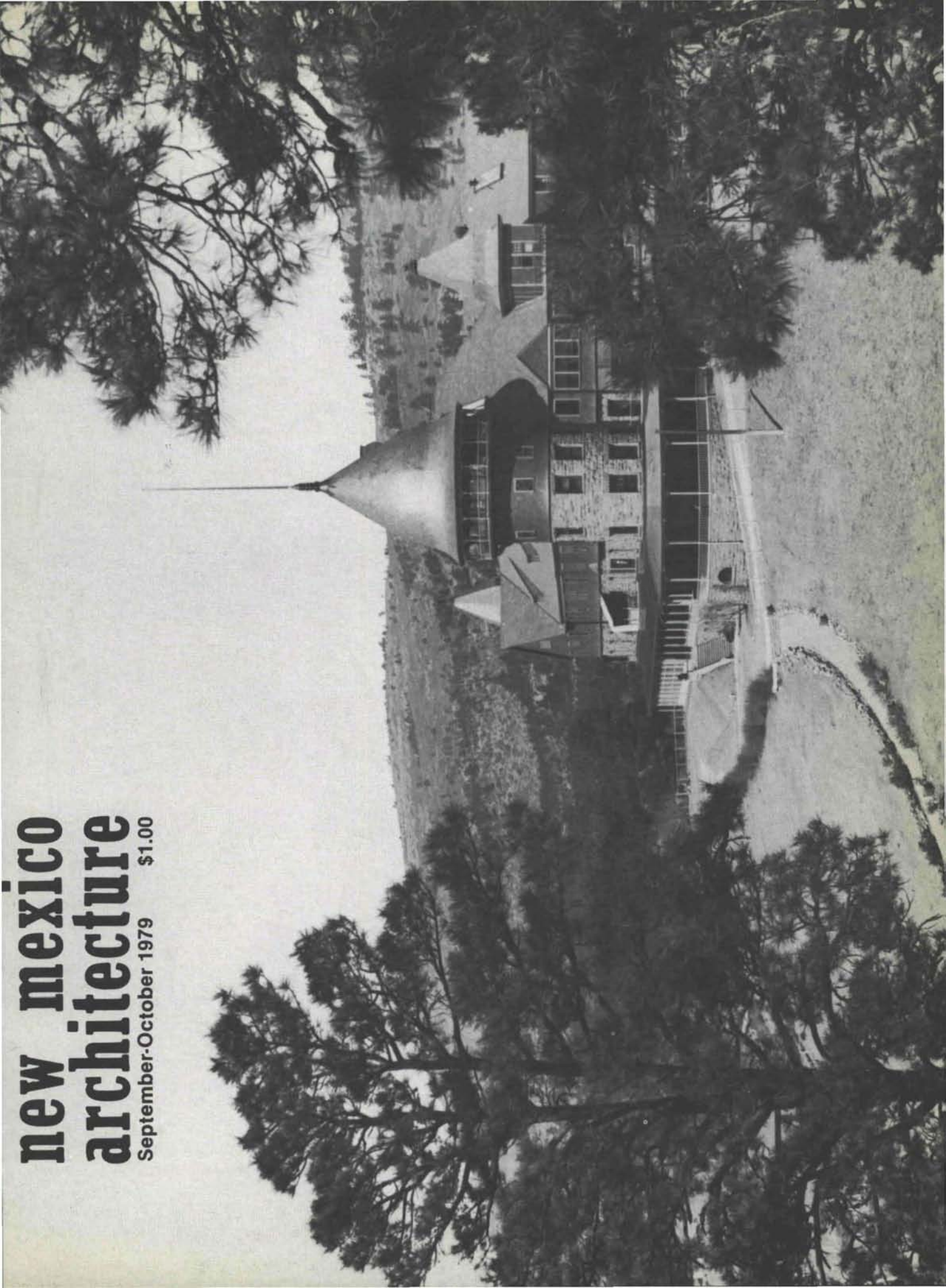


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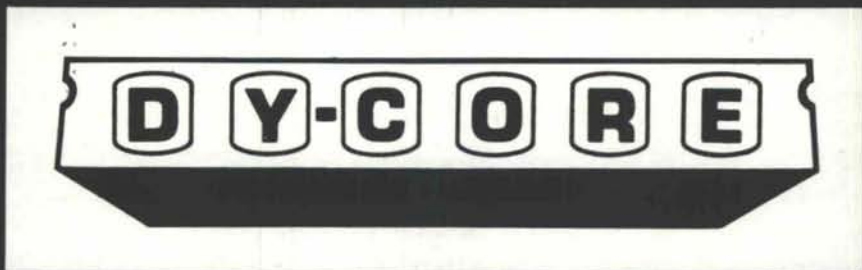
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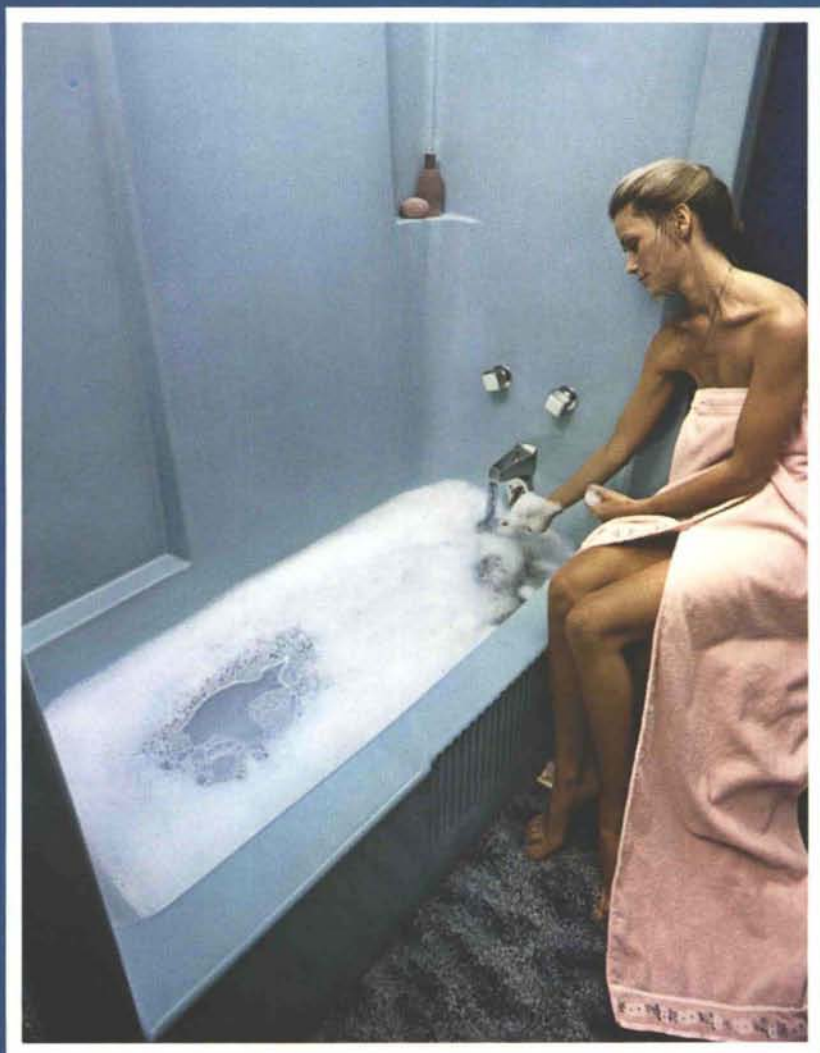
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FIBERGLASS BATHING MODULES



IN THE KOHLER TRADITION

BARBADOS

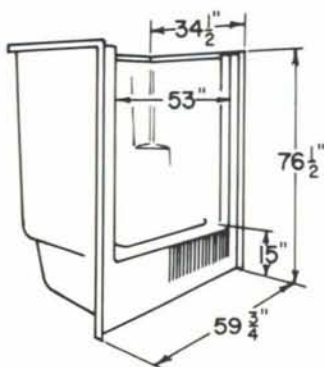
... for bathing and showering. And Barbados Whirlpool ... for relaxation and comfort.

