of certain types of apartment developments for inclusion in this annual mid-May issue. What the editors are seeking are those low-rise, multi-family designs that might reasonably offer an alternative to the houses that appear elsewhere in this issue. Mid- or high-rise apartment blocks, nursing homes, dormitories, summer camps—however residential in character—belong to other issues.

Submissions to RECORD HOUSES AND APARTMENTS OF 1978 are welcome through October 15, 1977 and architect-readers who wish to submit are invited to examine the entry procedures outlined on page 2 of this issue.

## Butternut Hill Condominiums Waitsfield, Vermont Design Five, Architects

Located near Sugarbush, one of Vermont's famed skiing resorts, this group of 48 condominium apartments is divided into eight house-like buildings that are separated from each other by generous distances and trees. Still, the condominiums occupy only a small portion of a large natural site of 101 acres. And their presence offers an interesting financial means for maintaining the bulk of that site in its sylvan condition—which is doubly important because of its location adjacent to a large state forest. As the condominiums themselves produce a viable density for the amount of land the remainder can be divided into 24 acres of totally undisturbed common space and 15 parcels for single houses on at least five acres each.

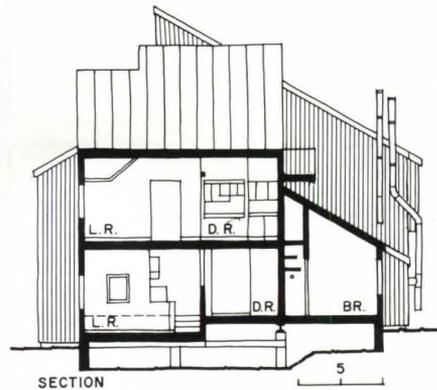
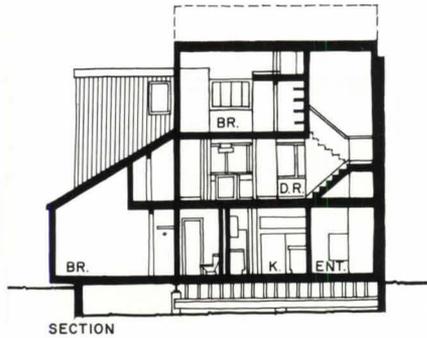
Each of the house-like units shown here contains six apartments—not large, but in keeping with their intended use for vacations. Sizes range from 600 square feet in a studio to 1050 square feet in the largest two-bedroom unit. Every unit is given visual interest and a feeling of more expansive space by changes in the floor levels or by double-height ceilings (see sections). Each is entered from grade—the upper units being entered by bridges from the nearby uphill slope. Siting for each of the buildings has been carefully considered to make natural conditions work to advantage.

Commonly owned facilities include a community building, tennis courts and a swimming pool. Construction—while mostly of standard wood framing—was accomplished by the prefabrication of parts in an on-site factory. The factory was built in recognition of the short construction season in the locale, and allowed non-seasonal work—as well as a speeding of the whole process. Concrete block walls between the units act as fire barriers and deaden sounds. They also support the light weight concrete floors. Windows are double glazing in wooden frames, and roofs are galvanized steel sheets with standing seams.

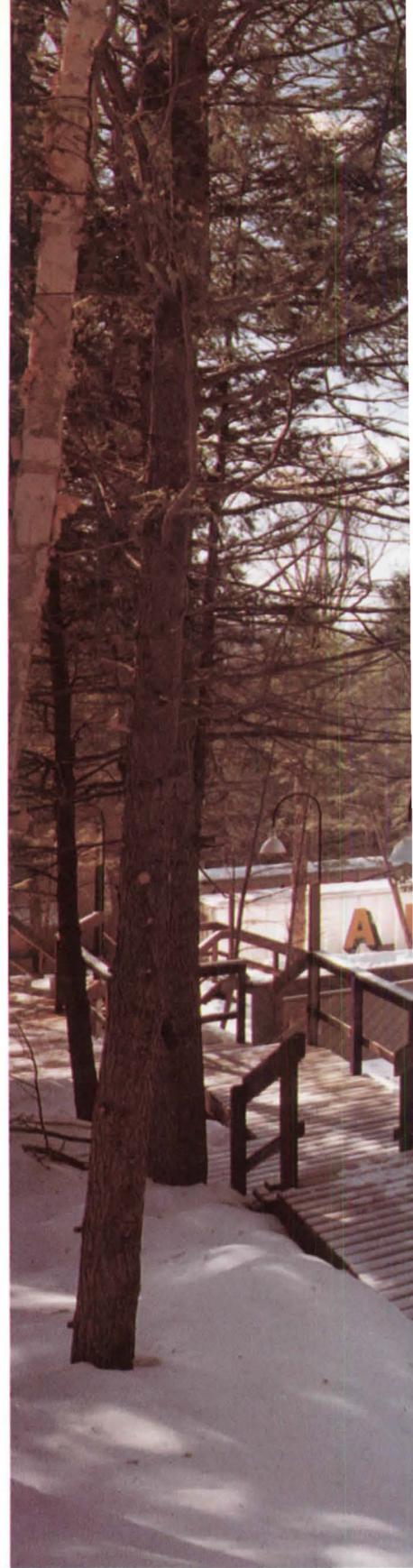
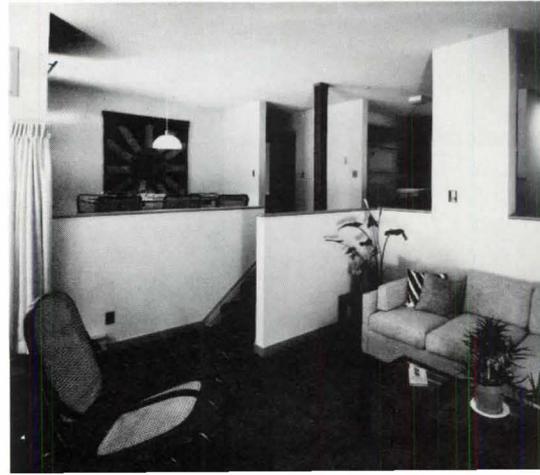


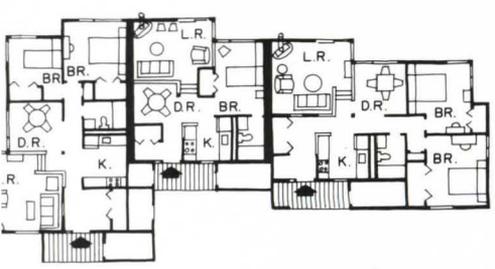
Architects: Design Five, Inc.  
806 Massachusetts Avenue  
Cambridge, Massachusetts

Owner: Great Eastern Building Company, Inc.  
Contractor: Great Eastern Building Company, Inc.  
Photographer: © Steve Rosenthal

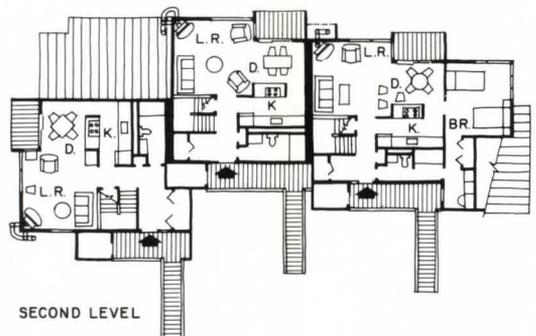


Forty-eight apartments are designed for vacation living. Half contain two bedrooms. The remainder have one bedroom or are efficiencies. The upper living rooms are double-height, while visual interest in the lower-level living rooms is provided by a change in floor levels (see smaller photos and sections above).

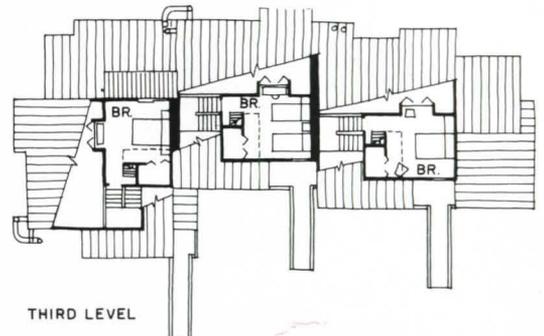




FIRST LEVEL



SECOND LEVEL



THIRD LEVEL

## Apogee 1 Townhouses

Miami, Florida

Robert Altman, Denis Arden,  
Charles Sieger, Architects

The best natural defense against the humid heat of the Florida coast is moving air, and these townhouses in Miami encourage breezes to enter and circulate freely through open interiors. According to architect Robert Altman, the design is a conscious effort to develop an indigenous Florida architecture for clustered housing that can make full use of natural ventilation.

The duplex units contain few rooms as such. Only bathrooms and closets are fully enclosed, while the remaining 1,700 sq ft of space is arranged in high-ceilinged volumes more or less loosely defined according to function. Ceiling fans promote air movement unimpeded by the open, riser-less stairs or by the pipe railings.

On both floors of each unit, terraces have sliding doors on all sides to capture breezes for the interior: the first-floor terrace opens to living and dining areas, and to the kitchen across a built-in counter, while the upstairs terrace opens to the master bedroom and to the bath. A stair from this terrace leads to the roof terrace. The living area opens on grade.

To ensure privacy, baffles, from which potted plants are hung, screen neighbors' views of bedroom terraces and adjacent glass doors. Again for the sake of privacy, the architects gave careful consideration to the balance of interior and exterior nighttime lighting so that living spaces would not be obtrusively visible through terrace doors. Landscape lighting is relatively bright in comparison with interiors, and ceiling fixtures are provided only in the kitchens.

The site encompasses ten condominium units in five buildings. A spine of grassy pavement separates the two rows of buildings and gives vehicular access to the ground-level garages. Pedestrians enter through a landscaped court with swimming pool.

**Architects:**

Robert Altman, Denis Arden, Charles Sieger  
2906 S.W. 37th Avenue  
Miami, Florida

**Developer:** Davis Development Corporation

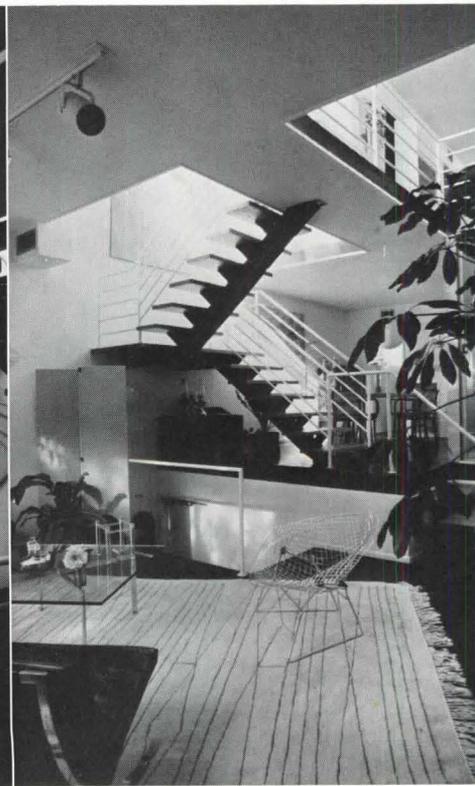
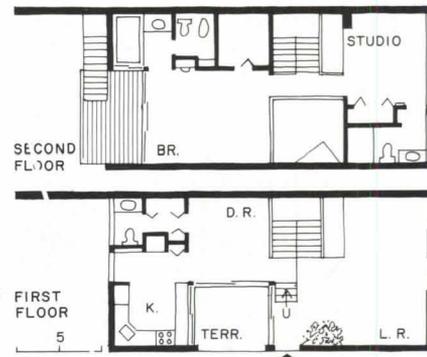
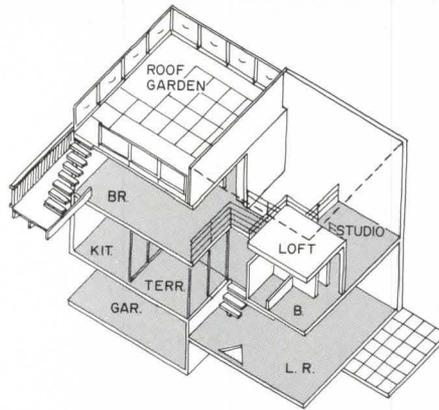
**Engineers:** Davis Engineers  
(structural, soil, mechanical)

**Interior design:** Dennis Jenkins

**Landscape architect:** Ted Baker

**Graphics consultant:** Jeannie Welch

**Photographer:** Richard Chimelis





3128

Embarcadero Condominiums  
Newport, Oregon  
Campbell-Yost-Grube,  
Architects

On the banks of Yaquina Bay in the small coastal town of Newport, Oregon, a new condominium complex has been partially completed as a marina-resort. A large complex, it will upon completion consist of 185 living units, recreation center, restaurant, convention center, commercial and maintenance building and rental boat moorings. To date, 103 units have been completed.

Designed to emphasize the salient feature of the site—its proximity to the water—the condominiums conform to the slope of the bank with the majority of the complex constructed on a bench of land near the shoreline. An angled roof line for all housing not only permits the maximum amount of sun to penetrate each unit, while not hindering views from housing on the upper slope, but visually reduces the bulk of the complex. Units are clustered together in the tradition of a fishing village. Timber construction and the prominent use of cedar shingles on the exterior allow the new structures to harmonize with the surrounding forested area.

Used mostly on a seasonal basis, only one- and two-bedroom apartments were designed, with a variety of floor plans; the largest townhouse is 1200 square feet. Each unit has a separate entrance on the inland side, connected to a system of boardwalks joining the complex with the marina and nearby beaches.

The partner-in-charge of the project is also a vice president and a director of the development firm. "In this position," Rand says, "we have been able to have more input in the decision-making process, bringing our professional talents to bear on the problems." The total cost of the project will be approximately \$4 million, with the first 103 living units costing \$2.65 million.



*Architects:* Campbell-Yost-Grube  
2040 S.W. Jefferson Street  
Portland, Oregon  
Barry A. Rand, partner-in-charge  
Richard A. Campbell, design partner  
David M. M. Shelton, project architect

*Developer:* Yaquina Development Corp.

*Engineers:*

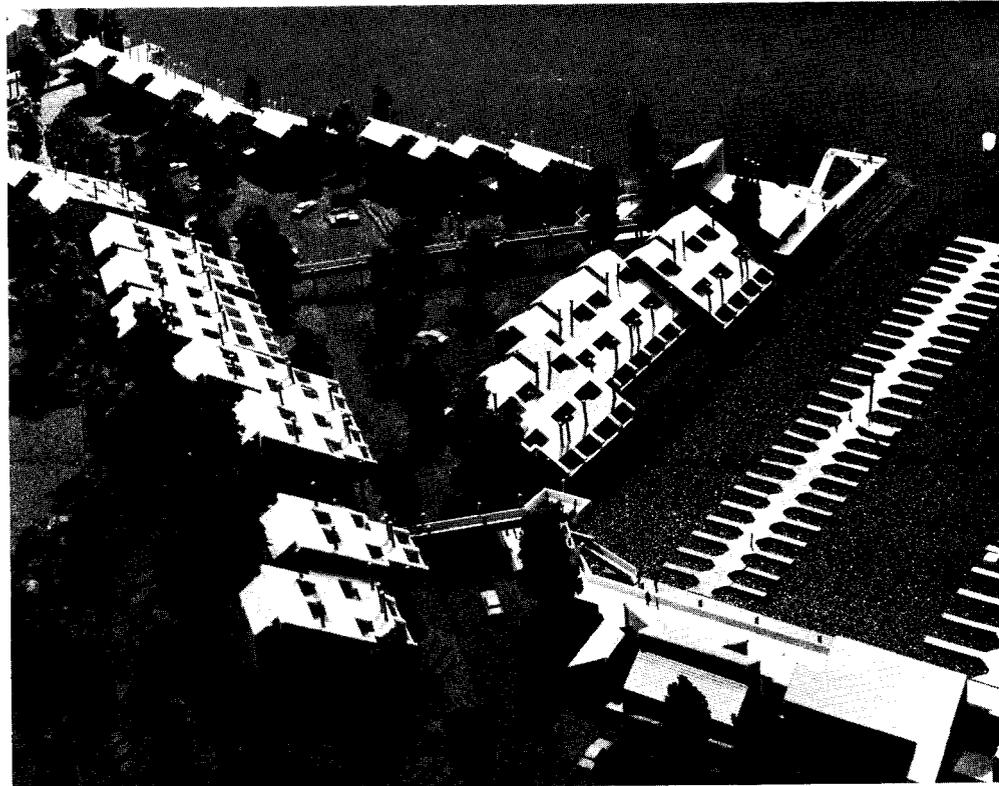
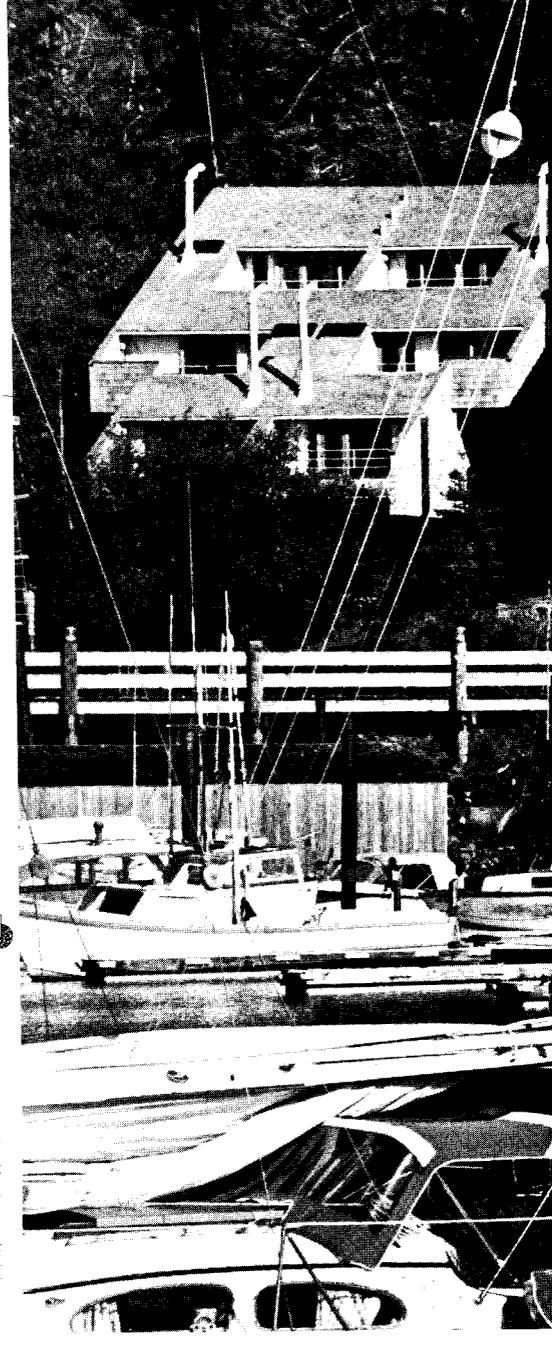
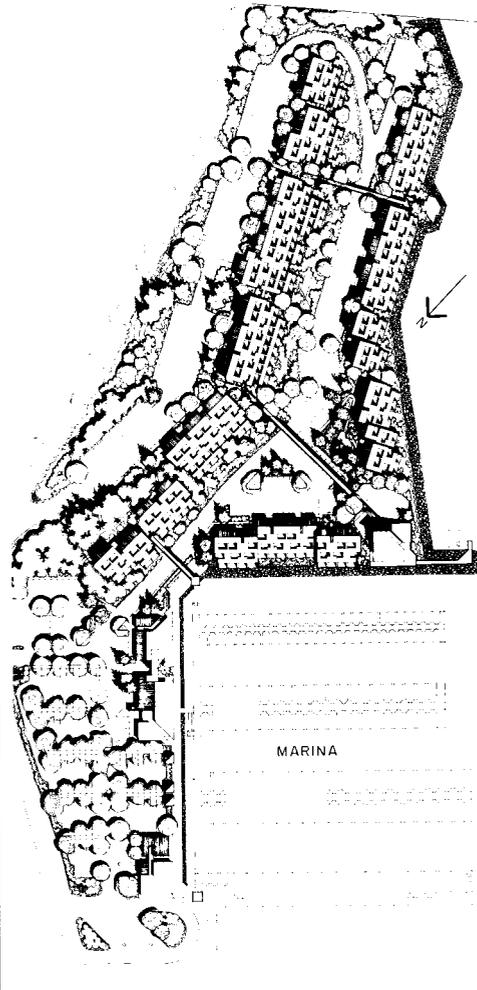
Harlan Luck (structural)  
Dames & Moore (soils)  
Mc-An Engineering (mechanical)  
Langton-Mehlig & Associates (electrical)

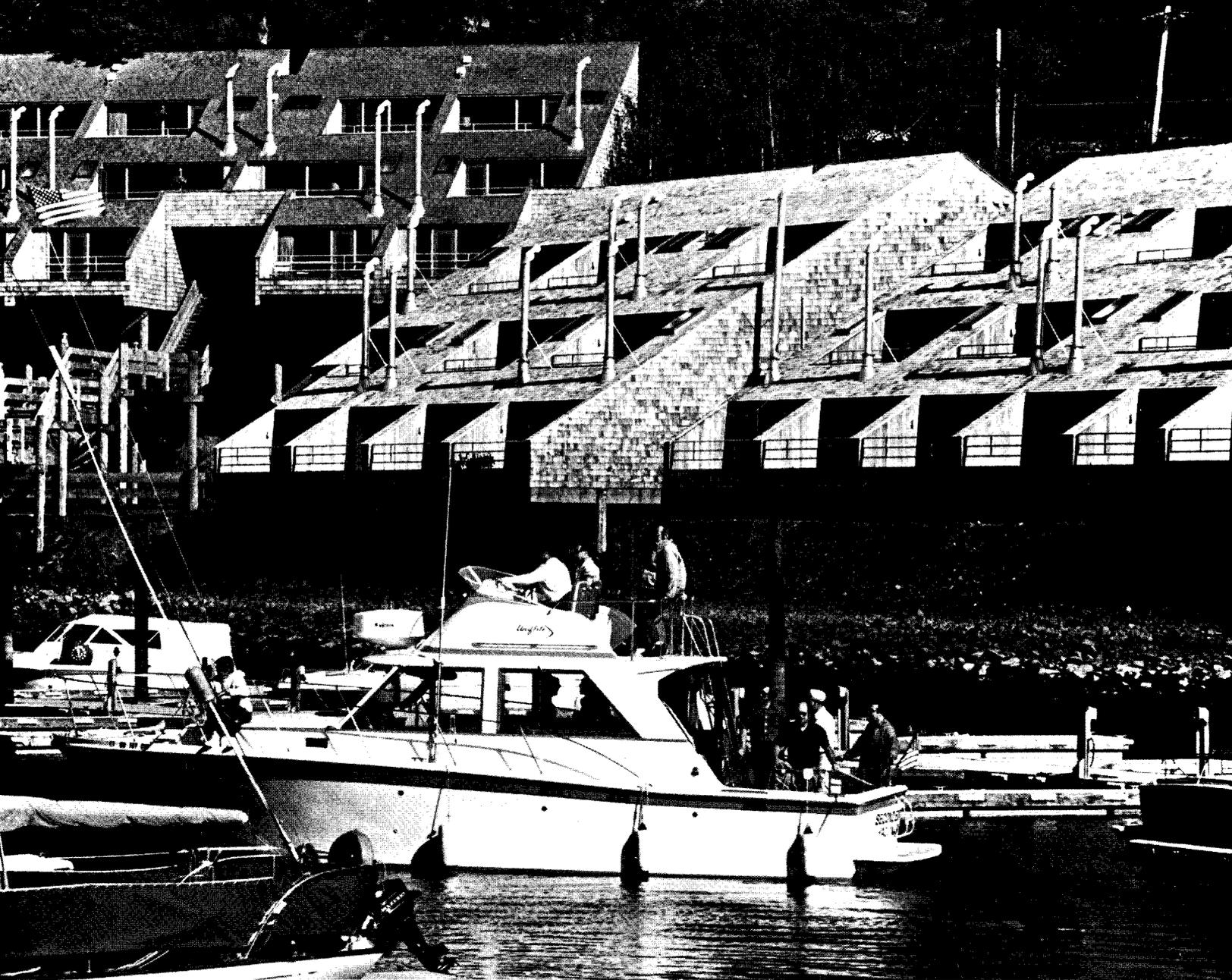
*Acoustical consultant:* Daly Engineering Co.

*Interior design:* Kahl's Interiors

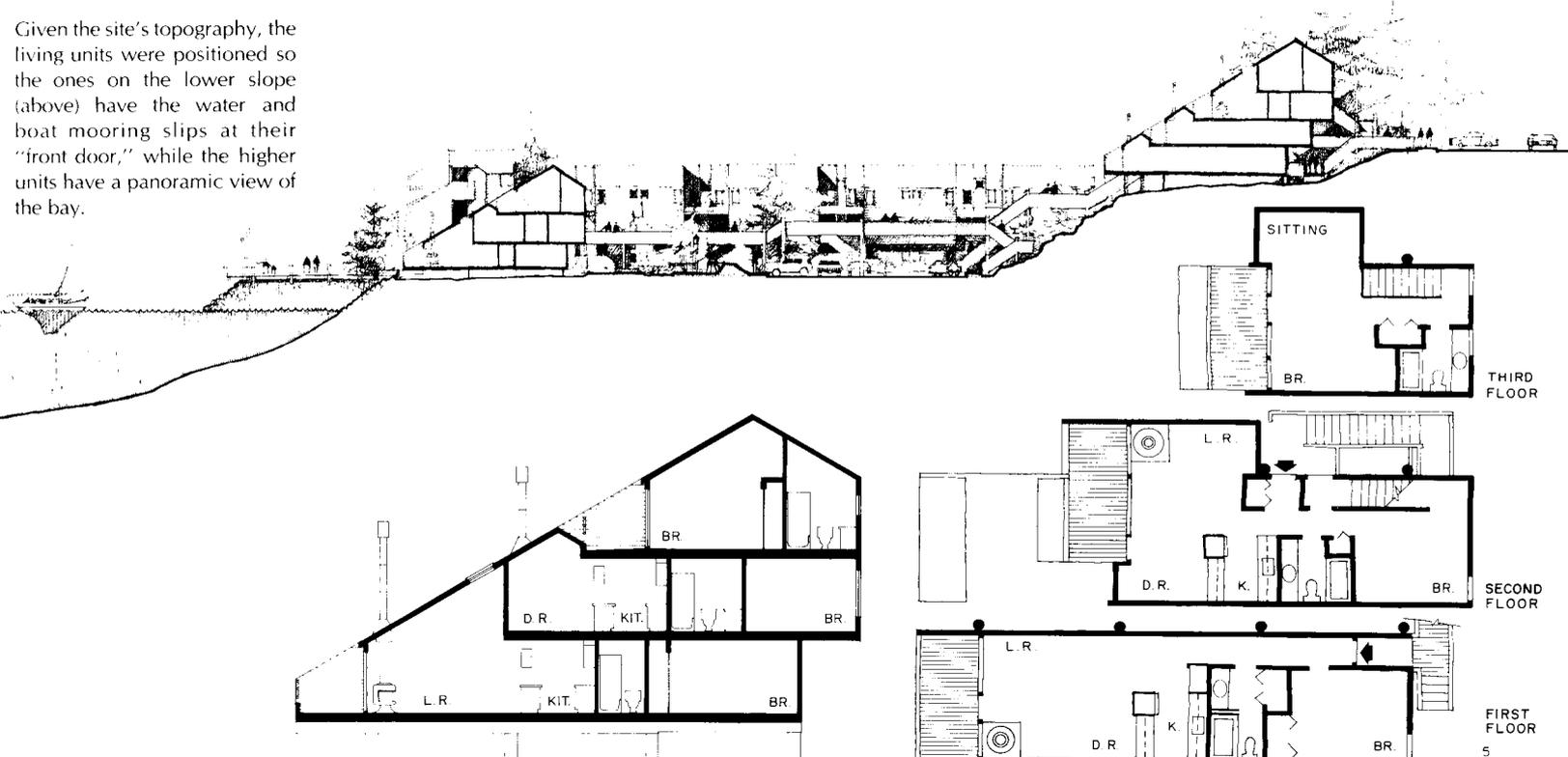
*Contractor:* Todd Building Co.

*Photographer:* C. Bruce Forster





Given the site's topography, the living units were positioned so the ones on the lower slope (above) have the water and boat mooring slips at their "front door," while the higher units have a panoramic view of the bay.



## Crest Apartments

St. Helens, Oregon

Robert Foote, Jr. and

William Wilson, Architects

The less than half-acre site is situated on a dead-end street, two blocks from the town's commercial core. Dominating the site, and providing its most conspicuous land form is a spine of rock up to nine feet high that extends on a long diagonal across the property. The cost of blasting precluded rock removal, so the architects used the ridge as a design form, siting the building mass of 10 units on its edge and developing first floor entrances on the high side (see section).

The outdoor space was gathered into one useable area on the west that serves as a buffer against the road. As the west is also the view side, the architects provided elaborate sun screening devices in the form of horizontal wood planes that also imbue the west elevation with considerable energy and sculptural interest. The guardrails on all deck areas are planes two feet wide that tenants can personalize with planting or other objects of display.

Because the Crest Apartments were funded through a Federal subsidy to qualifying moderate-income households, the one-bedroom units were limited to 650 square feet, the two-bedroom units to 810 square feet. In spite of their modest scale, the units are nicely laid out with almost no space given over exclusively to circulation. High ceilings also expand the sense of interior volume.

The units were framed conventionally in wood stud over concrete foundations. The exterior finishes are cedar siding, painted, resawn plywood siding, and asphalt shingle for the sloping roofs. Inside, the finishes are drywall for partitions and ceilings, sheet vinyl and/or carpet for floors.

The material selection and careful cost controls kept prices to approximately \$23 per square foot.



Architects: Robert Foote, Jr.  
608 N.W. 19th, Portland Oregon

in joint venture with  
William K. Wilson

Owner: Ronald Steinke

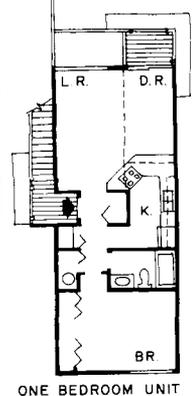
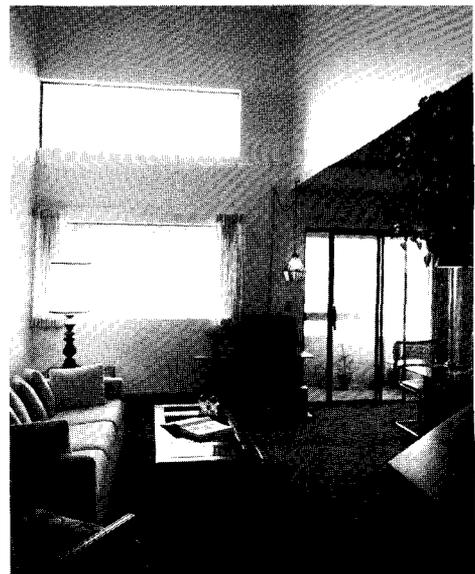
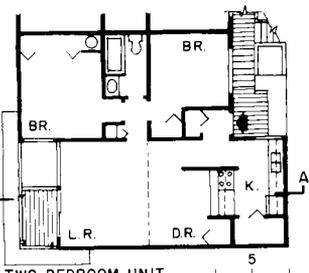
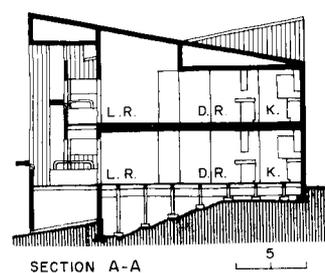
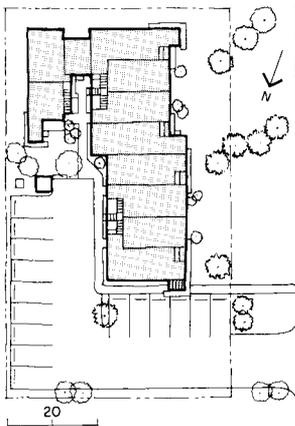
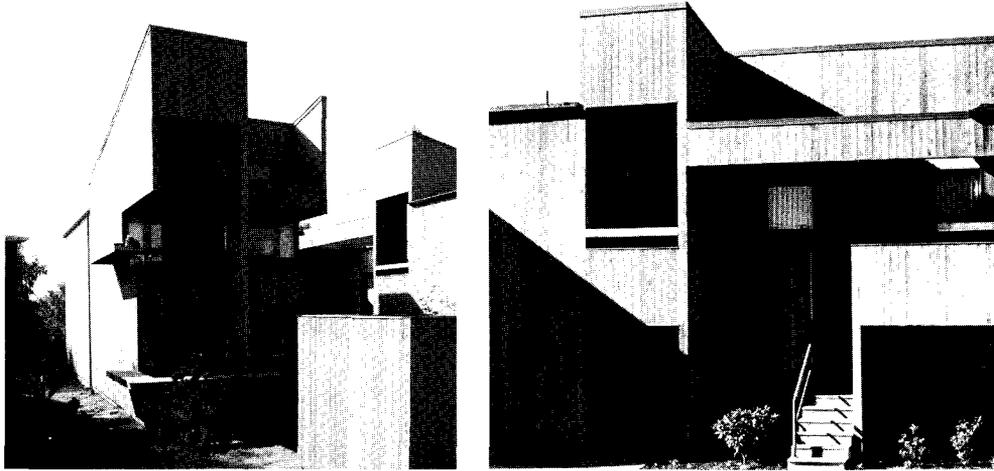
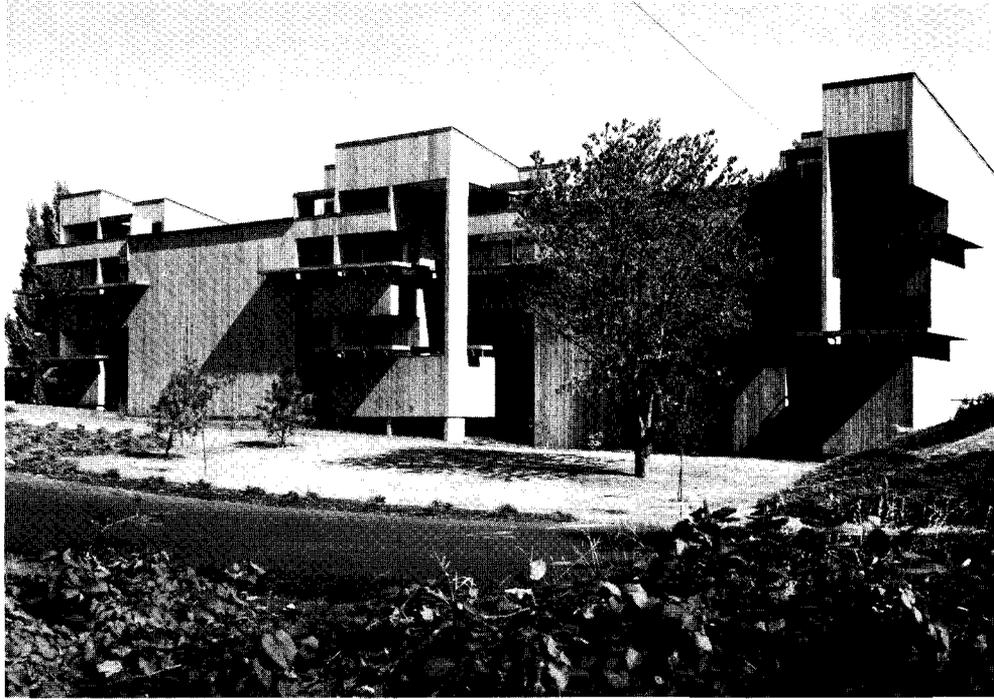
Engineers:

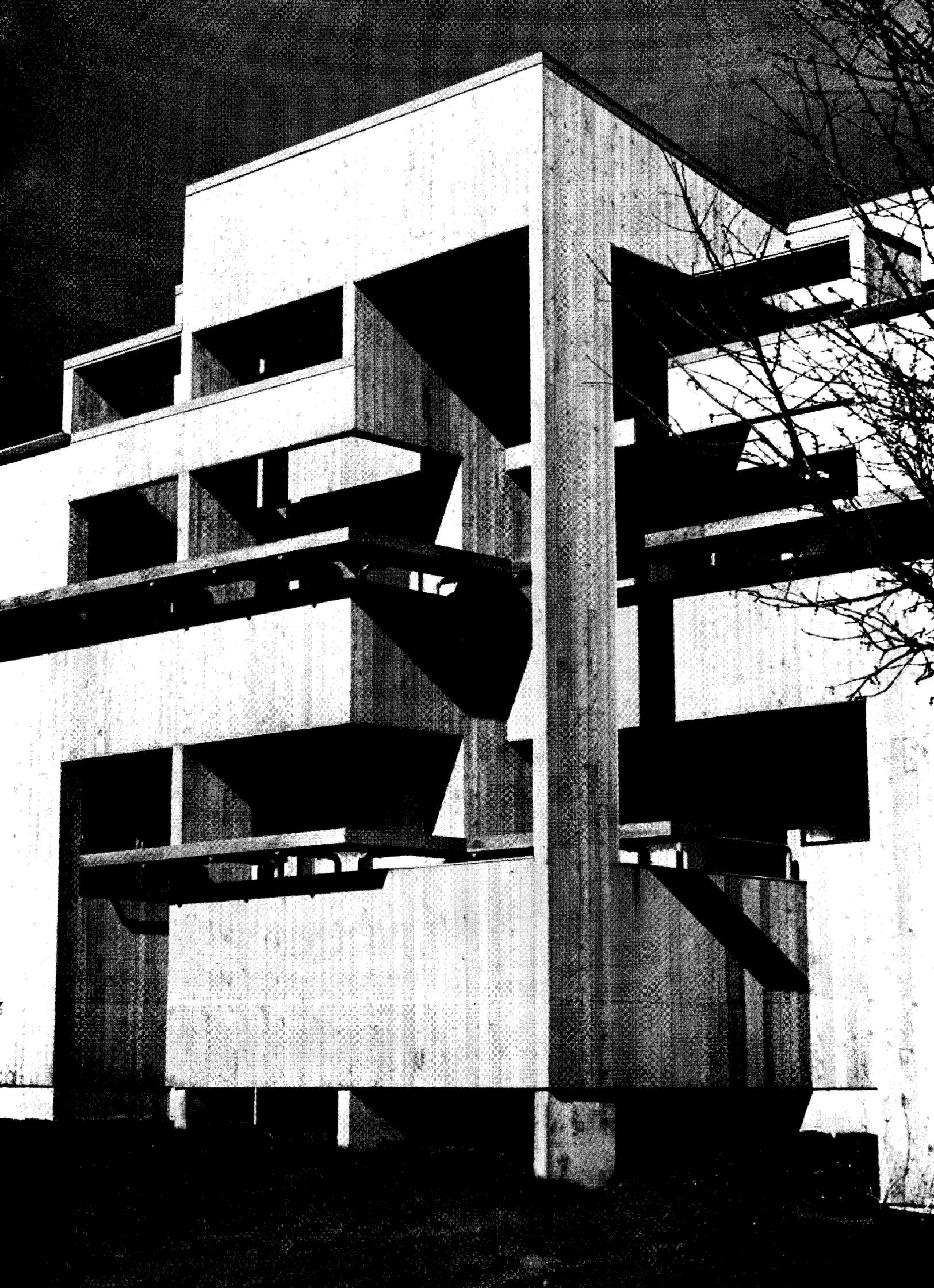
Donald C. McMacken (mechanical)  
Langton, Mehlig & Associates (electrical)

Contractor:

Steinke Construction, Inc.

Photographer: Michael Dahlstrom





## The Landings near Buffalo, New York Morse & Harvey, Architects

On Grand Island, near Niagara Falls, the Landings is Phase One of a projected 2400 unit planned unit development called River Oaks. The first 26 units, in six blocks, border a golf course and are skewed at 45 degrees to the axis of the fairway and at 90 degrees to adjacent blocks. The triangular areas created by this siting were lowered some two feet to create a semi-private buffer area against the fairway—a design device intended to minimize encroachment by golfers in search of errant balls. Another grade change occurs closer to the buildings and defines each unit's private outdoor space. On the side away from the fairway, each unit also has its own arrival court, defined on two sides by structure and on the third by an earth berm that provides a sense of partial enclosure.

The units were planned so that they attached at the point of narrowest dimension. The party wall thus created became a fire wall as well and all nonhabitable spaces—stairs, baths, kitchens—were backed up to this wall. Plumbing and electrical chases were also incorporated and the furring they required provided added sound insulation between units.

In other aspects the plans include the amenities usually offered to a market heavily composed of "empty-nesters"—retirement-aged couples whose children no longer live at home. As many owners of this type are trading down from larger homes they no longer need, the architects have striven to retain certain of the features most closely associated with single-family houses. These include an unusual degree of privacy (no owner overlooks his neighbor's private outdoor areas), attached garage, and a material selection that includes stained cedar clapboard siding and brick pavers in the entry courts.



*Architects:* Morse & Harvey  
350 Madison Avenue  
New York City

*Owners:* W.R. Development, Inc.  
*Engineers:*

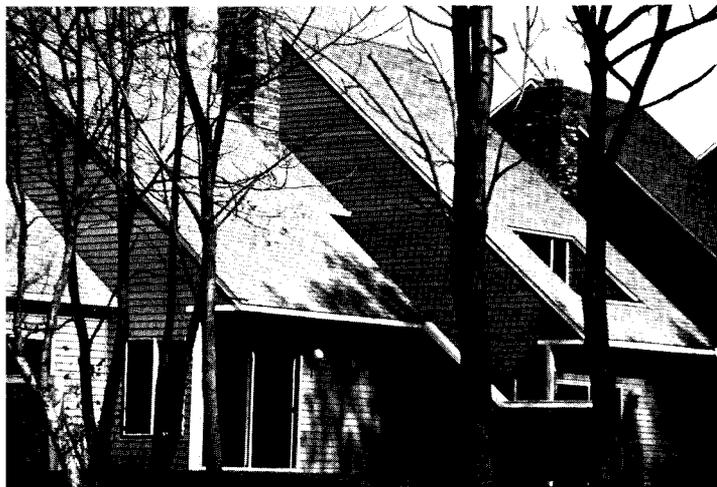
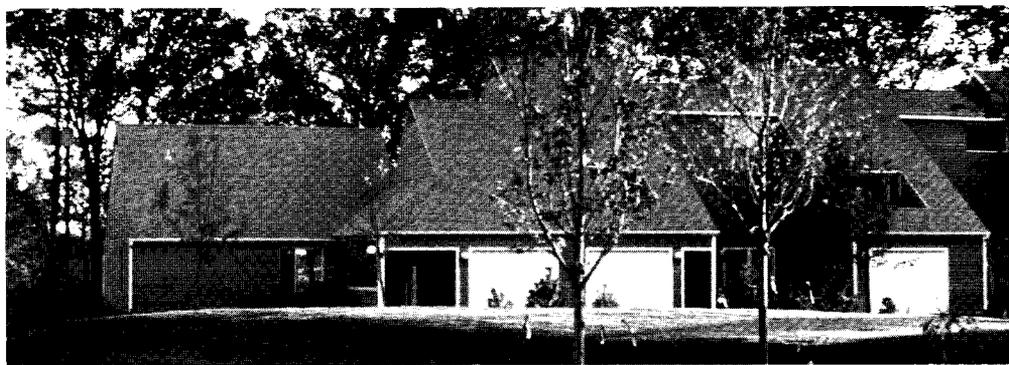
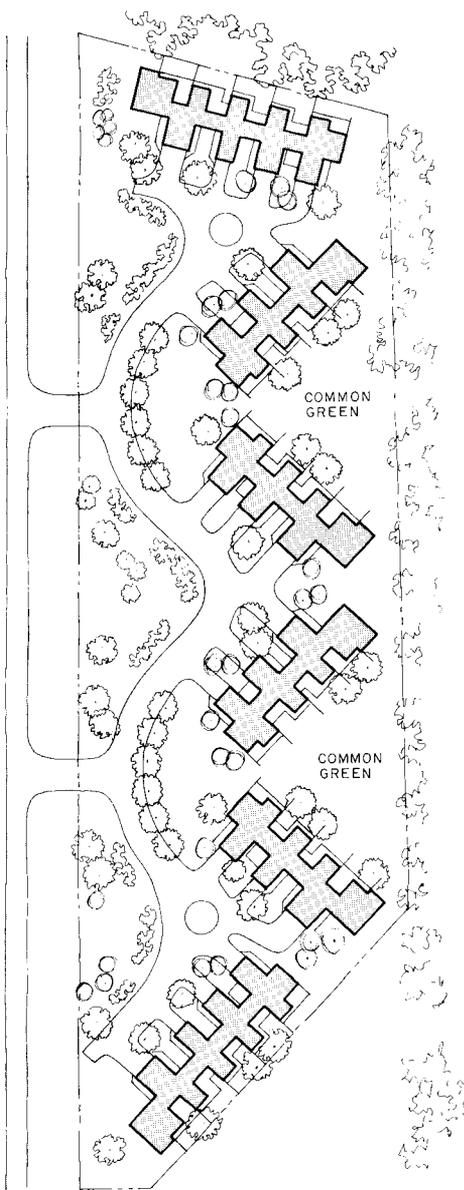
Antony Vairamides (structural)  
Kravchenko & Assoc. (foundation)  
Goldman Sokolow (mechanical)

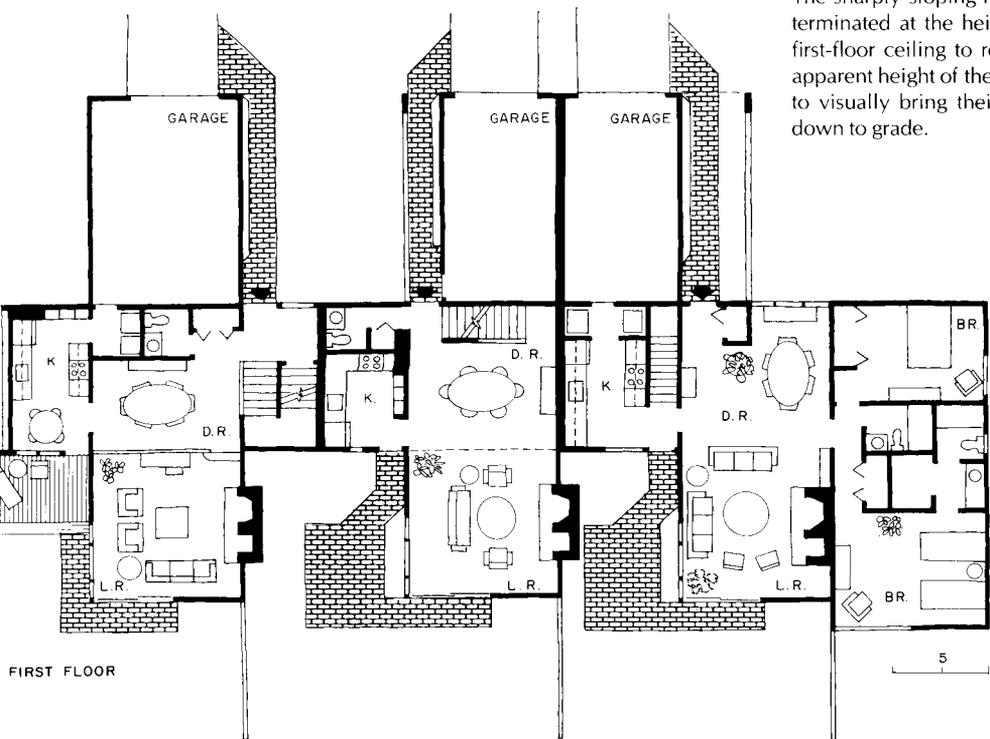
*Landscape architect:*

Vreeland & Guerriero

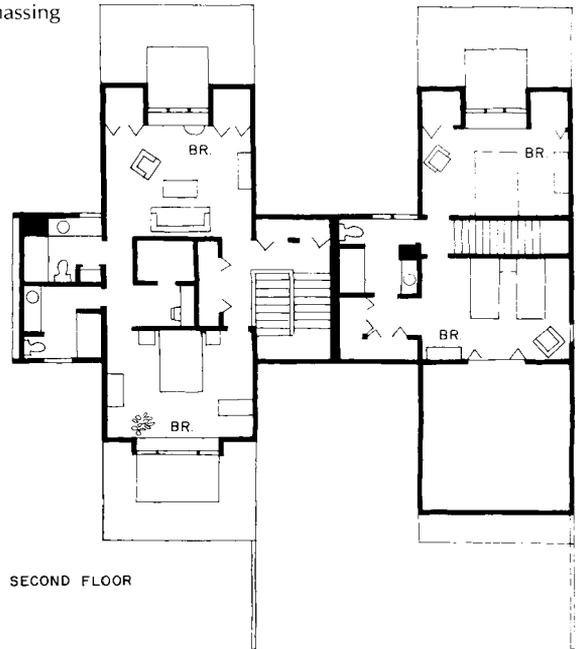
*Contractor:* L.R.F. Construction

*Photographer:* Jonathan Morse





The sharply sloping roofs were terminated at the height of the first-floor ceiling to reduce the apparent height of the units and to visually bring their massing down to grade.