Bathtub and walled alcove are one piece of smooth fiberglass. Kohler calls it "Walls 'n All" construction. No seams, no cracks, no crevices. Unit replaces approximately 50 square feet of plaster, tile or paneling otherwise needed to finish off walls above a conventional bathtub. Sculptured ledges at two heights provide storage for soaps and toiletries; 15" high fluted front panel offers added beauty. 5' long, 34½" wide and 76½" high including nailing flanges. Availa-

ble in eight colors and white.

Barbados Whirlpool also features four adjustable whirlpool jets, dual air controls and a choice of timers. Pictured below in Aspen Green. K-1409 with left drain outlet; K-1410 with right drain outlet. Faucets and Water-Guard showerhead from Kohler's Alterna series in polished 24-carat gold finish. Castle lavatory and Wellworth Water-Guard toilet also in Aspen Green.

Barbados without whirlpool: K-1405 with left drain outlet; K-1406 with right drain outlet.



TOBAGO

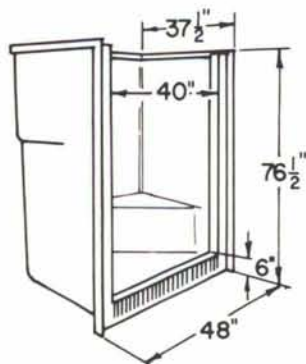
A bathing environment with a built-in seat for complete showering comfort.

Kohler's Tobago measures 48" by 37½", including 1½" nailing flanges. Walls are 75" high from floor — plus 1½" nailing flanges. Generous dimensions provide unequalled bath and shower freedom.

Other features: Integral floor. Sculptured corner ledges that provide convenient storage space for soaps and toilet-

ries. Six-inch high panel has fluted front for added beauty. Sidewall and pillar supports permit installation of shower door or curtain. Choice of eight colors and white.

K-1448 Tobago shown in Country Grey, Kohler's newest high-fashion color. Recommend installation with K-9132 drain with perforated strainer for 2" caulk connection. K-3385-EB Rochelle low-silhouette toilet in Country Grey.



TRINIDAD

A compact bathing module that combines shower cove convenience with one-piece "Walls 'n All" construction.

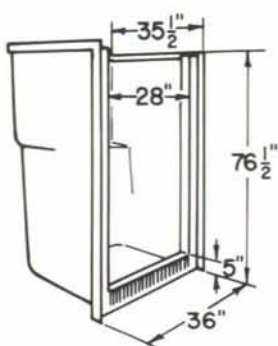
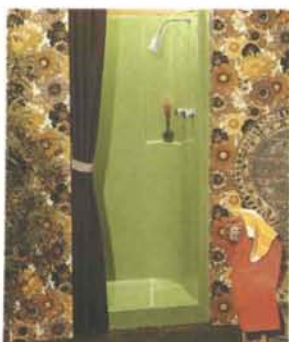
Trinidad measures 36" wide, 35½" front to back, including 1½" nailing flanges. Alcove walls are 76½" high from floor, including 1½" nailing flanges.

Additional features include integral floor, two spacious corner ledges for convenient storage of soaps and toiletries; 5" front panel with fluted design for added beauty. Built-in

support of pillars and sidewalls permits installation of shower door or curtain.

K-1436 Trinidad in Fresh Green with K-132 "Antique" Rite-Temp pressure balanced bath/shower control and City Club ball-joint showerhead. Compact Pompton toilet, K-3400-PB. Farmington lavatory, K-2905, with "Antique" faucet, K-108.

Trinidad is available in eight colors and white.



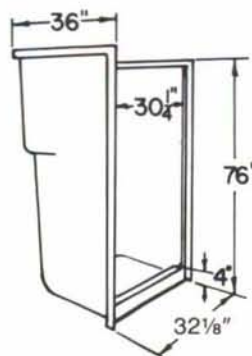
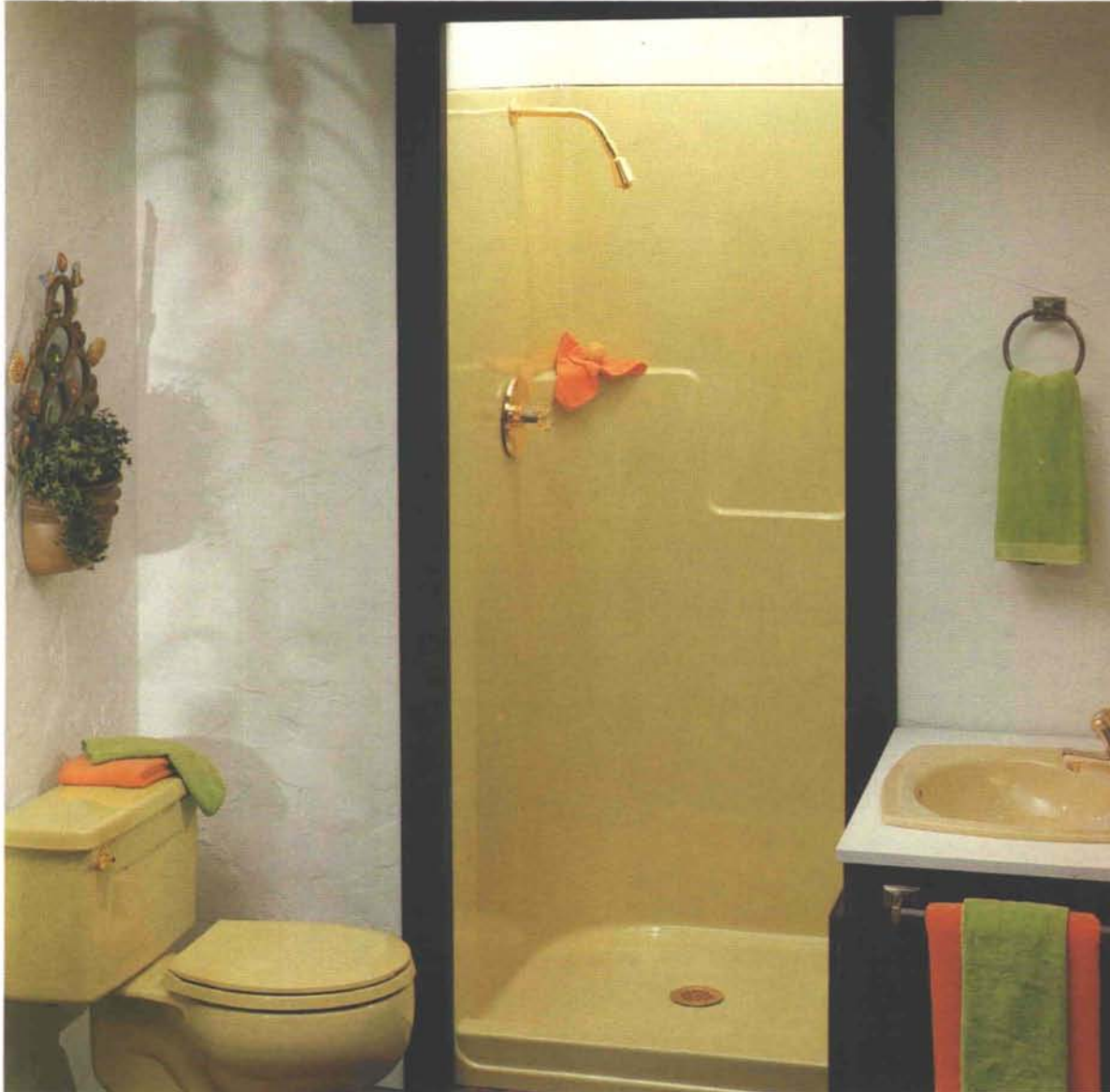
BIMINI