FIRST FLOOR

5

SECOND FLOOR

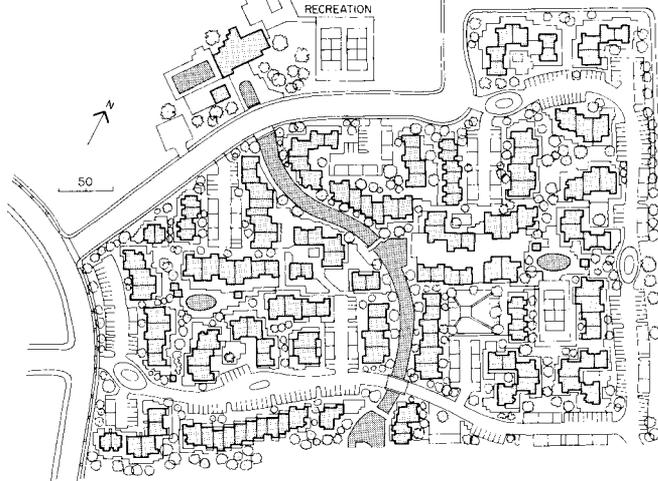
Venetian Gardens  
 Stockton, California  
 Bull Field Volkman  
 Stockwell, Architects

This mixed-use community occupies 150 acres recently released from the long-range expansion plans of two adjacent colleges. It lies at the intersection of two main traffic arteries, one of which has already been strip-zoned for commercial use. In planning the new community, developer and architects wished to exploit the commercial possibilities of the crossroads location without resorting to further strip development. They accomplished this by planning an integrated community with single-family and row housing, recreational facilities, offices, shops and a variety of other community amenities. Chief among these is a continuous system of canals that links all parts of the project with its commercial center—and gives the project its name. References to Venice can be seen in the design vocabulary throughout.

An important part of the open space system is a nine-hole golf course that has been graded and designed with hazards that form a portion of the project's storm drainage pattern. This combined use was important for another reason: it allowed partial funding of the open space through sewer district bonds.

Access to the site is by automobile but the principal avenues of circulation through the site are designed for pedestrians and bicycle riders. As these routes get closer to the commercial hub, they are given more urban form with paving materials and planting appropriate to intensive use. Landscaped berms at the project's perimeter provide an important measure of internal privacy.

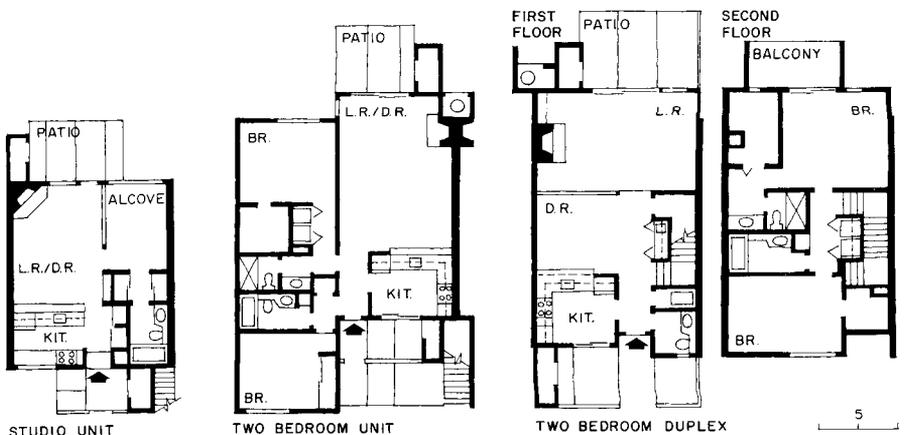
At present, all of the first phase commercial, office and residential properties have been sold or leased. Apartment vacancies now run at less than two per cent in a region where the more typical rate is 12-15 per cent. The final phases will include additional housing plus special units for both the elderly and student groups.



Apartment designs include six different unit types which, although repetitive, can be grouped in different combinations to produce a variety of building masses. Finishes vary also in an effort to satisfy a broad spectrum of public tastes.



Architect: Bull Field Volkman Stockwell  
 350 Pacific Avenue  
 San Francisco, California  
 Owner: Schmitz Development, Inc.  
 Planner: Gary Fong, A.I.P.





Sunrise Apartments  
 Sacramento, California  
 Donald Sandy-James Babcock,  
 Architects

On a rolling site in a developed area of California's capital city, the Sunrise apartment complex has been sensitively designed for a diverse tenancy (at present, mostly young professionals and retired persons) through organization of structures, circulation and open spaces.

Two hundred seventy units were constructed on a 14.8-acre site. Despite this relatively high density, a sense of spaciousness was achieved by positioning the units near the perimeter-emphasized parking, thus allowing for a large central glade. Further, the apartments were clustered into ten groups, each with a formal plaza and fountain as the focal point. This creates a neighborhood atmosphere uncommon in multi-family housing complexes.

The height of the buildings varies with the contour of the land to maintain a generally low profile; one-story sections are always positioned at the edges of each cluster and three-story sections are located at significant locations for visual impact. Special concern was shown in the design of each unit's outdoor space for privacy and partial sun protection in the hot summers. Each ground level unit has a high-walled patio partially covered by the upper level's deck which is secluded from the neighbors by narrow walls extending outward from the building and with trellises for fractional sun shading.

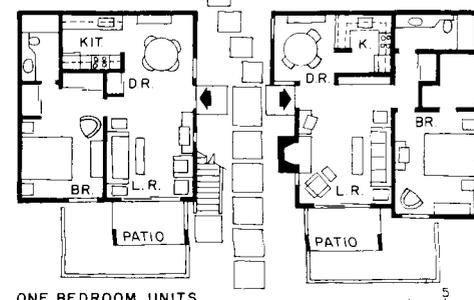
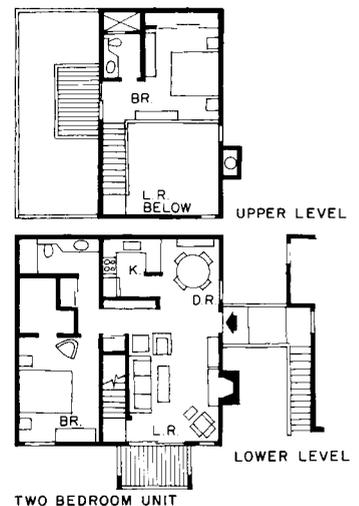
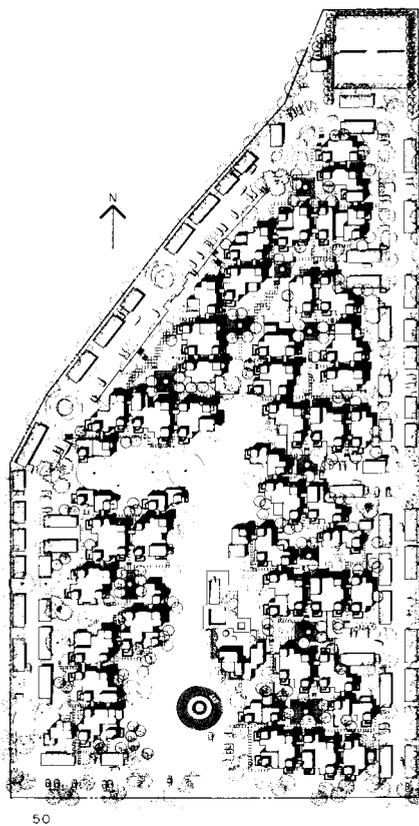
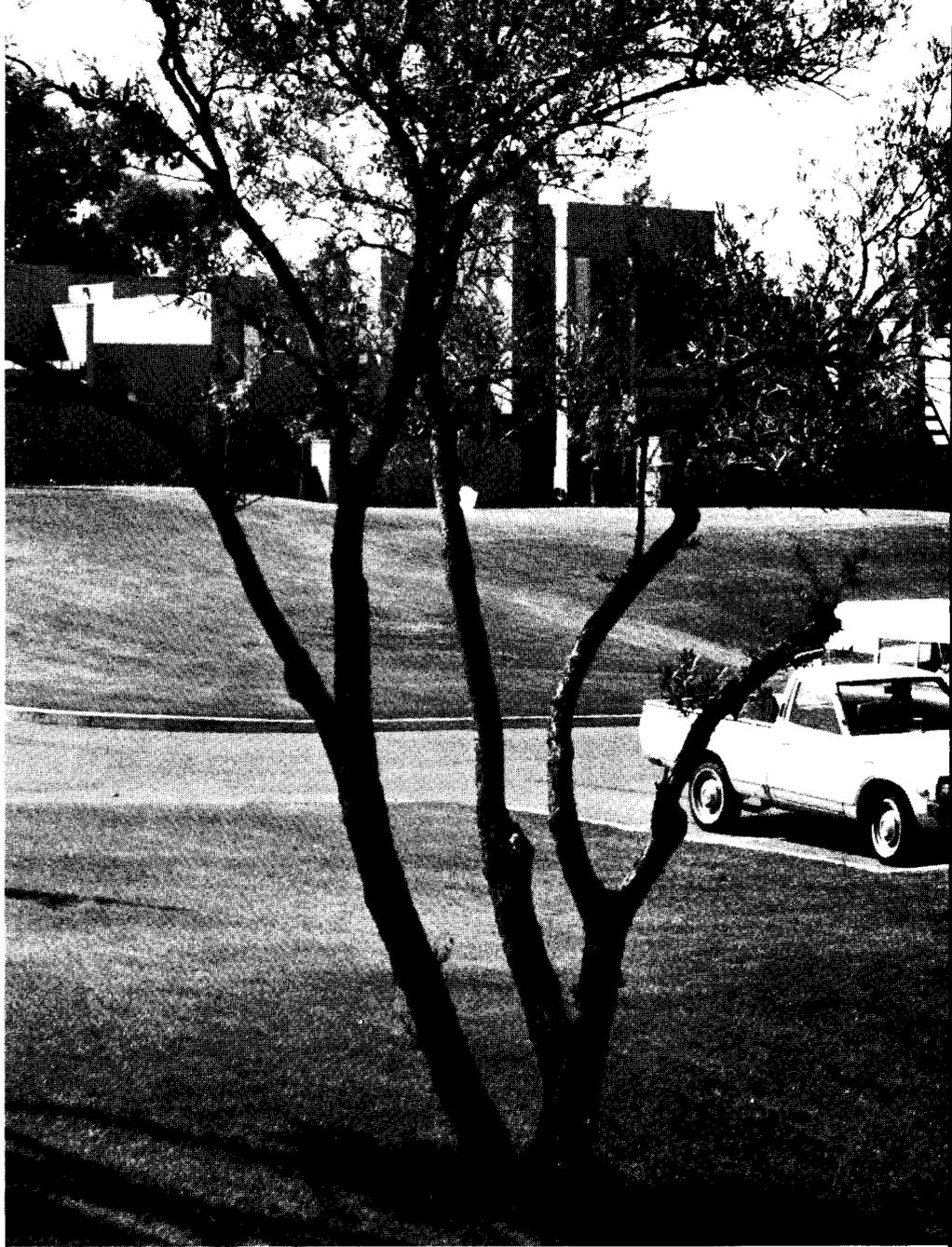
To facilitate a "crisp, hard-edged contrast to the natural features of the site" the cedar plywood exterior is without trim but has either mitered or rabbetted joints. This precision contributes to the visual aspect of the massing of structures making them appear to march up the slopes.

The site was an olive orchard, and most olive trees were saved but relocated, interspersed with a few oak trees. At completion of the project in 1976, the total cost was \$5 million.



Architects: Donald Sandy Jr., James A. Babcock  
 Diana Crawford, Design associate  
 1349 Larkin Street  
 San Francisco, Calif.

Owners: Prometheus Development Corp.  
 Engineers: Welisch & Associates (structural)  
 Cooper Clark & Associates (foundation)  
 Landscape architects: Baronian & Danielson  
 Contractors: Oscar Spano Enterprises  
 Photographer: Thomas Alan Abels





## Whalers' Cove Apartments Foster City, California Fisher-Friedman, Architects

An unusually well-designed single-family housing development has combined the charm of a New England village with the outdoor lifestyle of California. The development is located in an area south of San Francisco which is continuing to have a surge in growth. When completed, all 206 houses on the 34-acre site will have a view to man-made inland waterways, with most houses (150) directly facing lagoons.

Two distinct sites have been developed. One is "Whalers' Landing," bordered on two sides by water; the other is called "Whalers' Isle," a man-made island highlighted with three, finger-like water canals. Despite the location, conventional concrete slab foundations were usable.

There were two main goals in the design concept—flexibility and individuality. Six floor plans with one- and two-story heights, and two-, three or four-bedroom options provide a wide range of spatial flexibility. Also incorporated are vaulted ceilings (right), skylights, garden atriums, glass-enclosed solariums and private decks. All houses have wood exteriors, but the materials vary between cedar shingles, redwood clapboard or vertical siding, left natural, stained or painted—all intermingled (far right). Individuality is further emphasized by the treatment of windows, fluctuating with a combination of bay, arched, port-hole or dormer designs.

Each house is positioned so that one side is on the lot line, providing a wide, open corridor on the other side, and usable as a semi-private extension to the yard and outdoor deck.

Also designed by Fisher-Friedman Associates is the main recreation center (not shown) located on the "Landing" and smaller facilities scattered throughout. Included are five beaches and dock and boat storage facilities.

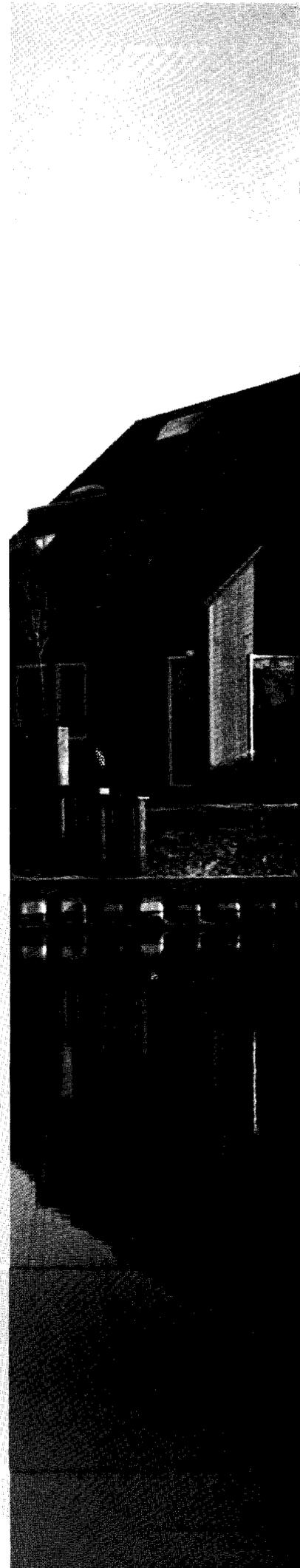
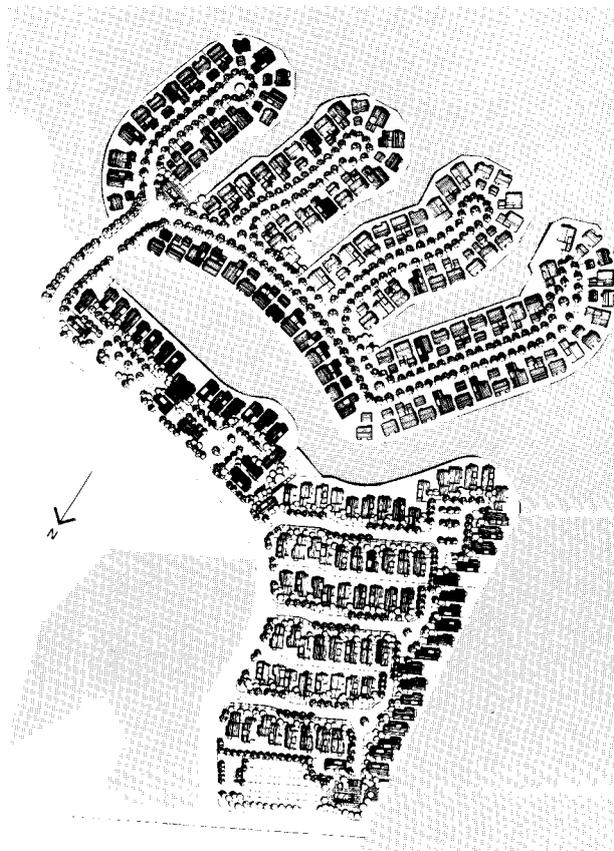
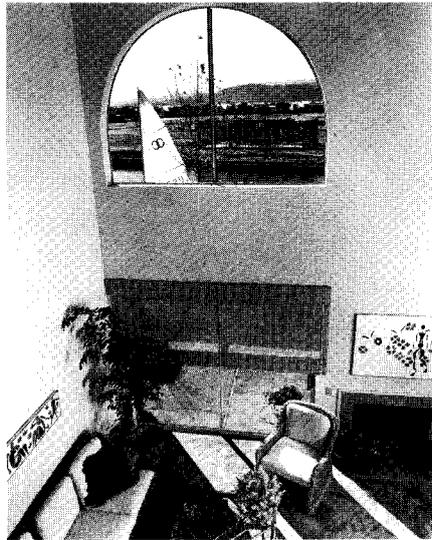
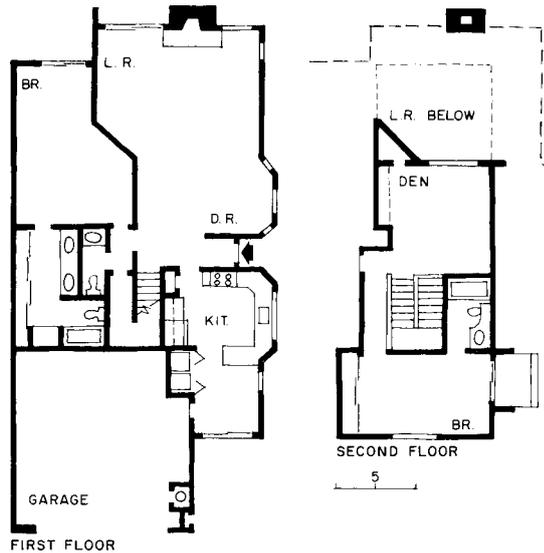


*Architects:* Fisher-Friedman Associates  
A. Robert Fisher, Rodney F. Friedman  
Robert J. Geering, Stephen Haines,  
Paul Fisher  
242 California Street  
San Francisco, California