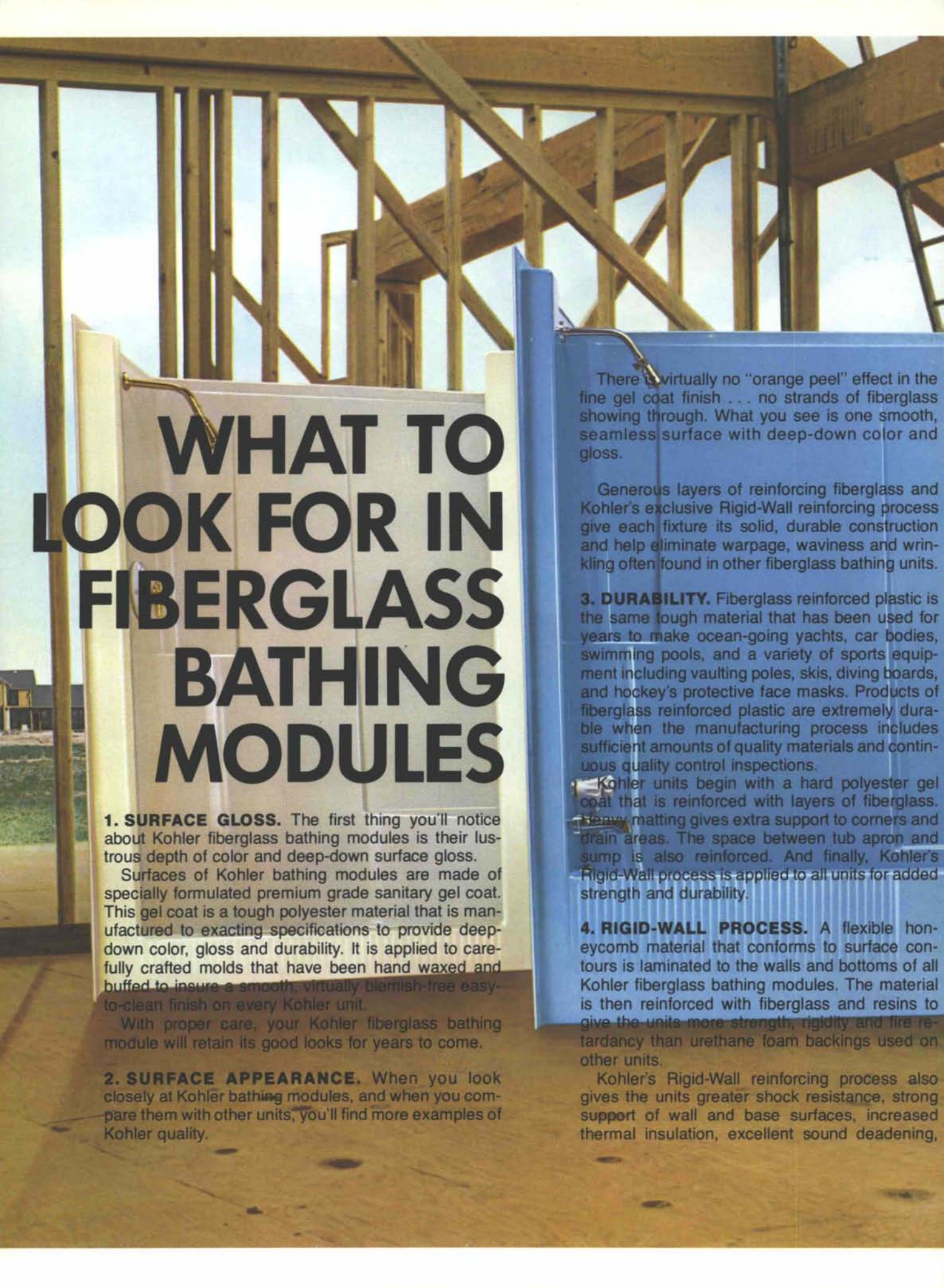
Ideal for remodeling . . . and for new construction.