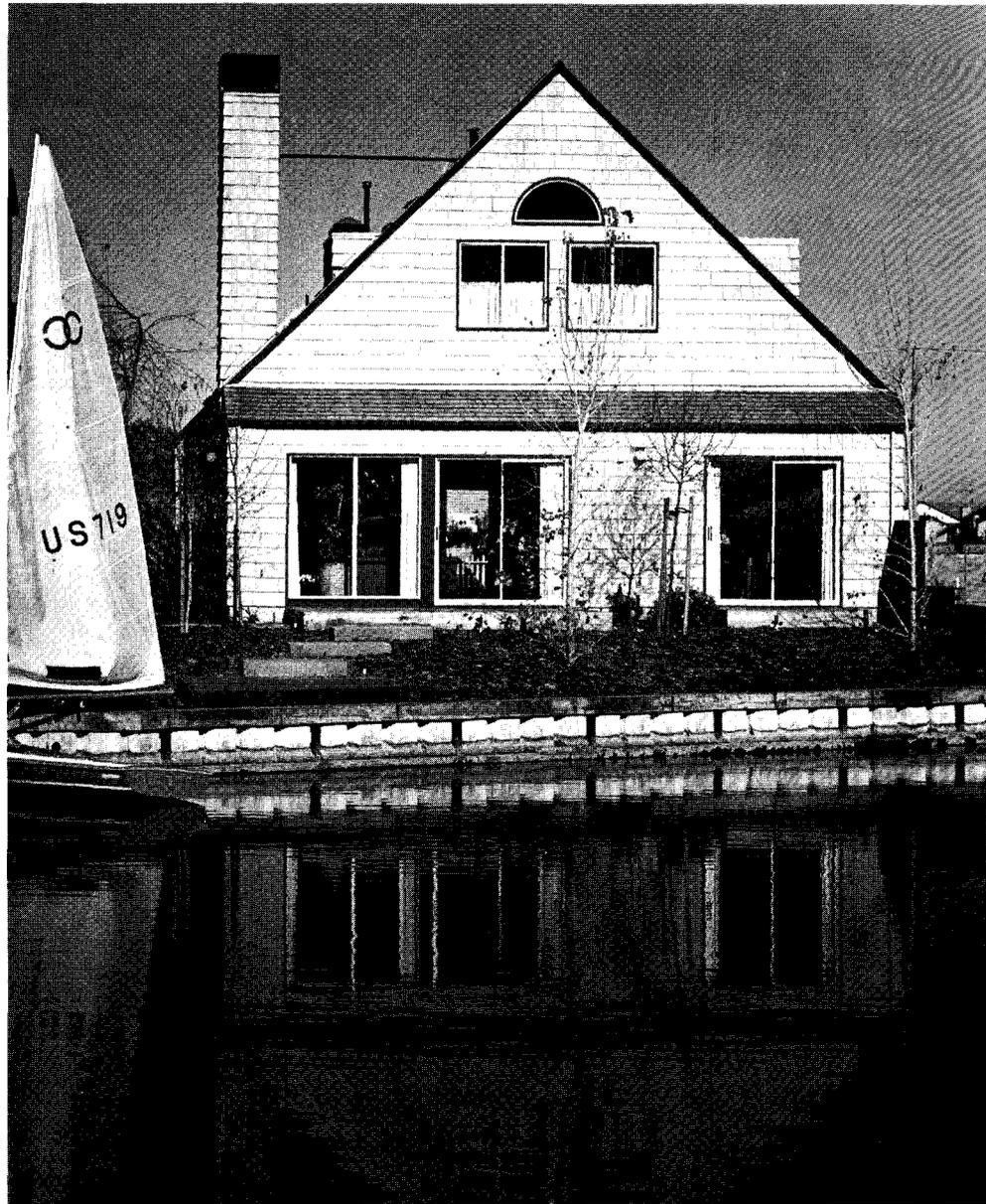
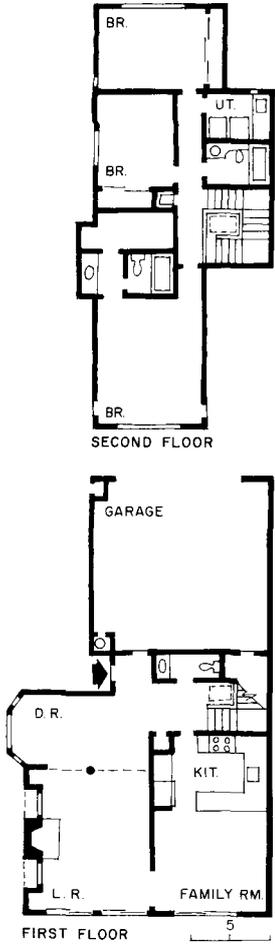
*Owner:* Vintage Properties

*Engineers:*  
L. F. Robinson & Associates (structural)  
Berlogar, Long & Associates (foundation)

*Landscape Architect:* Omi-Lang  
*Contractor:* Vintage Construction Inc.  
*Photographer:* Joshua Freiwald







A house sheathed in cedar shingles (right) is only one example of exterior treatment. Flexibility in floor plans also provides some formal living and dining areas (below), usually filled with light from floor to ceiling windows and augmented by nearby skylights.





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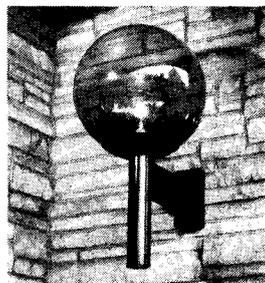
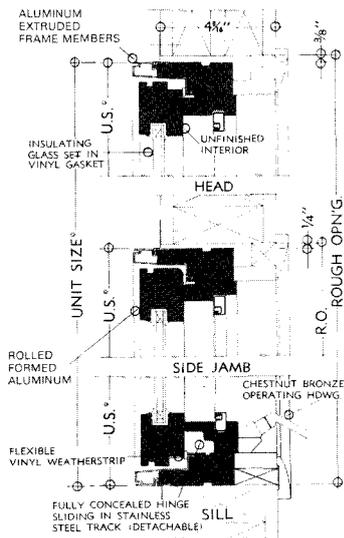
For more information circle selected item numbers on Reader Service Inquiry card, pages 169-170.



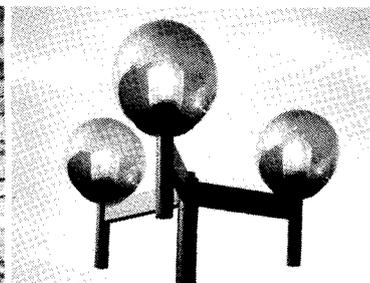
## Casement window affords maintenance-free exterior, custom-finish interior

The company's "CARclad" casement window—which features exterior sash surfaces clad with roll-formed aluminum finished in bronze color or white—has a wood interior surface to be finished to customer specifications. The exterior frame for the window is made of heavy extruded aluminum and is interlocked with a kiln-dried wood frame. The sash is glazed with  $\frac{7}{16}$ -in. insulating glass—a sheet of clear glass and an external sheet of tinted blue-green glass with a  $\frac{1}{4}$ -in. air space between. Flexible, tubular vinyl weatherstripping is installed in all frame members. Sash are equipped with sliding type concealed hinges that permit detachment of sash from the frame without tools. Individual units may be combined into a pre-assembled single unit forming a wide variety of fenestration. The same construction features and advantages are also offered in awning windows and a patio door. ■ Caradco Window and Door Div., Scovill, Rantoul, Ill.

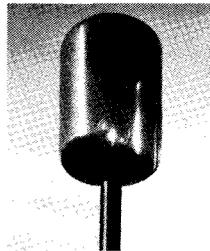
Circle 300 on inquiry card  
more products on page 133



Wall Mounted Sphere, G40 Lamp



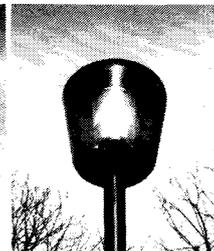
3-Sphere Cluster, with Refractors



Cylinder, with G40 Lamp



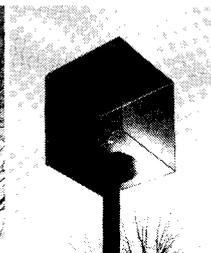
Sphere with Canopy, with Refractor



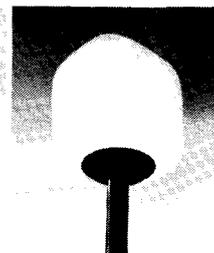
Tapered Cylinder, with Refractor



Opal-White Ellipse



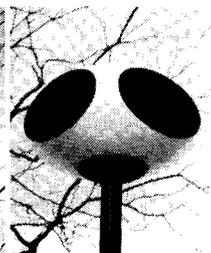
Hard Cube, with G40 Lamp



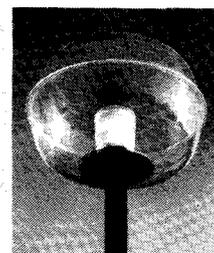
Soft Cube, Opal-White



Sphere with Planes, G40 Lamp



Ellipse with Planes, 4 faces



Drum, with Refractor

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6-226



# APPLETON®

For more data, circle 34 on inquiry card

**PLUMBING FIXTURES** / Bathroom fixtures and fittings are shown in room settings to illustrate a variety of color and design techniques available for the contemporary bath. The plumbing catalog features two new products said to be particularly suited to remodeling applications: a line of combination vanity/lavatory units and "Classic Brass" fittings. ■ Crane Co., Plumbing Div., New York City.

Circle 400 on inquiry card

**ENERGY-EFFICIENT HOME** / Study and floor plans are available for a line of 10 house designs, combining energy-efficient construction and solar heat generation. Two types of forced-air solar furnaces are discussed, both said to provide up to 75 per cent of space heating, hot water, and air conditioning needs. ■ Solar Shelter, Reading, Pa.

Circle 401 on inquiry card

**KITCHEN & LAUNDRY LAYOUTS** / A 24-page booklet, "Sketchbook of Practical Kitchens & Laundries," explains the planning assistance available from this manufacturer's Kitchen Design Operation, and illustrates over 60 kitchen and laundry concepts applicable to single- and multi-family housing. ■ General Electric Co., Louisville, Ky.

Circle 402 on inquiry card

**CERAMIC TILE** / A 12-panel folder offers a residential overview of various ceramic tiles available for use throughout the house. In-use application photos are included. ■ United States Ceramic Tile Co., Canton, Ohio.

Circle 403 on inquiry card

**WOOD CONSTRUCTION SYSTEMS** / A 12-page technical manual uses drawings, charts, and text to illustrate how foundation, floor, wall and roof systems can be designed more efficiently to lower costs for home builders. Construction suggestions include framing floors in 4-ft modules; framing walls 24-in. on-center; using an underfloor plenum heating/cooling system; and constructing crawl spaces or basements with all-weather wood foundation. ■ Western Wood Products Assn., Portland, Ore.

Circle 404 on inquiry card

**ZONE AIR CONDITIONING** / A 16-page revised product brochure discusses installation concepts for *Zone-line* packaged terminal air conditioning. Covered are such areas as architectural adaptability, exterior esthetics, individualized interiors, and special systems; ratings and product specifications for the full line of cooling and heat/cool models are given. ■ General Electric Co., Louisville, Ky.

Circle 405 on inquiry card

**APPLIANCES** / A fully-illustrated catalog outlines product specifications and dimensional drawings on freestanding and built-in ranges; laundry equipment; refrigerator-freezers; dishwashers; food waste disposers; trash compactors; and packaged terminal and built-in room air conditioners. Featured appliance colors are *The New Naturals*: neutral earth tones of almond, snow, onyx, and wheat. ■ General Electric, Louisville, Ky.

Circle 406 on inquiry card

**SOLAR HEATING** / Complete information on the design and construction of solar collectors is available from the manufacturers of *Sun-Lite* collector cover material. Intended for use in low temperature solar heating systems, especially passive and air, *Sun-Lite* panels are said to provide a weather-proof exterior skin; good solar heat transmission; translucent daytime lighting; and interior finish wall—all in one. ■ Solar Components Div., Kallwall Corp., Manchester, N.H.

Circle 407 on inquiry card

**RESIDENTIAL ENTRANCES** / Over 40 designs of steel entranceway systems, including patio, leaded-glass-look and fire-rated doors, are presented in a 24-page catalog. ■ Pease Co., Ever-Strait Div., Fairfield, Ohio.

Circle 408 on inquiry card

**GARAGE DOORS** / The *Driftwood* residential garage door comes in a deep-relief rustic texture, ready for staining or painting. An illustrated fact sheet gives details on these all-wood doors, available in standard sizes. ■ Phenix Mfg. Co., Inc., Shawano, Wis.

Circle 409 on inquiry card

**WESTERN RED CEDAR** / Outdoor living projects designed in clear or knotty cedar by 10 architects are depicted in full-color photographs in a concept brochure. ■ Western Red Cedar Lumber Assn., Portland, Ore.

Circle 410 on inquiry card

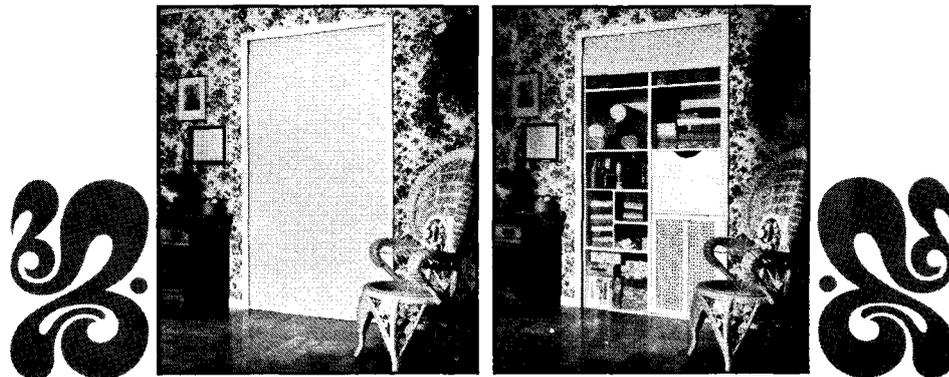
**TEXTURED CLAY TILE** / Brochure shows a variety of installations of structural textured clay tile, and includes wall sections and diagrams of fire-rated walls. ■ Stark Ceramics, Inc., Canton, Ohio.

Circle 411 on inquiry card

**EXPANSION JOINTS** / A color brochure explains how proper use of expansion joints can save money and improve architectural appearance by stopping damage due to internal and external wall expansion and contraction, flexing, settling and other adverse conditions. ■ Keene Corp., Bldg. Prods. Div., Vienna, W.Va.

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**ENERGY-SAVING GLAZING** / An eight-page illustrated brochure explains how *Solarcool* bronze reflective glass can be used in homes, multi-family dwellings and small commercial buildings to lower cooling bills, reduce glare, and provide privacy. ■ PPG Industries, Pittsburgh, Pa.  
*Circle 413 on inquiry card*

**BATHROOM HEATERS** / New additions to this manufacturer's line of bath and room heaters are featured in a color brochure. Heaters are available with either plastic or aluminum grilles, both of which can be papered or painted to match room decoration. ■ Miami-Carey, Monroe, Ohio.  
*Circle 414 on inquiry card*

**DECORATIVE LAMINATES** / The 96 solid colors, woodgrains, leathers, marbles and patterns that make up the current line of decorative *Micarta* laminate are shown in an eight-page selector guide. The brochure also includes information on types of *Micarta* for specific applications, standard surface finishes, and specifications for the product's fire-retardant grades. ■ Westinghouse Electric Corp., Micarta, Div., Hampton, S.C.  
*Circle 415 on inquiry card*

**WALL SURFACING PRODUCTS** / A 20-page catalog covers an entire line of interior wall finish products, including fiberglass tub recess kits. Planks, panels, moldings, full installation instructions and accessory items are featured. ■ Marlite Div., Masonite Corp., Dover, Ohio.  
*Circle 416 on inquiry card*

**PANELING** / "All About Wall Paneling" introduces a number of *Weldwood* plywood and hardboard paneling styles. Detailed instructions for installing paneling and moldings are given; 26 remodeling ideas are illustrated; woodgrain swatches and color reproductions assist panel selection. ■ Champion Building Products, Stamford, Conn.  
*Circle 417 on inquiry card*

**WOOD STAINS** / A six-page folder provides sample chips on over 90 wood stain shades. Solid, semi-transparent and wiping stains, both latex and oil-based, are included in the *Rez* line of interior and exterior wood finish products. Also shown are three sheens of clear varnish and polyurethane finishes. ■ PPG Industries, Inc., Pittsburgh, Pa.  
*Circle 418 on inquiry card*

**TILE IDEAS** / "The Book on Ceramic Tile" presents dozens of color installation photographs showing tile in every room in the house, on both wall and floor. ■ Sikes Corp., Lakeland, Fla.  
*Circle 419 on inquiry card*

**DECORATIVE CEILINGS** / Twenty-four *ArtCarved* ceiling panels for homes and offices are shown in a color brochure. Wood panels come in solid or lattice styles, with either walnut or white finish standard. *ArtCarved* ceilings fit any 2-ft. by 2-ft. grid system; larger sizes are available. ■ Entol Industries, Inc., Miami, Fla.  
*Circle 420 on inquiry card*

**GYPSUM-FILLED WALLCOVERING** / Detailed installation instructions are provided for *Wonderwall* gypsum-filled wallcovering. Brochure also discusses maintenance and painting suggestions. The 48-in.-wide product, which is said not to crack, craze, flake or chalk, can be applied to any rigid surface, and is available in 10 colors. ■ Marlite Div., Masonite Corp., Dover, Ohio.  
*Circle 421 on inquiry card*

**FLOORING** / Color reproductions of all patterns in the *Classicon* sheet vinyl flooring line are shown in a product brochure. Both swirl design and tile motifs are included, all featuring the *Aquabar* layer protecting the flooring from mildew, rot and discoloring caused by moisture penetration. ■ Mannington Mills, Inc., Salem, N.J.  
*Circle 422 on inquiry card*

**EXTERIOR HOUSE PAINTS** / Physical properties such as leveling and blister and moisture resistance of *Latex 508* house paint are discussed in a 22-page booklet. Performance of filming aids with *Latex 508* are classified in order, from most effective to least effective. Storage and handling procedures, weathering test results, and white and tint formulations for the acrylic interpolymer latex are also given. ■ Union Carbide Corp., New York City.  
*Circle 423 on inquiry card*

**LIGHTING TIPS** / "How to Decorate with Light" offers suggestions for residential and apartment use of various lighting techniques. The 24-page booklet also provides ideas for homemade lighting fixtures for special effects. ■ GTE Sylvania, Stamford, Conn.  
*Circle 424 on inquiry card*

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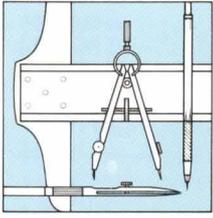
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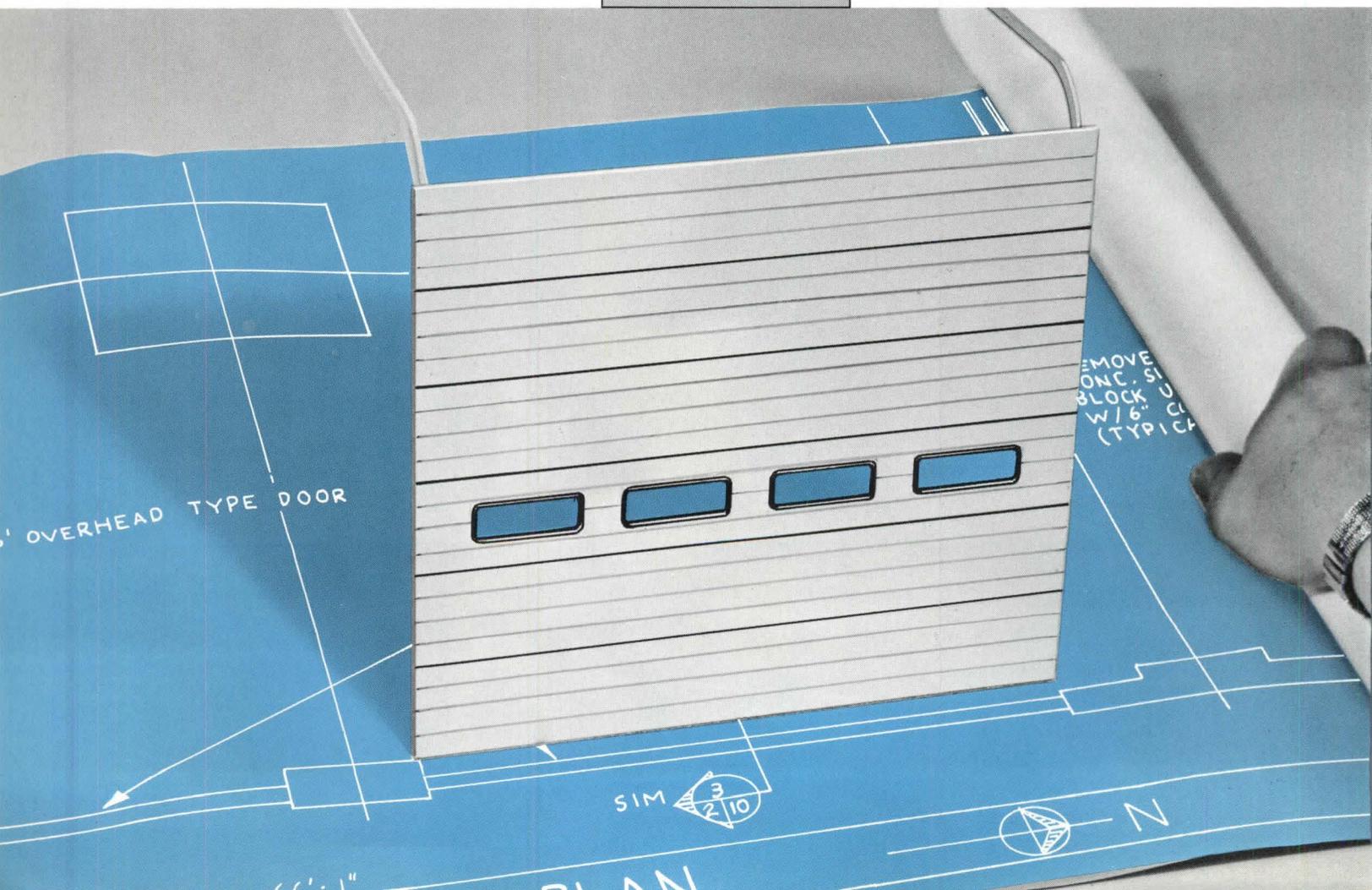
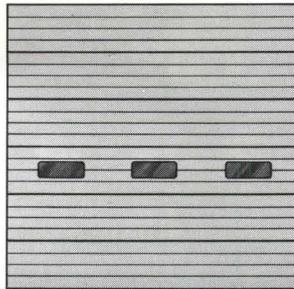
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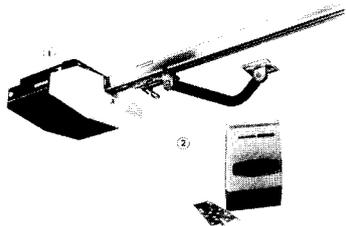
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**SMOKE ALARM** / Model "217" residential smoke and fire alarm meets UL Standard 217, which goes into effect in July, 1977. Utilizing a photocell alarm for quick reaction to slow, smoldering fires, the "217" operates under extremes in temperature, atmospheric pressure, humidity, specified corrosive environments and high intensity light. Unit will not false alarm when extraneous transients are introduced. Dual-photocell alarm uses Light Emitting Diodes with a projected life of 20 years. Unit is AC powered, and measures 3½-by 5¼-by 1½-in. ■ The Edwards Co., Norwalk, Conn.