Bimini measures just 32½" wide and 36" front to back, including 1½" nailing flanges. Compact dimensions mean that the unit will fit through most door openings, and can be installed almost anywhere — even in the dressing room next to the outdoor pool.

Bimini features integral floor, 4" high front panel, and 76" high alcove walls, including 1½" nailing flanges.

K-1462 Bimini in Harvest Gold with K-6874 Centura bath/shower control, Autel Water-Guard showerhead. Ron-delle lavatory, K-2185, with Centura push-pull faucet, K-6882. Wellworth Water-Guard toilet, K-3500-PB.





WHAT TO LOOK FOR IN FIBERGLASS BATHING MODULES

1. SURFACE GLOSS. The first thing you'll notice about Kohler fiberglass bathing modules is their lustrous depth of color and deep-down surface gloss.

Surfaces of Kohler bathing modules are made of specially formulated premium grade sanitary gel coat. This gel coat is a tough polyester material that is manufactured to exacting specifications to provide deep-down color, gloss and durability. It is applied to carefully crafted molds that have been hand waxed and buffed to insure a smooth, virtually blemish-free easy-to-clean finish on every Kohler unit.

With proper care, your Kohler fiberglass bathing module will retain its good looks for years to come.

2. SURFACE APPEARANCE. When you look closely at Kohler bathing modules, and when you compare them with other units, you'll find more examples of Kohler quality.

There is virtually no "orange peel" effect in the fine gel coat finish... no strands of fiberglass showing through. What you see is one smooth, seamless surface with deep-down color and gloss.

Generous layers of reinforcing fiberglass and Kohler's exclusive Rigid-Wall reinforcing process give each fixture its solid, durable construction and help eliminate warpage, waviness and wrinkling often found in other fiberglass bathing units.

3. DURABILITY. Fiberglass reinforced plastic is the same tough material that has been used for years to make ocean-going yachts, car bodies, swimming pools, and a variety of sports equipment including vaulting poles, skis, diving boards, and hockey's protective face masks. Products of fiberglass reinforced plastic are extremely durable when the manufacturing process includes sufficient amounts of quality materials and continuous quality control inspections.

Kohler units begin with a hard polyester gel coat that is reinforced with layers of fiberglass. Heavy matting gives extra support to corners and drain areas. The space between tub apron and sump is also reinforced. And finally, Kohler's Rigid-Wall process is applied to all units for added strength and durability.

4. RIGID-WALL PROCESS. A flexible honeycomb material that conforms to surface contours is laminated to the walls and bottoms of all Kohler fiberglass bathing modules. The material is then reinforced with fiberglass and resins to give the units more strength, rigidity and fire retardancy than urethane foam backings used on other units.

Kohler's Rigid-Wall reinforcing process also gives the units greater shock resistance, strong support of wall and base surfaces, increased thermal insulation, excellent sound deadening,

TO ENHANCE YOUR FIBERGLASS BATHING MODULES . . .

Kohler Bath/Shower Controls and Water-Guard Showerheads



K-6904



K-6872

CENTURA

Centura bath/shower ensemble, above, offers smart styling for the bath. Push-pull mixing valve, diverter tub spout and Autel Water-Guard showerhead are available in polished chrome or 24 carat gold finishes.