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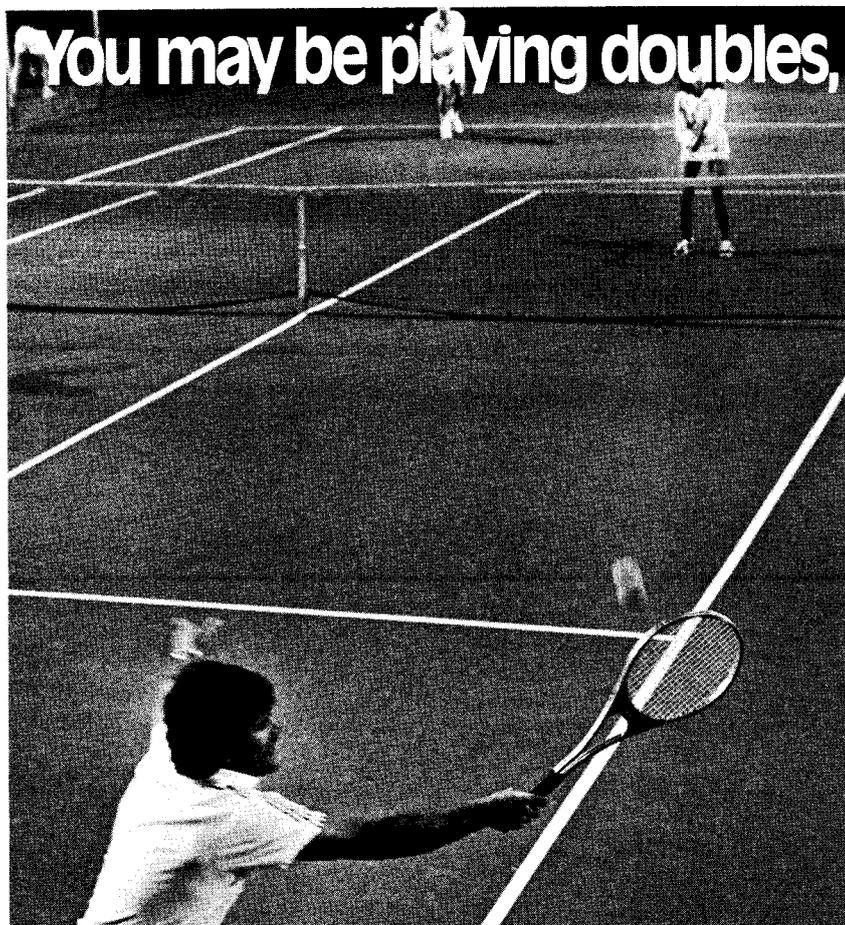
**FREE-STANDING FIREPLACE** / The "Imperial Carousel" fireplace uses hood baffles and an adjustable air intake in the fire box door to create a whirling action that draws all smoke up through the chimney. The unit is "self-cleaning;" ashes are completely burned out and reduced to fine particles. The baffles prevent heat from escaping through the chimney, forcing it to radiate through the steel hood and glass-enclosed fire box for efficient space heating. "Carousel" fireplaces stand 54 in. high, 40 in. in diameter; these ICBO-approved units come assembled, ready for installation. ■ Malm Fireplaces, Inc., Santa Rosa, Calif.

*Circle 303 on inquiry card*



**HOT WATER STORAGE** / Recent additions to this manufacturer's line of insulated tanks are a solar hot water storage tank (pictured), and an electric water heater with a solar connection. Both units come in 30- and 120-gal-capacity sizes. Insulation completely surrounds the tank; special pads between the tank bottom and jacket base help retain heat. Cold water is introduced to the tank bottom with horizontal diffusion to reduce turbulence. Two ¾-in.appings on the tank front hook up to solar piping. ■ A. O. Smith, Kankakee, Ill.

*Circle 304 on inquiry card  
more products on page 135*



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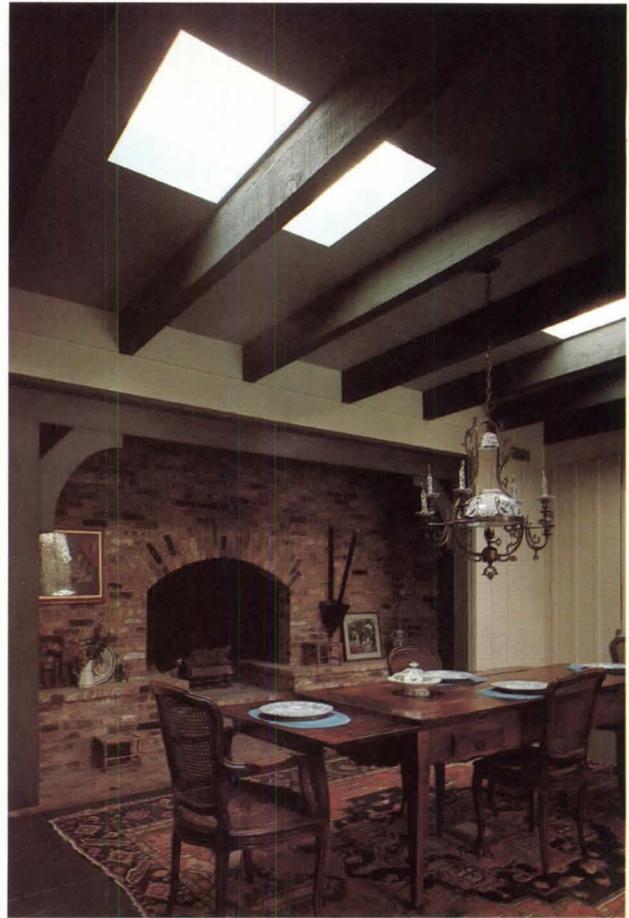
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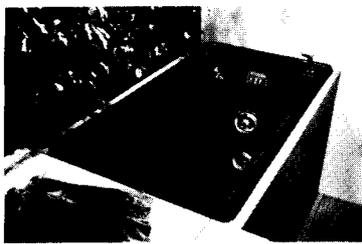
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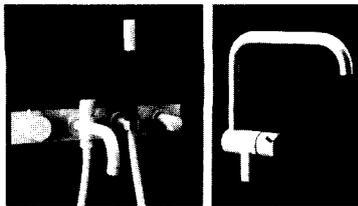
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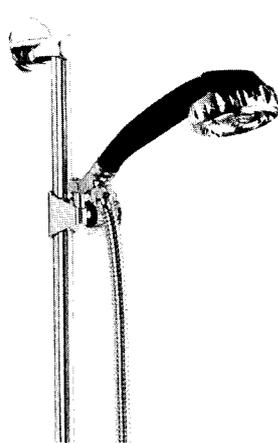
**DEEP WHIRLPOOL BATH** / This "Executive" model bath is 34 in. deep to allow submersion of the whole body. Two fully adjustable recessed whirlpool inlets are located one above the other for hydro-massage of both the upper and lower body. The self-contained, fully plumbed bath features a silent air-induction manifold system to draw air to be mixed with water. Baths are constructed of higher-luster fiberglass, available in 12 colors. ■ Jacuzzi Whirlpool Bath, Inc., Walnut Creek, Calif.

*Circle 305 on inquiry card*



**FAUCETS/FIXTURES** / Intended by designer Arne Jacobsen to unclutter and simplify the appearance of bathroom and kitchen fittings, these Danish-made fixtures use a valve which adjusts both water volume and temperature in one turn-pull movement. This deflectable-membrane valve can be combined with many different outlets: swivel spout, head or hand-shower, etc. "Vola" sanitary fittings are adaptable for either wall- or counter-mounting; all piping is concealed. Accessories such as soap, toothbrush, and towel holders are available. Fixture at left has a soap holder: a small, smooth metal cap is placed in the soap bar; soap is held in place by the holder's magnet. Fittings as well as accessories are supplied chromium plated or epoxy enameled in 15 colors. ■ Architectural Complements, Lincoln, Mass.

*Circle 306 on inquiry card*



**BAR-MOUNTED HAND SHOWER** / Designed for such heavy-use locations as apartments and hotels as well as residences, model "1501 MA" handheld shower is available in chrome plate or polished gold finish. Shower may be changed from pulsating massage action to regular spray by rotating the decorative collar; an acrylic knob positions the showerhead at any height. ■ Alsons Corp., Covina, Calif.

*Circle 307 on inquiry card*



**HOT WATER DISPENSER** / Two point-of-use water dispensing units provide heated water from a cold water line with a single move of the faucet handle. A small under-sink holding tank heats water under atmospheric conditions to temperatures of 190-200F; hot water is mixed with cold inside the faucet, eliminating accidental scalding. The *UltraHot* system has a separate push-button valve for dispensing 190F water for beverages. The *UltraWarm* unit is suitable for such public locations as restrooms, health facilities, etc. Both units need only a 1/4-in. cold water supply line, sink, and 115-volt AC outlet for installation. ■ In-Sink-Erator Div., Emerson Electric Co., Racine, Wis.

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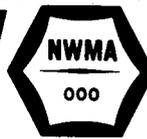


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**STEEL DOOR FRAME** / A prehung residential exterior steel frame, *Perma-Frame* installations need no brick mold finishing. When combined with a steel *Perma-Door*, the entry is said to offer excellent home security. The all-steel assemblies have synthetic rubber weatherstripping; the door bottom/threshold seal passes the ASTM water and air infiltration test. ■ Steelcraft Mfg. Co., Cincinnati, Ohio.

*Circle 309 on inquiry card*



**STORM DOOR** / The "Grande Entrance" door has a 74-in.-high tempered safety glass panel which shows most of the main house door behind it. One-in. and 1½-in. thick models are available; a full screen replaces the glass panel for summer ventilation. Extruded corner gussets, spring-loaded oilite bearing hinges, and shock-absorbing U-channel vinyl glazing are door features. ■ Season-All Industries, Inc., Indiana, Pa.

*Circle 310 on inquiry card*



**ROOF VENT** / Designed to provide necessary air ventilation from soffit to attic, 48-in.-long *Proper Vents* are stapled to the underside of roof sheathing at the cornice and plate line. Each vent provides a 16-sq.-in. air space to control attic moisture and prevent ice buildup and damming on the roof. ■ WayneRoy, Inc., Minneapolis, Minn.

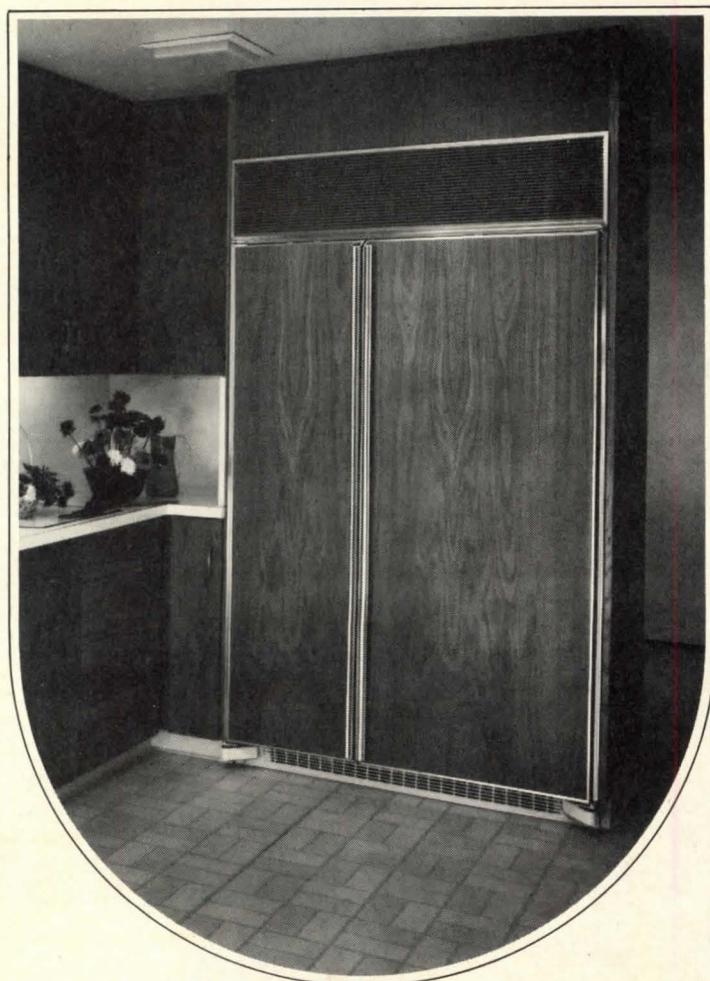
*Circle 311 on inquiry card*



**SHOWERHEAD** / An adjustable, water-saving spray pattern is produced by this German-made showerhead. Constructed of lime-resistant plastic and solid brass, the showerhead can handle water up to 185 F. Water flow can range from a wide-angled soft spray to a narrow-angled coarse one. ■ Grohe Div., Flygt Corp., Elk Grove Village, Ill.

*Circle 312 on inquiry card*

*more products on page 139*



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# Clear Lake School: Trus Joist exposes some new subject matter.

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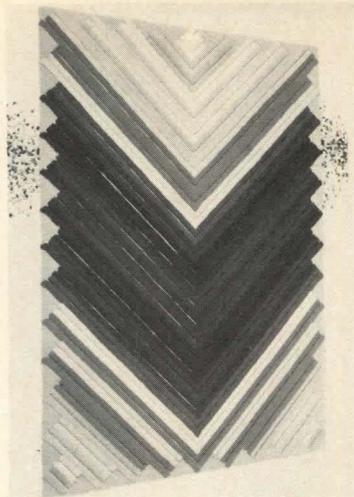
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**ARMCHAIRS** / Two new sled-base dining/conference armchairs, the C27 (seen here), and the C270, are among the major introductions planned by the company at NEOCON 9, June 22-24, 1977, in Chicago. Both the C27 and C270 are 21½ in. wide, 22½ in. deep, and 31 in. high, with fully upholstered seat. The back of the C27 is fully upholstered as well, with the C270 featuring a half-open back. Both are available in ash and walnut, and in special dimensions, woods, finishes and upholstery as specified. ■ Helikon Furniture Co., New York City.

*Circle 313 on inquiry card*



**AREA RUG** / This Anso nylon area rug by textile designer Bill Hinz, is an overall multi-colored chevron design with exposed duck backing. Sizes are: 5 ft 2 in. by 7 ft 2 in. and 6 ft 6 in. by 9 ft 2 in. ■ Regal Rugs, Inc., North Vernon, Ind.

*Circle 314 on inquiry card*



**LAMINATED CHAIR** / The "Skagen" chair is laminated of many layers of oak veneer. In this series, the company offers a selection of natural cane, all oak veneer, or upholstered seats and backs. Four basic styles are available in both arm and armless versions. A swivel arm chair with tilt control is also offered. ■ R-Way Furniture Co., Sheboygan, Wis.

*Circle 315 on inquiry card*



**PLANTERS** / "Fiberamic" planters are constructed of fiberglass resins and ceramic. Recommended for use indoors or out, they can be easily drilled for drainage or hanging. The planters come in eight colors and sizes range from 4 to 24 in. in diameter; saucers accommodate smaller sized pots for any given diameter. ■ D.F.G. Tooling Corp., Sumner, Wash.

*Circle 316 on inquiry card*

*more products on page 141*

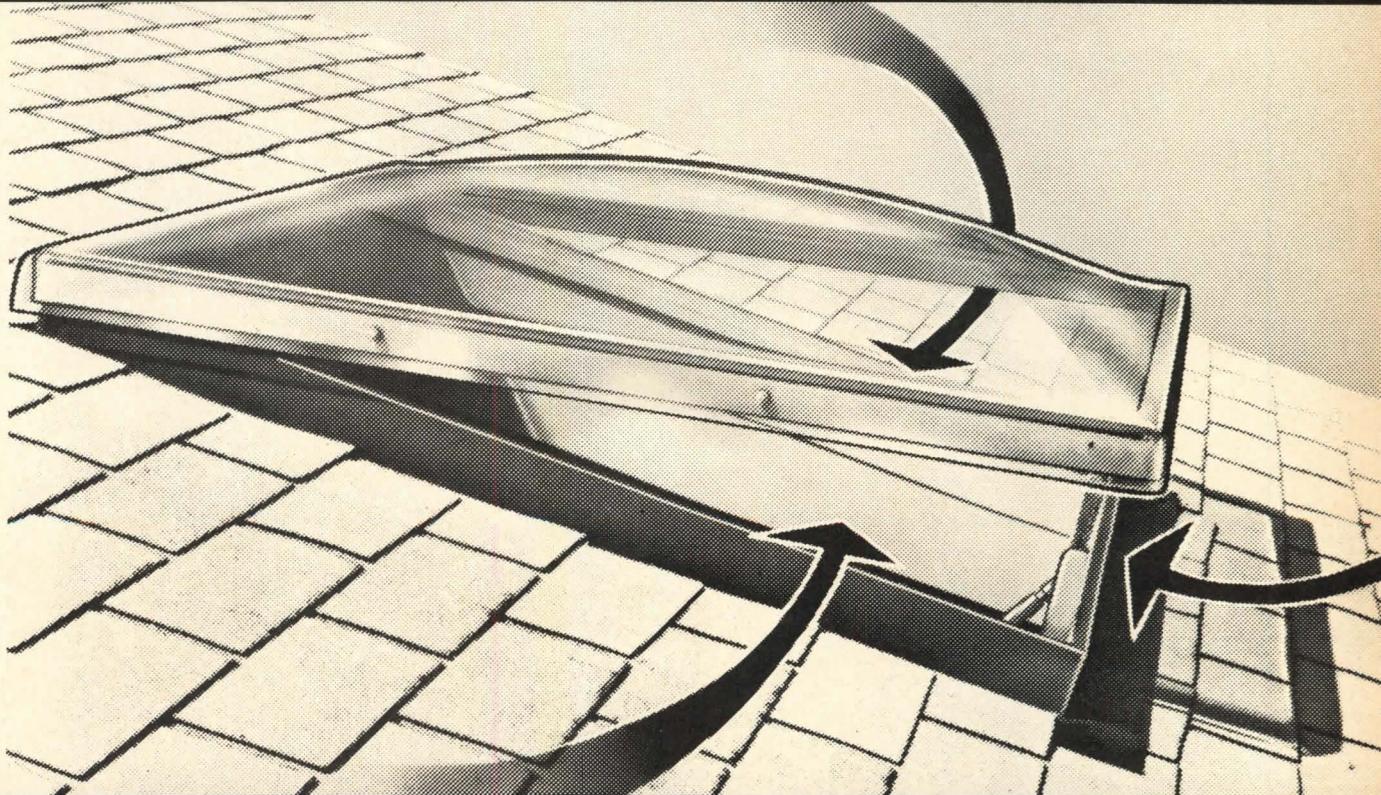
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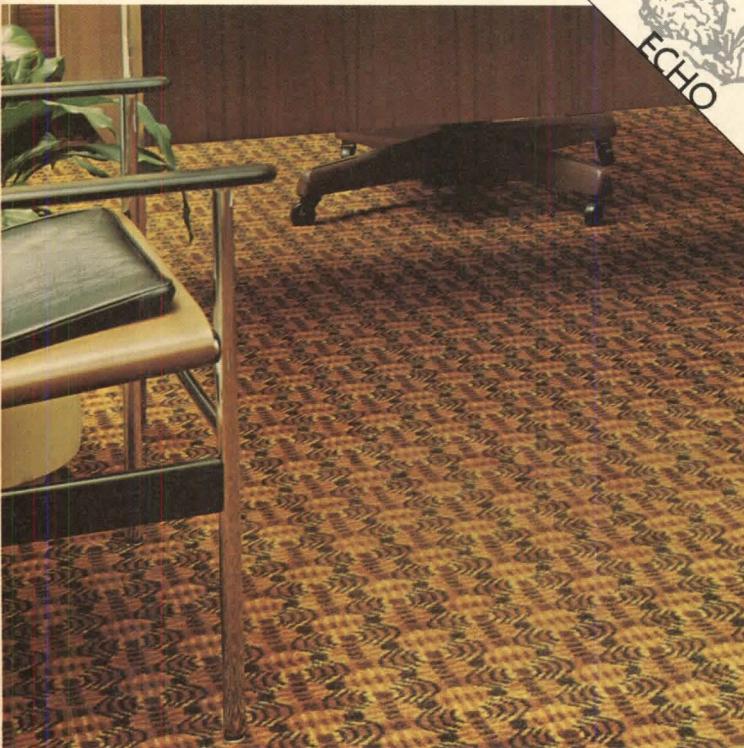
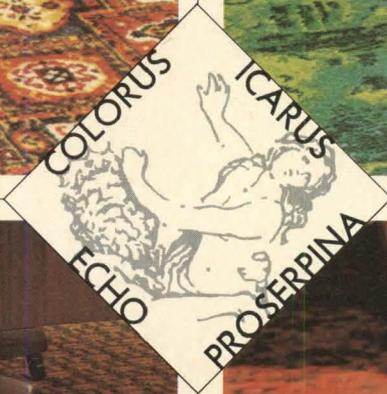
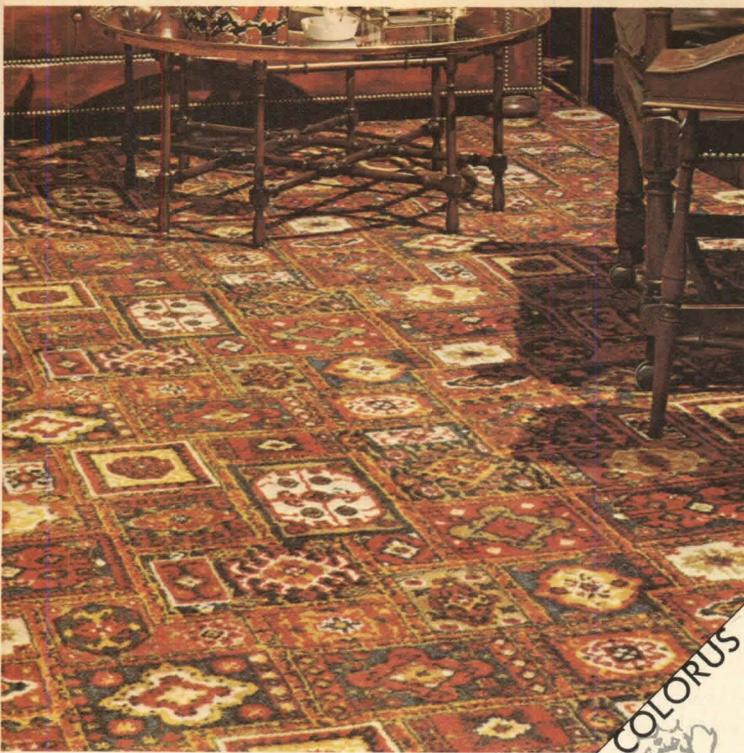
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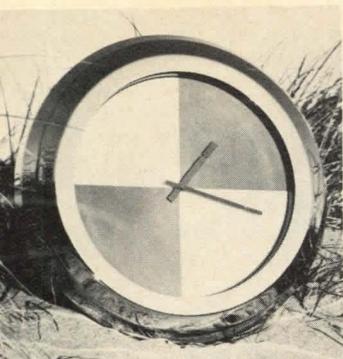


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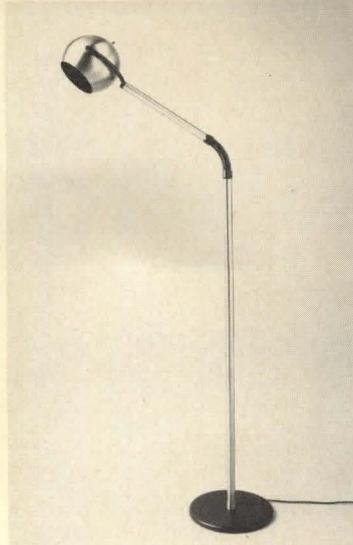
**CLOCKS** / Electric, quartz or tuning fork battery movements are available for this 18-in.-diameter multi-faceted wall clock. The clock housing is highly-reflective polished chrome steel. Two different glass-covered dial designs are available: a bi-metal design with gold and silver anodized quadrants (shown); or a dial with polished chrome bars mounted on black. ■ Peter Pepper Products, Inc., Compton, Calif.

Circle 317 on inquiry card



**WINDOW BLINDS** / *Metalcrafted Classique* blinds are said to combine modern styling with the light control features of traditional venetian blinds. Units have 1-in. aluminum slats and thin polyester slat supports; no tapes are needed. A plastic tilt wand and a raising cord provides control of light, air flow and privacy. *Classique* blinds come in 57 colors, including wood grain and metallics. Additional "Duplex" styles have the interior slat side colored; outside face is a uniform white. Standard sizes cover most window applications, including sliding glass doors and corner windows. ■ Del Mar Loomcrafted Woven Wood, Huntington Beach, Calif.

Circle 318 on inquiry card



**READING LAMP** / "The Bends" reading lamp accommodates a 75-watt reflector bulb within its 7½-in. shade. Flexed coil permits adjusting light to any desired position; lamp itself is 65-in.-high overall. "The Bends" is finished in black and polished steel. ■ Koch + Lowy, New York City.

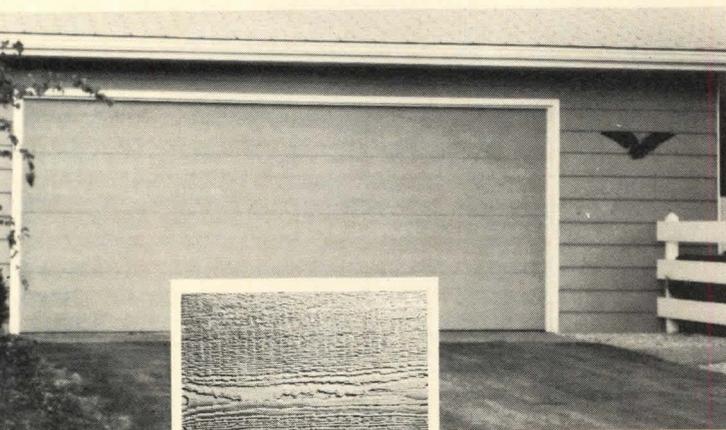
Circle 319 on inquiry card



**PENDANT LIGHTING** / The "37135" pendant fixture is made of heavy gauge spun aluminum, to house a 300-watt reflector lamp. The inner surface of the shade is finished in matte white for high reflectance. The dome-shape fixture measures 12-in. in diameter by 14-in. deep, and is available in the following finishes: polished brass or chrome; matte white or black, satin bronze; and wet red. Fixture may be either cord suspended or stem mounted. ■ Habitat Inc., New York City.

Circle 320 on inquiry card

more products on page 143



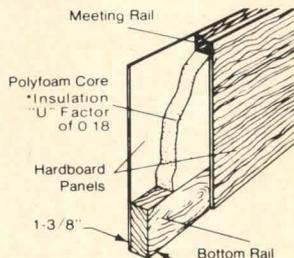
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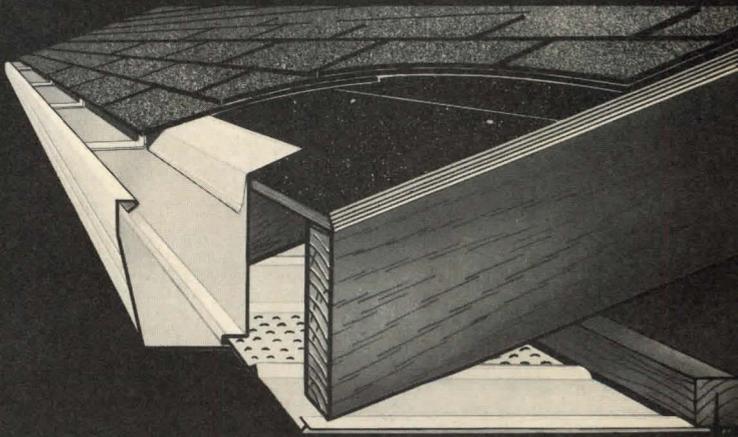


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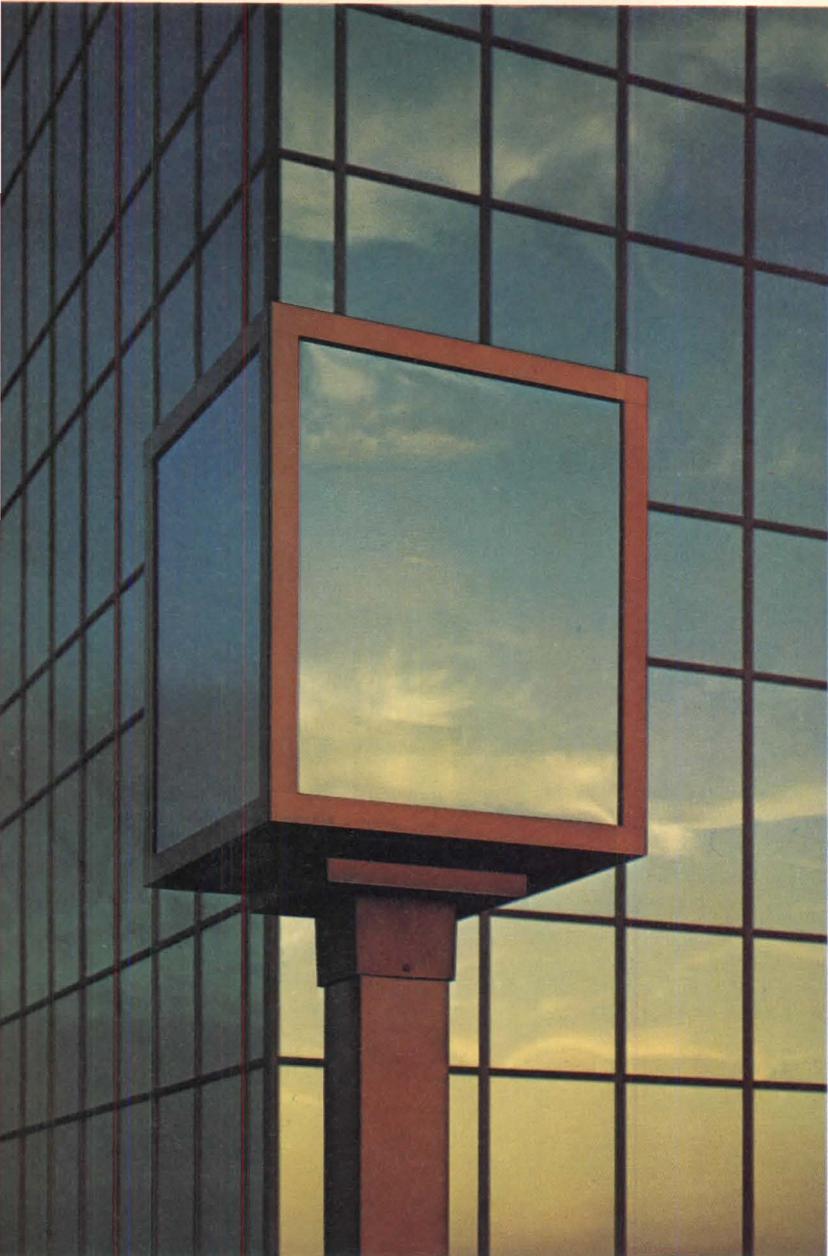
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# The luminaire that thinks it's a chameleon.



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**BATHROOM CABINET** / A single-unit, three-compartment bath cabinet has full storage shelving behind each mirror. The steel cabinet body comes with a baked-enamel finish; plate mirrors have either silver- or gold-anodized frame trim. The "Newport" is available in 30- by 30-in.; 30- by 36-in., 36- by 36-in., and 36- by 48-in. sizes; the mirrors carry a 10-year warranty against silver spoilage. ■ Triangle Home Products, Chicago, Ill.

Circle 321 on inquiry card



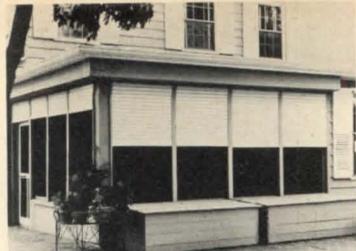
**THROUGH-WALL HVAC** / This three-model line of PTAC heat pumps, designed for apartment and other contract installations, is said to offer significant energy cost savings. *Zoneline III* units are designated "Extended Range Heat Pumps" because they operate as reverse cycle heat pumps with defrost down to 35 F or lower, depending on outdoor humidity conditions. Cooling mode EER ranges from 7.5 to 6.8; heating coefficient of performance is 2.0 or better. The new 42-in. units are similar in appearance and size to previous *Zoneline* models. ■ General Electric, Louisville, Ky.

Circle 322 on inquiry card



**CARPETING** / This firm's residential carpeting collection uses fine denier yarns for a silk-like feel and lustre. Pictured is "Botanica," a floral print in 10 denier Anso staple nylon, designed by Jack Lenor Larsen. The carpet is said to hide soil, resist static, and have good wear characteristics. ■ Gulistan, J. P. Stevens & Co., Inc., New York City.

Circle 323 on inquiry card



**ROLLING SHUTTERS** / Energy savings and increased residential security are claimed for these vertical rolling shutters, installed on windows, doors, screened porches, etc. Each PVC plastic slat is an extruded double wall with a dead-air space, said to act efficiently as a sound and thermal barrier. Once lowered, the shutters can be locked from the inside; the slats can be adjusted for any degree of light control. ■ Ever-Strait Door Systems, Fairfield, Ohio.

Circle 324 on inquiry card



**STEEL DOORS** / The *Therma-Tru* steel residential entry system now includes a symmetrically-patterned sculptured door. Magnetic-type weatherstripping provides a tight seal; dense urethane insulating core is said to give the door an R factor of 15.15. ■ Lake Shore Industries, Toledo, Ohio.

Circle 325 on inquiry card



**WASHER/DRYER** / Product changes for this line of automatic clothes washers and dryers include rearranged controls for easier and more versatile use, and energy-efficient dryers with larger load capacity. Gas dryers have direct-ignition devices to save as much as 30 per cent of the total fuel used in dryers with constant-burning pilots. ■ The Maytag Co., Newton, Iowa.

Circle 326 on inquiry card  
more products on page 145

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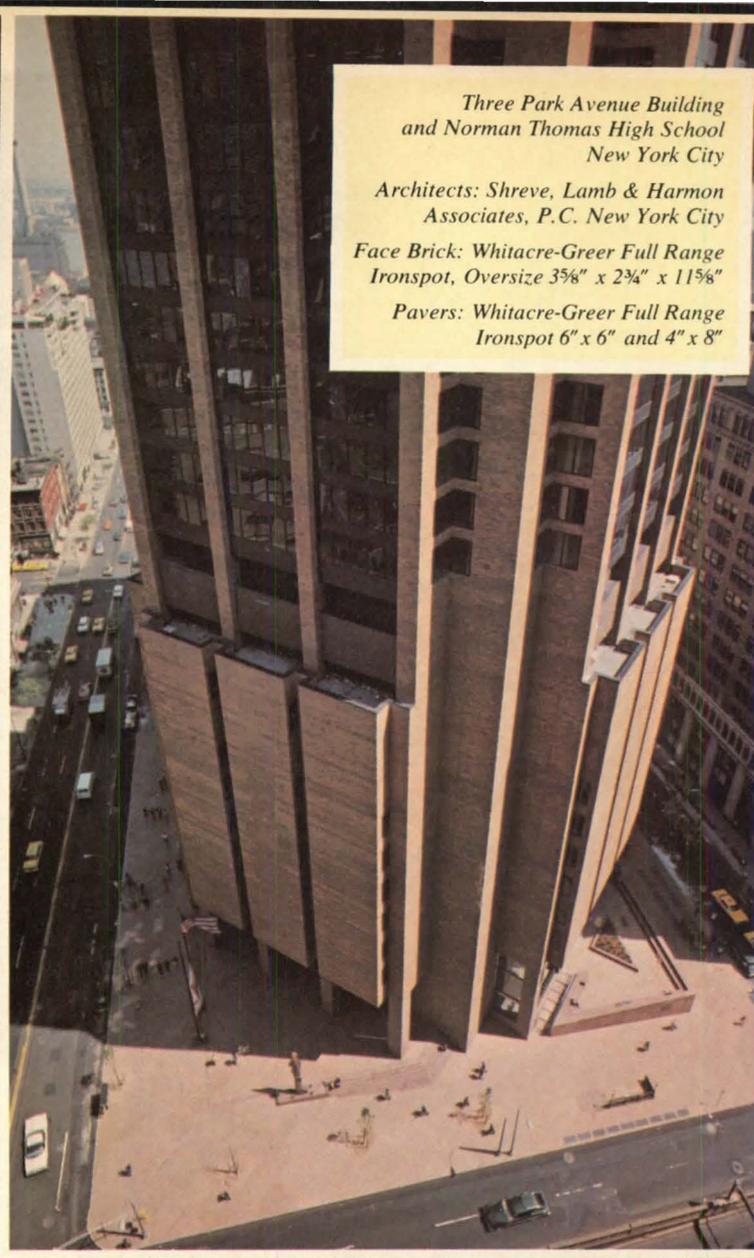
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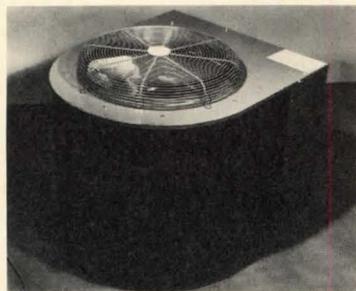
**IN-HOME SPA** / This self-contained environmental enclosure provides the effects of sunbathing, warm or cool showers, steam and drying breezes. The working mechanism includes four heat lamps, four sun lamps, six spray heads, a steam generator and two warm air circulating systems. Called "Environment," units are constructed of teak and cypress; the fiberglass fascia panel is optional. A control panel allows user to select the elements of sun, rain, steam and wind in sequences and time to suit his mood. Outside dimensions of the "Environment" are 109-in.-long; 44-in. front to back; 91-in. high. Included are: built-in porthole cabinet and window; hand-held shower; three-piece sliding doors, and 60- by 30-in. lighted translucent panel, on rear wall. Approximate base price: \$10,000. ■ Kohler Co., Kohler, Wis.

Circle 327 on inquiry card



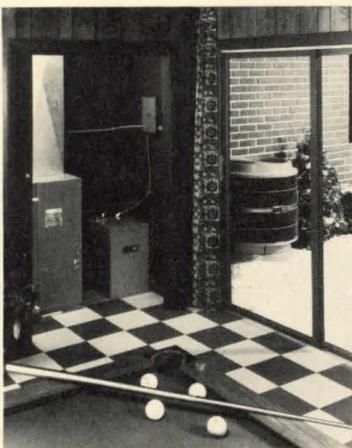
**CEILING FANS** / Available with plastic or aluminum grilles, these wall and ceiling fans can be decorated with either paper or paint to coordinate with room decor. Fans are said to be easy to install and quiet in operation. ■ Miami-Carey, Monroe, Ohio.

Circle 329 on inquiry card



**CONDENSER** / Said to be competitively priced, these high-efficiency residential condensing units are available in capacities of from 2½- to 5-tons. All condensers have an EER of 8.0 to 8.4, according to ARI standard 210-74. ■ Singer Co., Climate Control Div., Carteret, N.J.

Circle 330 on inquiry card



**HEAT PUMP** / The Weathermaster III series of residential heat pumps achieve an EER of about 8.0 (cooling) and a COP of 2.1 for heating, where outside air is 17 F. A special feature of these units is the inside location of the acoustically-treated compressor and all critical controls, which protects the mechanism from weather damage. The outside condenser may be wall-mounted for better drainage. An "Optimizer" control option makes it possible to add Weathermaster III heat pumps to an existing gas, oil, or electric furnace. ■ Carrier Corp., Syracuse, N.Y.

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**COIN-OP LAUNDRY EQUIPMENT** / Heavy-duty commercial washers have energy-saving and security features. To cut water heating costs, a valve reduces the warm water ratio of "hot" water mixed with "cold" for both wash and rinse cycles; a "Power Miser" switch allows only cold water rinses. Money boxes are protected by high-security meter cases, and may be padlocked; the timer is also lockable. ■ Sears, Roebuck and Co., Chicago, Ill.

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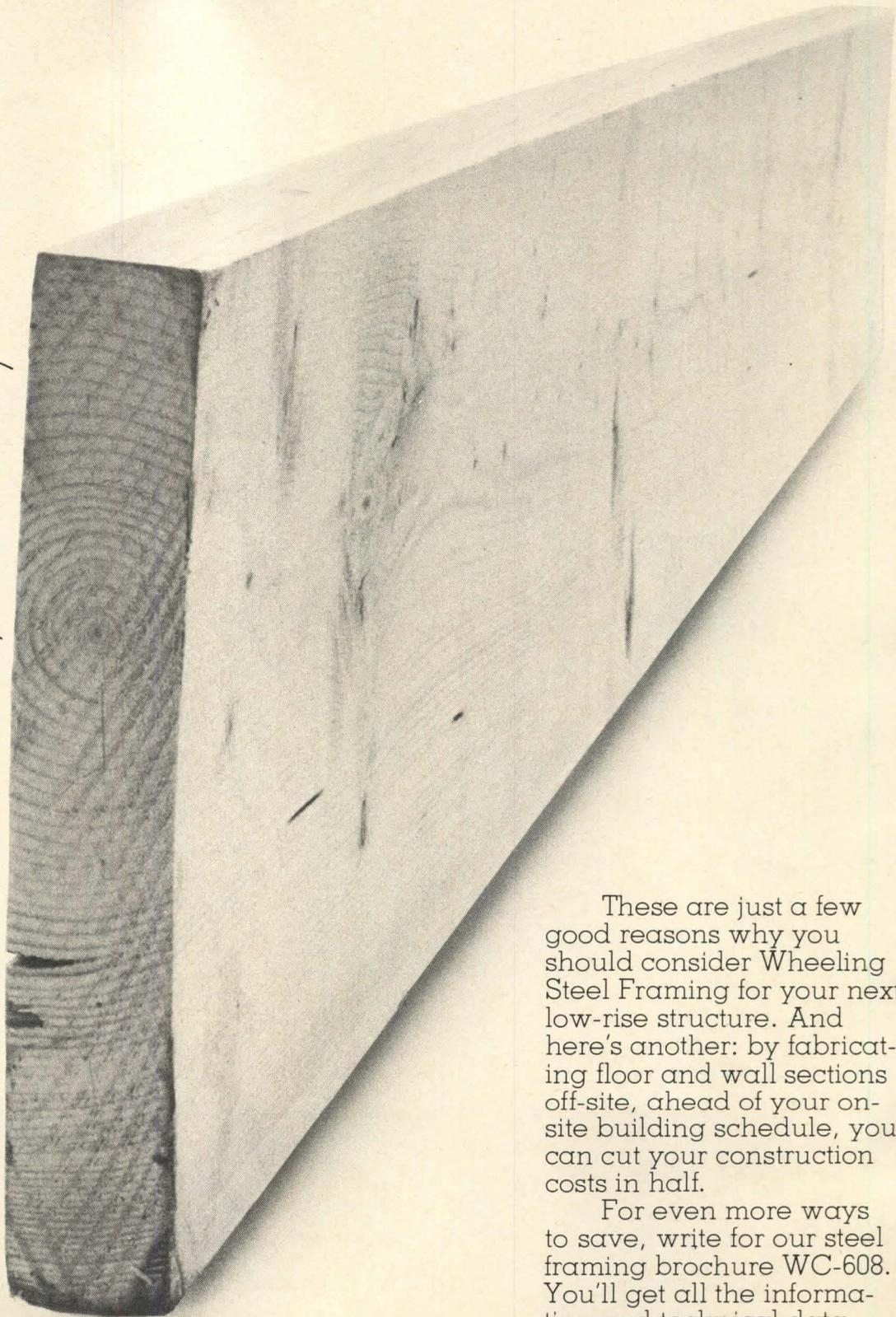
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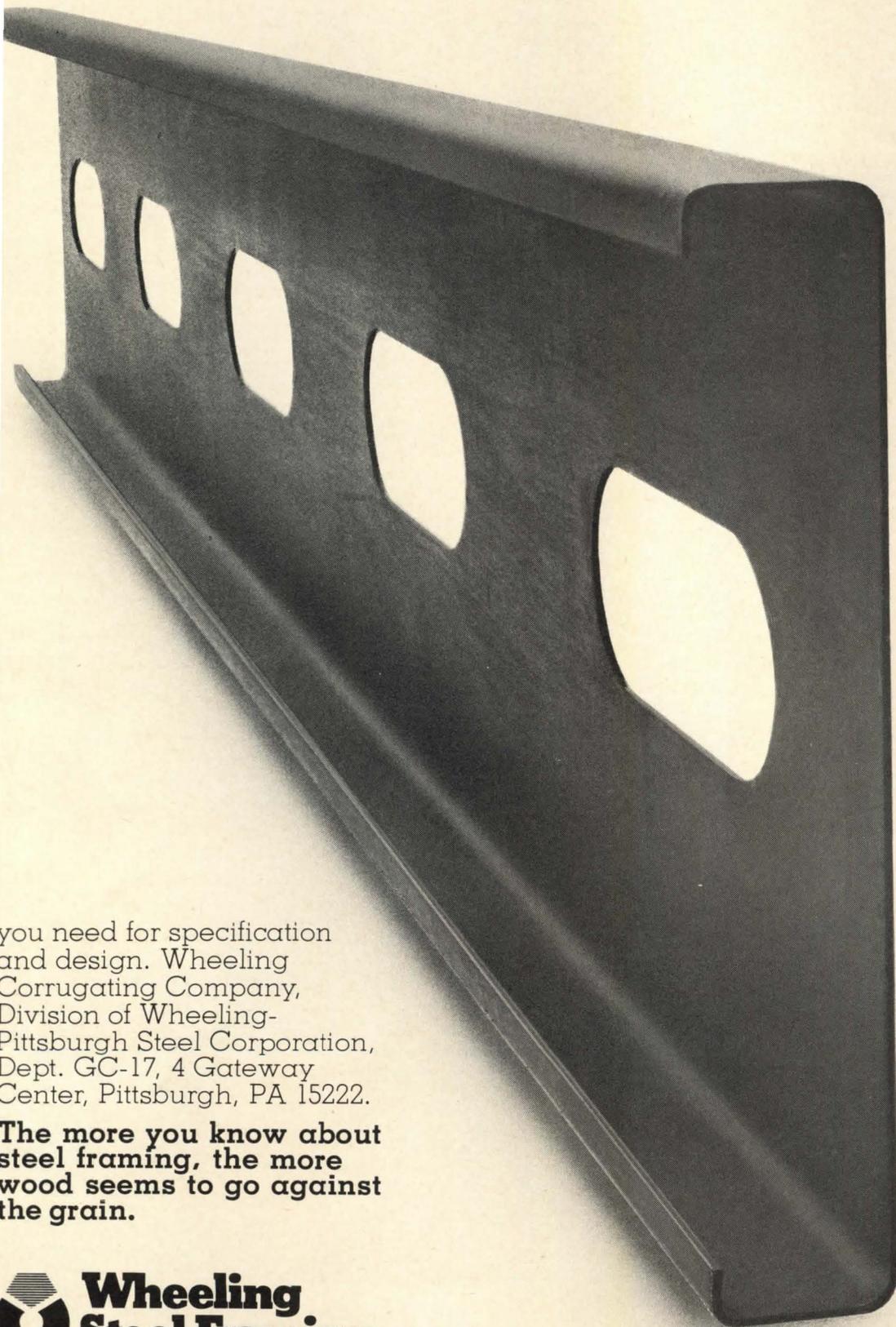
Wood framing results in more on-site scrap, greater chance for pilferage and more post job clean-up. With steel framing, you have no waste or debris and even small pieces of steel scrap are saleable.



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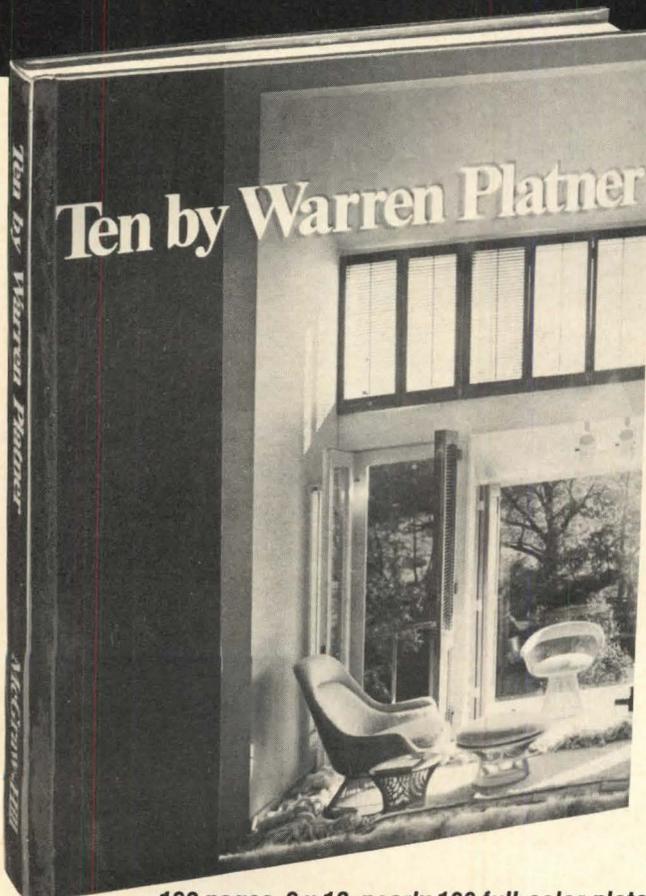
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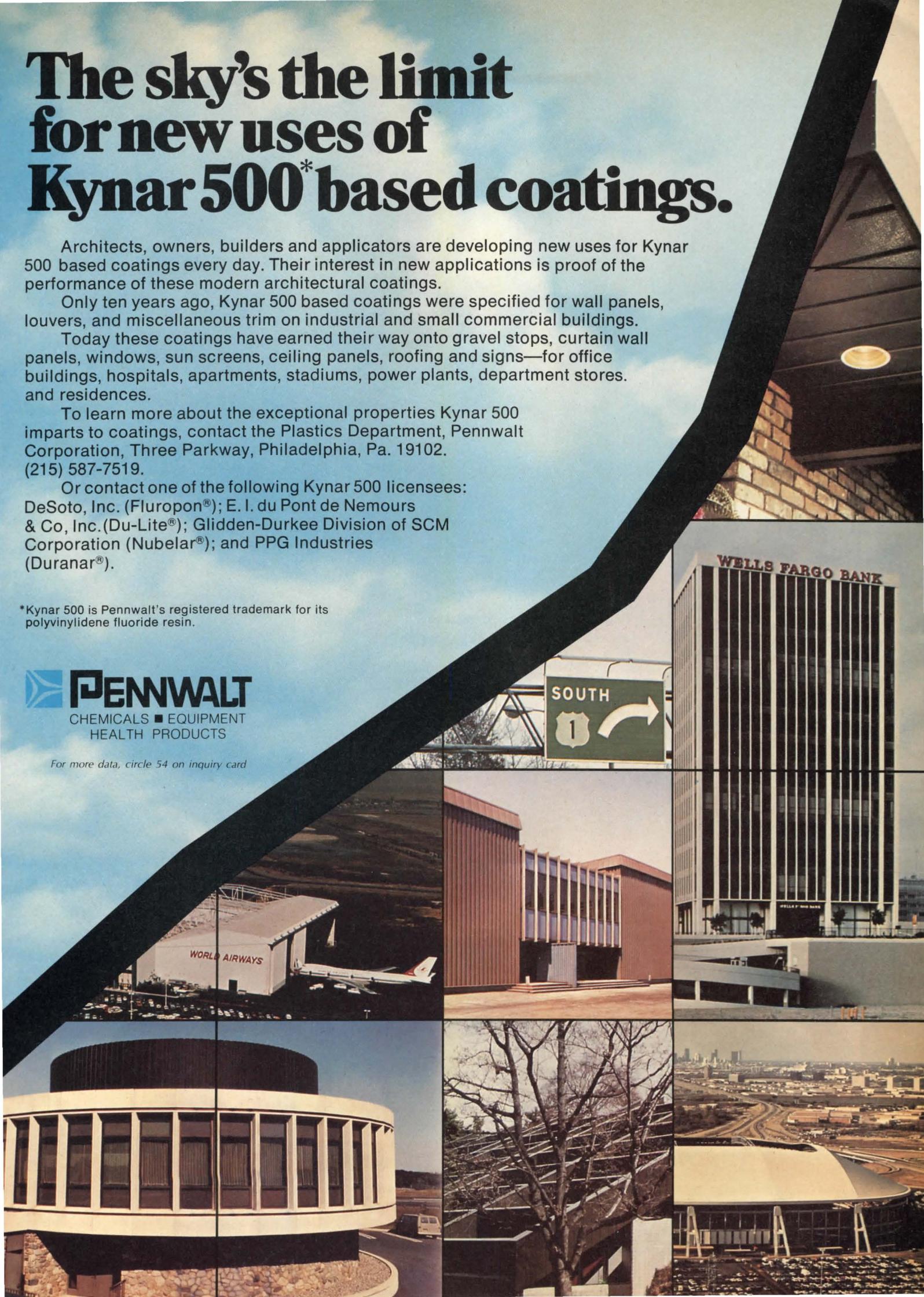
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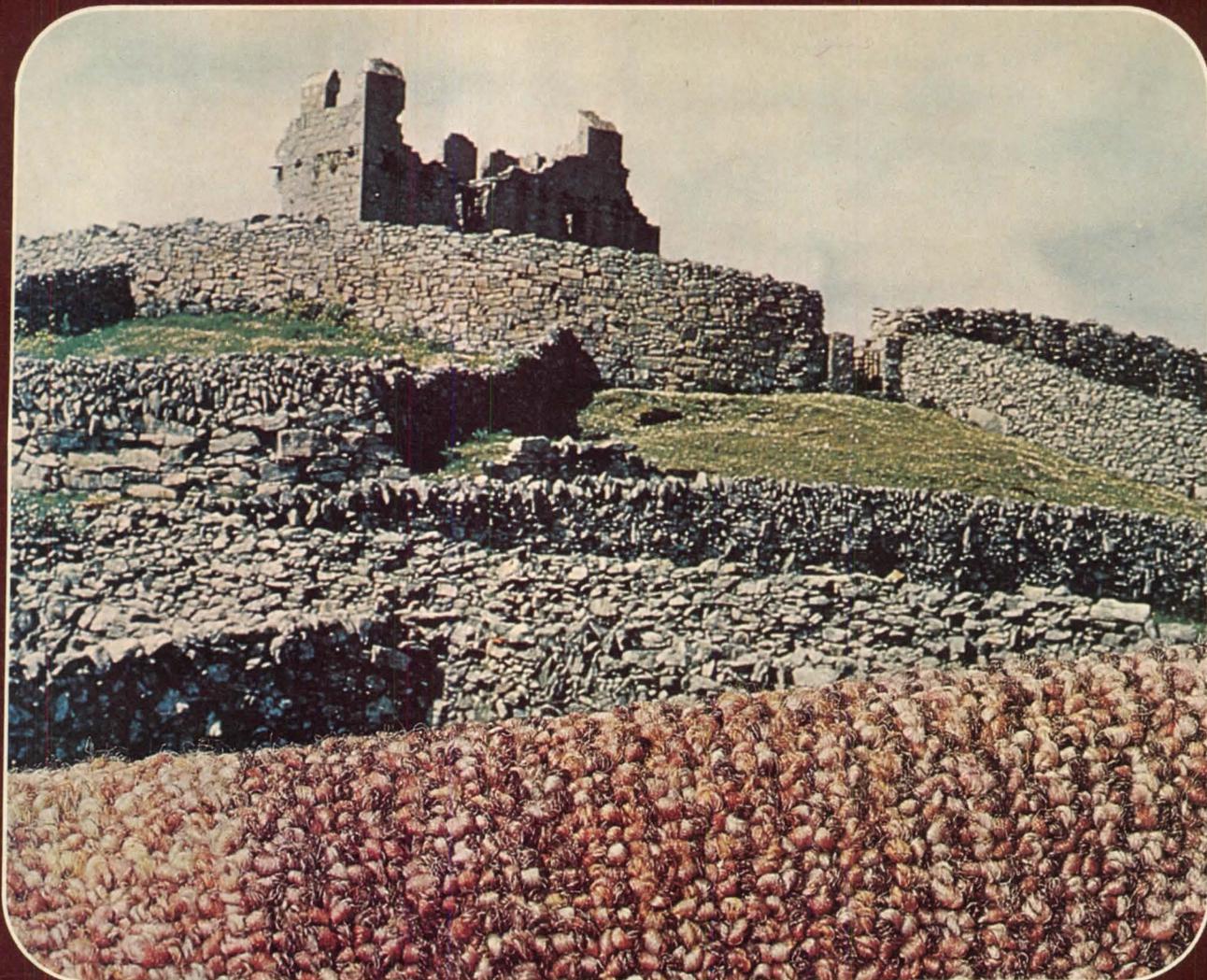
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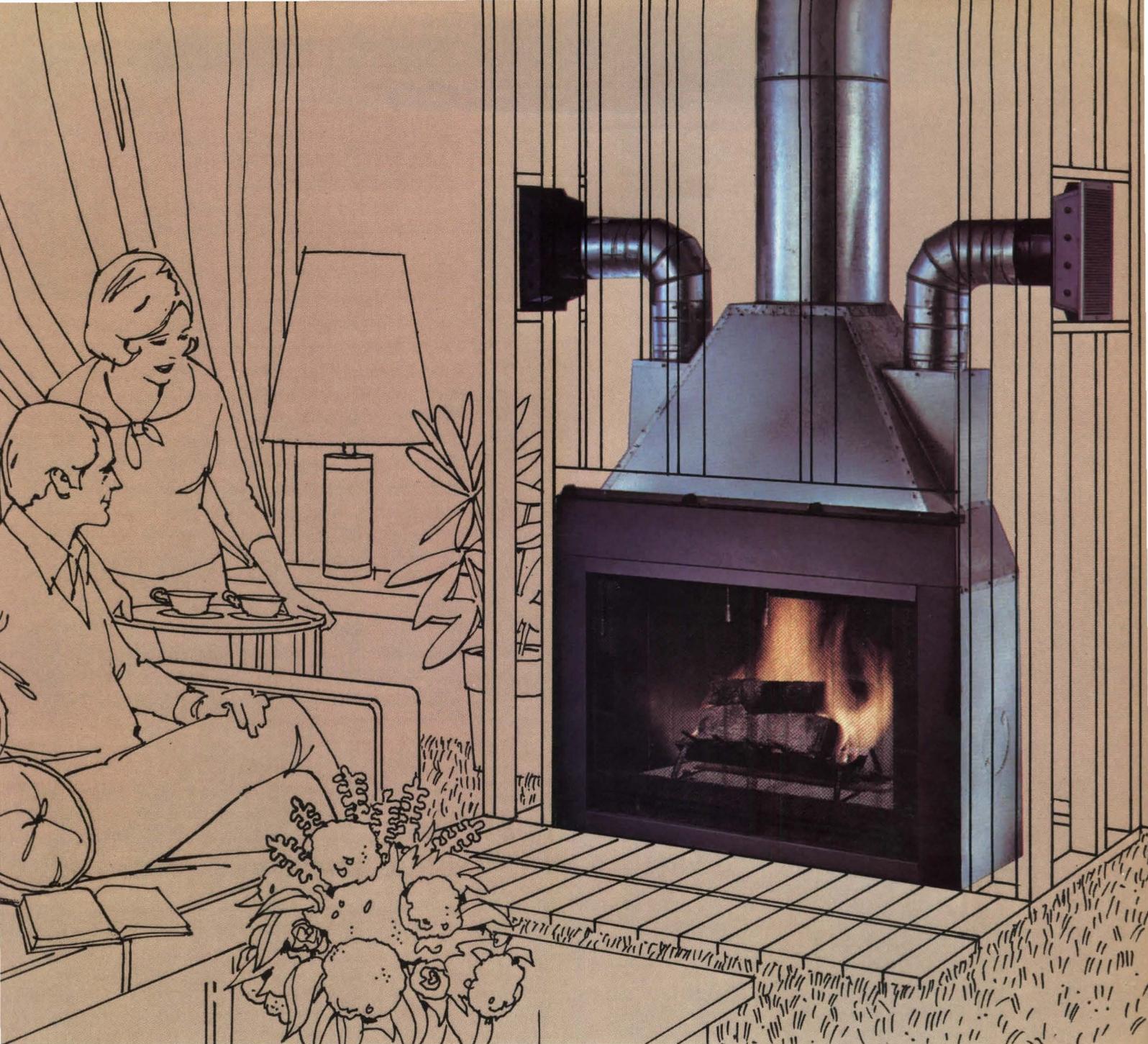
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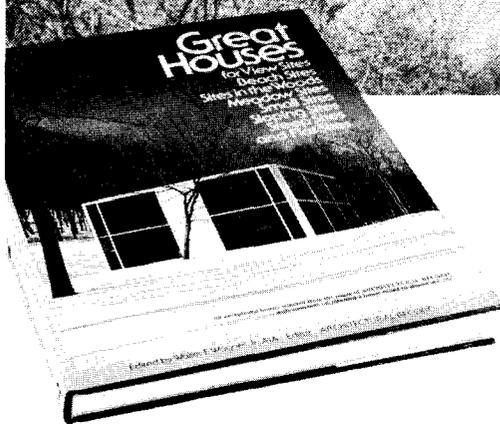
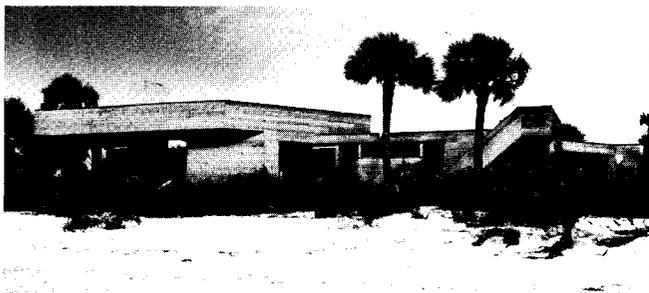
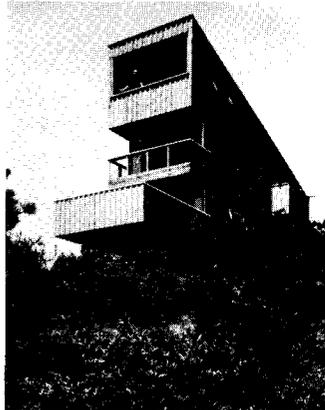
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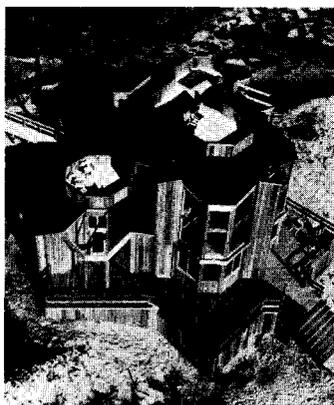
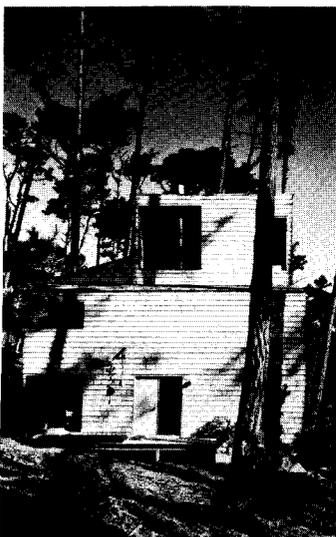
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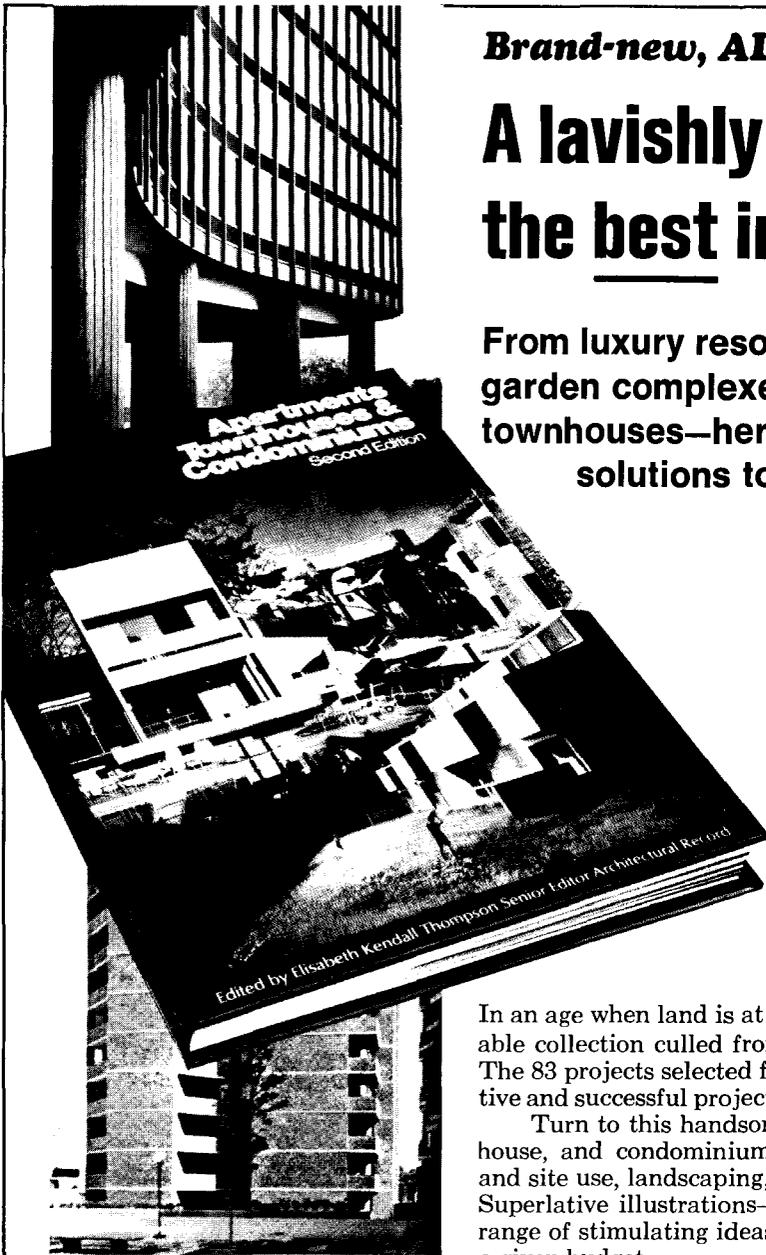
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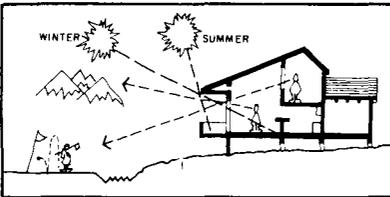


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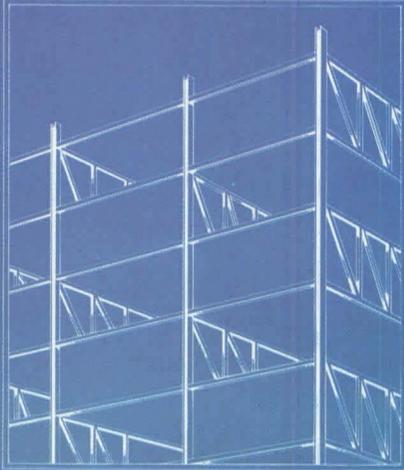


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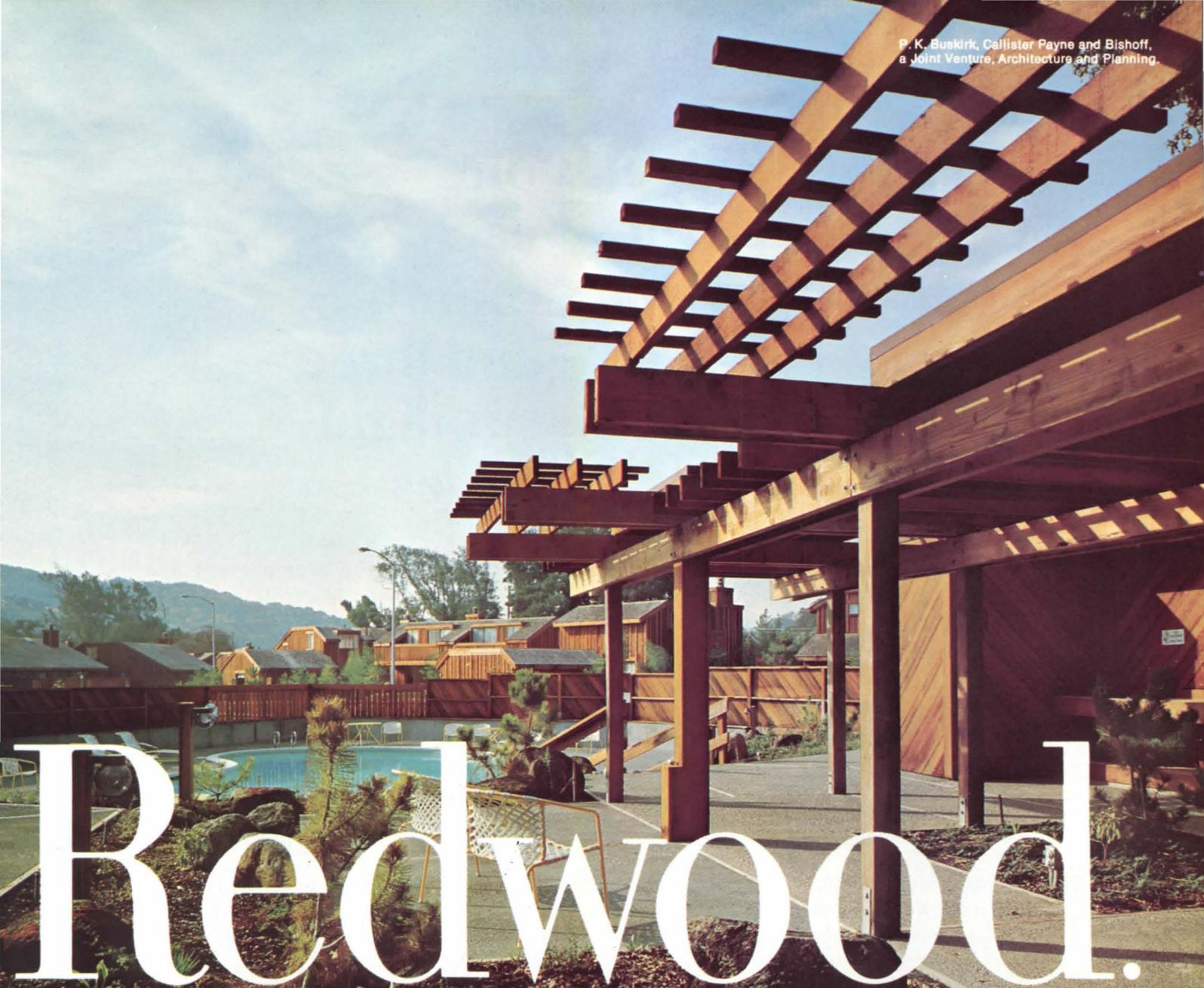
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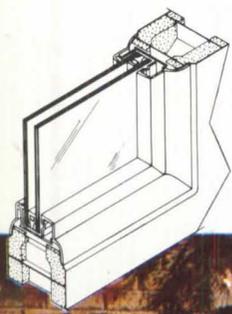
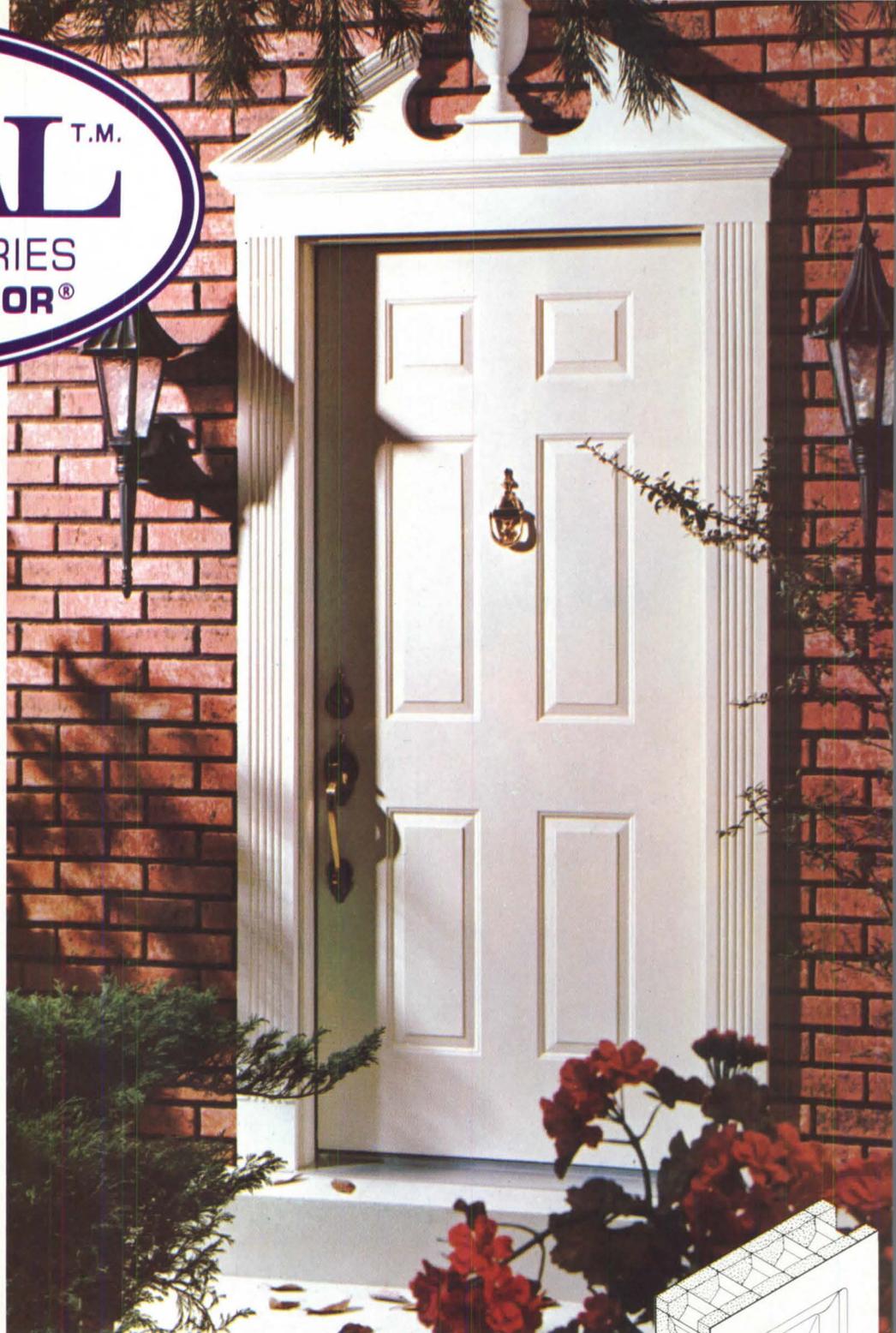
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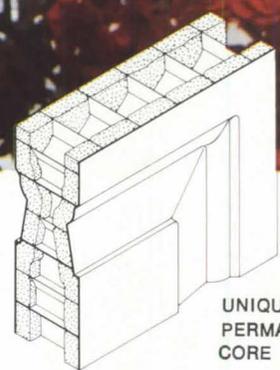




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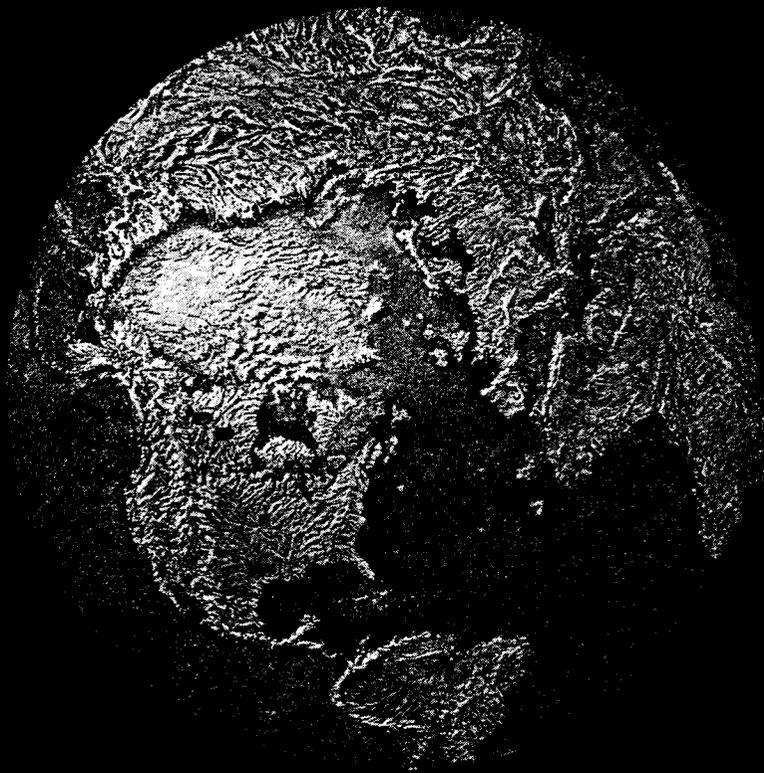
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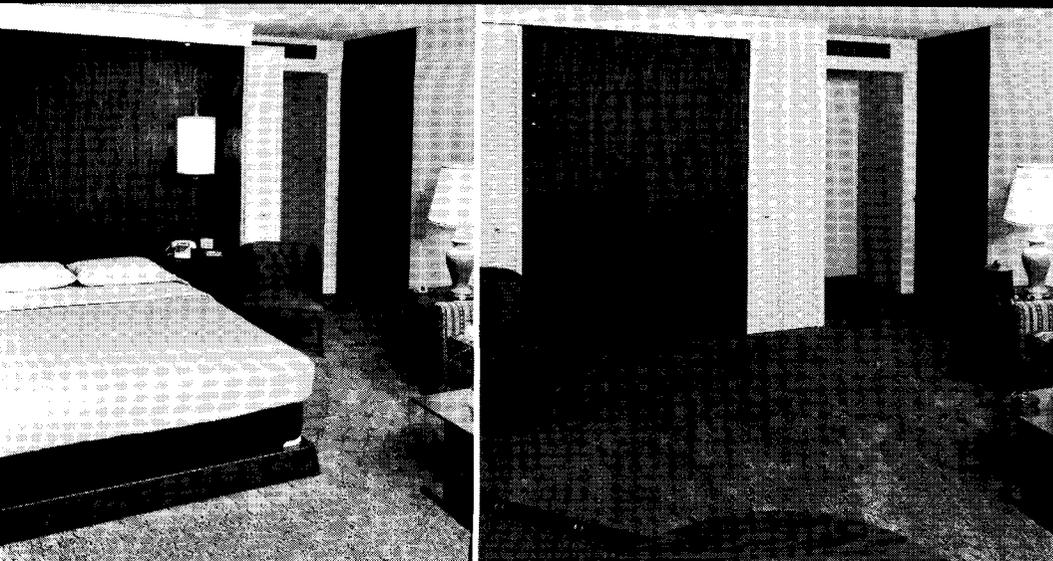


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there would be in the world**



**if all the beds  
got up in the morning  
like you do.**

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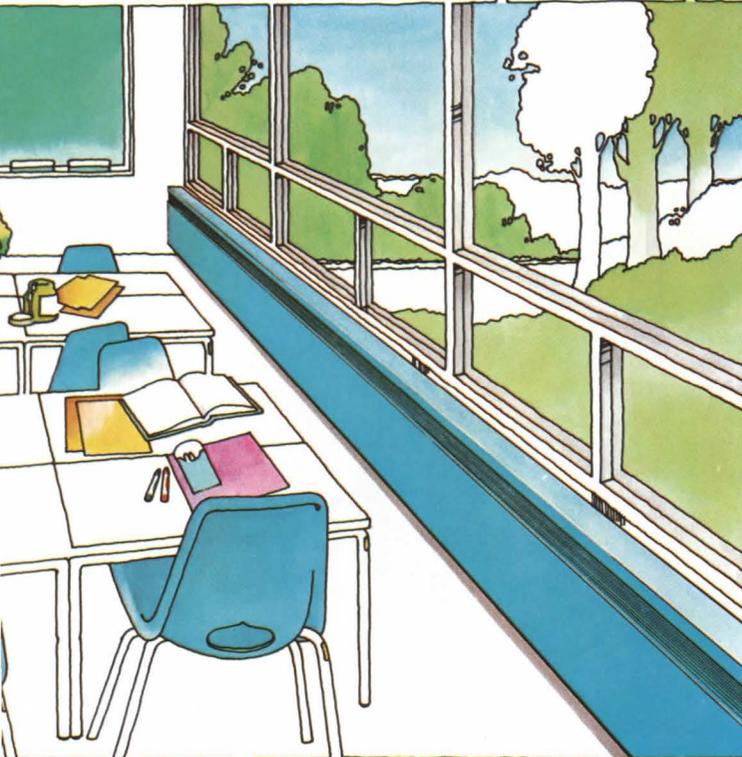
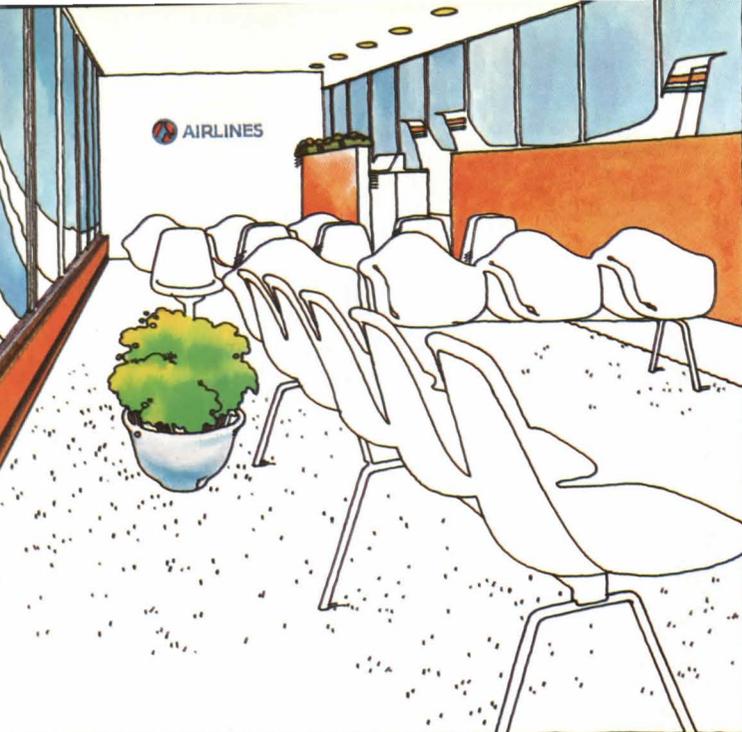
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## The custom sill convectors for your next job are ready

and waiting for you at Markel. Because for the first time, you can specify convectors that have the custom look, but are standard items.

It's called the Markel 4600 series. These artfully designed convectors let you choose a style and size without sacrificing the integrity of your design. At the same time, you're selecting highly efficient convectors that respect the integrity of your client's budget.

The 4600 system is a unique blend of form and function with no compromise to either. You can combine variable heat densities, inactive areas and controls in one monolithic enclosure. Inconspicuous seams permit infinite lengths. A wide selection of

configurations allows you to give each area the type and amount of heat required.

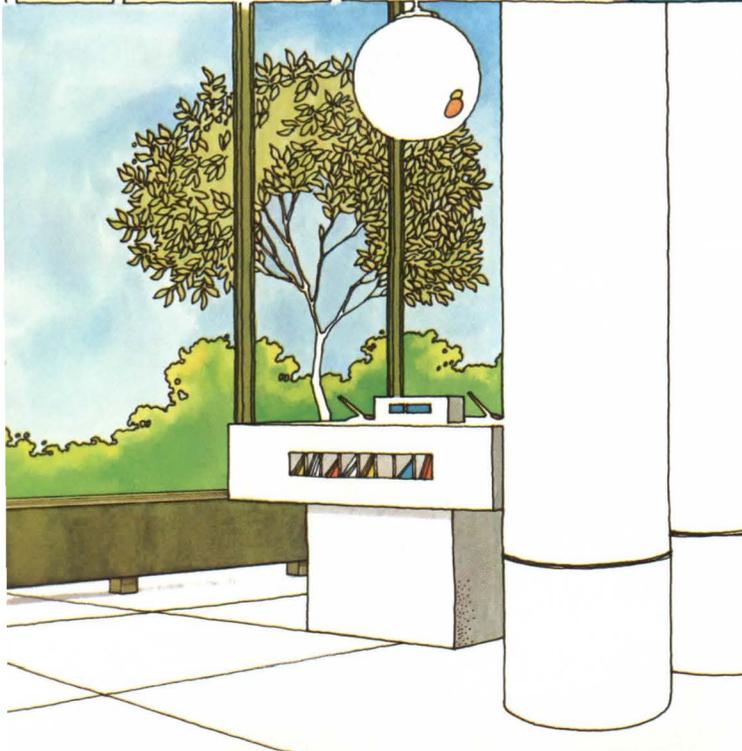
Vinyl coated, textured and stainless steel finishes available. Colors can be produced in exact matched shades.

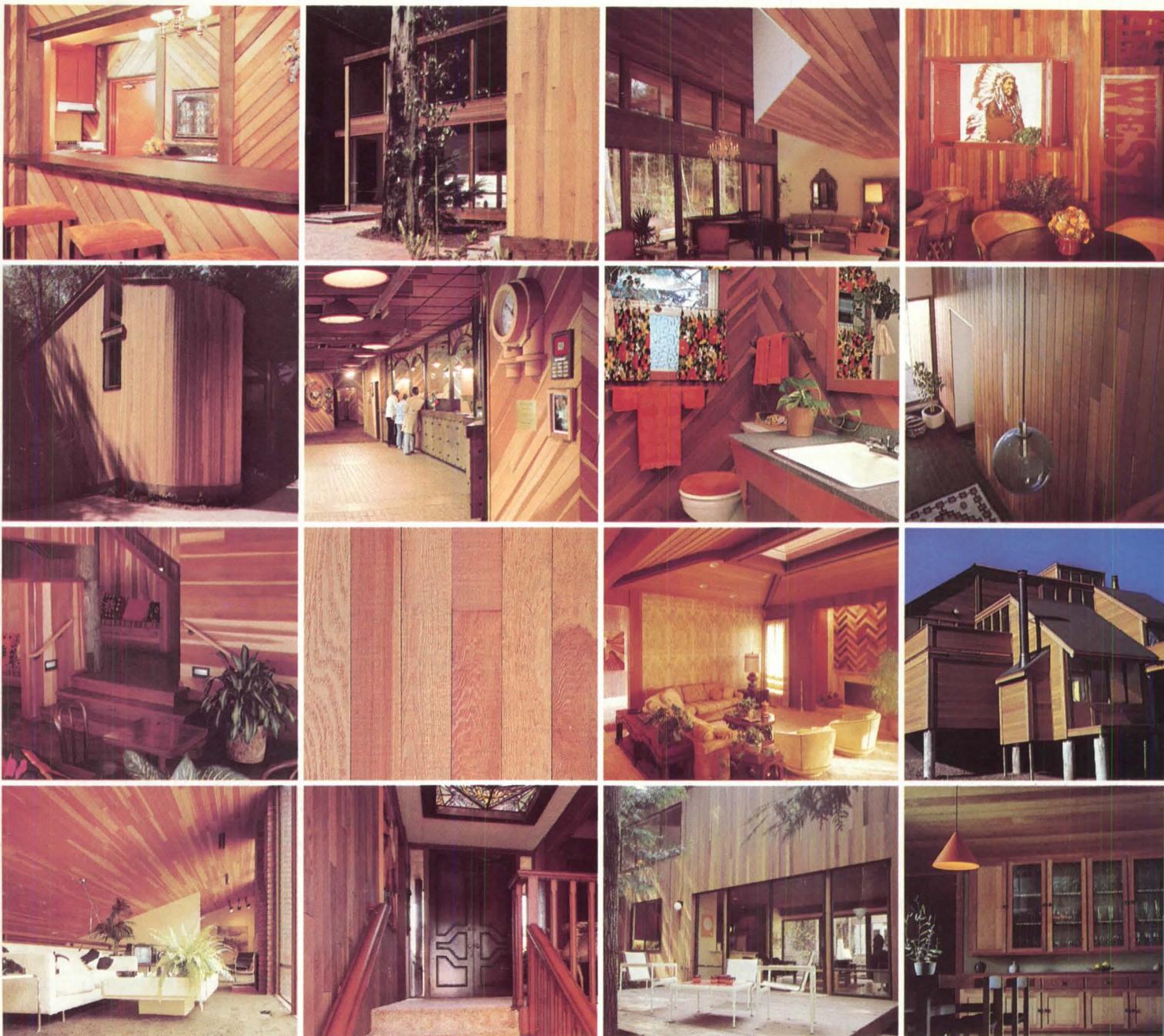
Markel 4600 sill convectors. They're aesthetically pleasing. Have uncanny low prices. Available when you need them. And are designed so everyone will think they were custom made.

**MARKEL**

The electric heating company  
 Markel Electric Products, Inc.  
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 Phone 716/875-7660, Telex 91-233

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## We'd like to make everything perfectly clears.

Some people just can't figure out why we're so enthusiastic about Simpson Redwood Clears. Let's face it, some people don't even know what they are.

We hope these pictures clear things up.

If they're anything, Simpson Redwood Clears are versatile. No other grade of redwood offers so many options: rough or smooth textured surfaces, a variety of patterns and a great selection of wide widths. The contrasting mix of heart and

sapwood gives every board its own unique character. Clears offer the builder and designer appearance options ranging from dramatic zebra stripes to subtle texturings.

And Clears still retain redwood's traditional advantages. In fact, Simpson Redwood Clears are the most economical way to purchase kiln-dried knot-free redwood. Anywhere. Specify Clears for exterior siding, interior paneling, fascia, trim, even decks and outdoor furniture.

Whatever your project, there's a place in it for Clears. For more information just write "Clears" on your business card and send it to Simpson Timber Company, 900 Fourth Avenue, Seattle, Washington 98164. We'll get back to you with some clear choices you can specify.

Redwood Clears  
**Simpson**

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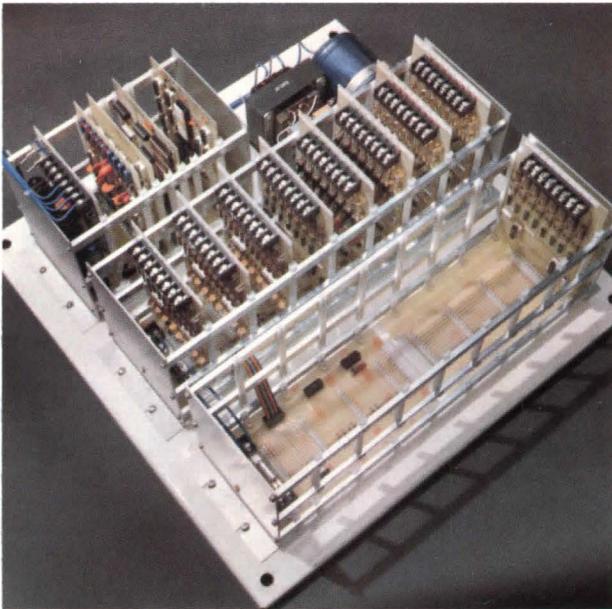
montgomery moves people

# montgomery miprom

MICROPROCESSOR ELEVATOR LOGIC CONTROL



This tiny programmable computer chip is the heart of Montgomery MIPROM



**M**ONTGOMERY MIPROM microprocessor elevator logic control provides greater reliability, economy and programmable capability than any of today's elevator systems.

This compact, solid-state electronic marvel—pioneered and developed by Montgomery—is available now through Montgomery's 170 offices in North America.

In operation, Montgomery's MIPROM correlates signals from the elevator and multiple programmable memories, then transmits logic instructions to the elevator.

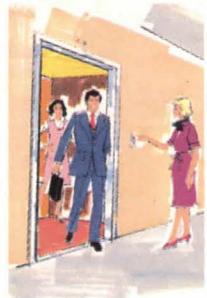
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**1. High Reliability.** Electronic solid-state components provide the highest possible reliability.

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**3. Preventive Maintenance.** Montgomery's diagnostic ServiceTerminal is used in preventive maintenance of this easy-to-service, modular-designed system.

**4. Economy.** Montgomery MIPROM costs less to install—and maintain—because of design, production standardization, miniaturization and reliability.



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