K-6900 with K-9629 Onyx



K-6913

RITE-TEMP

Kohler's Rite-Temp is a pressure balanced mixing valve that combines safety and comfort in the shower. You adjust a single control to mix hot and cold water to desired temperature, and Rite-Temp maintains that temperature regardless of pressure changes in the water supply.

Available in five styles — Alterna (upper left), Alterna Onyx (upper right), Triton II, above, Alterna Wood, and "Antique."



K-6844



WATER-GUARD SHOWERS

Kohler Water-Guard showerheads provide drenching showers with a maximum flow of 3 gallons per minute . . . 50% less than most conventional showerheads. This water-saving, energy-saving feature is available at NO ADDITIONAL COST.

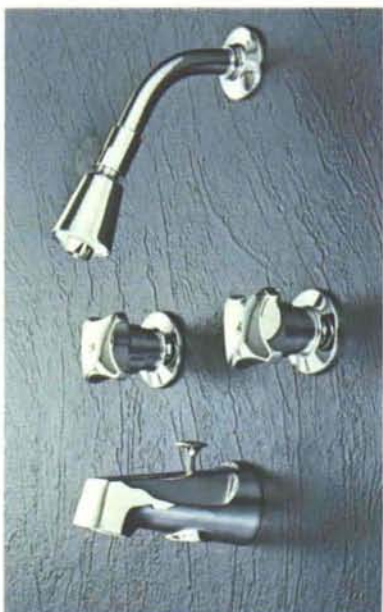
Kohler bath/shower controls and Water-Guard showerheads are available in an unmatched selection of styles and finishes to complement every installation.

But there's more to Kohler than beauty, variety and practicality. We call it craftsmanship . . . quality and dependability built into Kohler controls to give them long life, extended service and water-saving practicality.

Look to the Kohler Faucet Collection for all your bathroom, powder room and kitchen faucets and bath accessories.



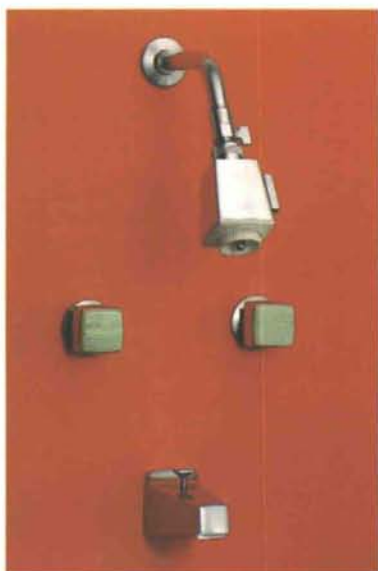
K-7004-FL Clear



K-7004-T

BATH/SHOWER ENSEMBLES

Styles to match every installation need. Choose from Flair, with handles in clear, white, charcoal or amber acrylic; Alterna Onyx, with natural onyx handle inserts in seven colors; Triton II, for chromium beauty plus economy; Alterna Wood, with natural wood handles; Alterna, with interchangeable handle inserts in four colors.



K-6931 with K-9627 Onyx




K-6931 with K-9642 Zebrawood



K-134

"ANTIQUE" RITE-TEMP

The look of yesterday with safety features for today. Vitreous china dial plate in choice of four colors with script lettering. Handle and plate in 24 carat gold electroplate or chrome finishes.



and less wall and floor deflection. This means that the units will resist chipping and other damage during shipping and installation, and will serve you better, longer, at home . . . and in hotels, motels, school dormitories, hospitals, rental properties and similar installations.

5. DESIGN. Contemporary designs and fashionable styling make Kohler bathing modules attractive as well as practical. Noteworthy design features include gently rounded corners for easier cleaning; spacious corner ledges for soaps and toiletries; integral column supports for installation of shower door or curtain; fluted front panels for added beauty.

Kohler offers fiberglass bathing modules in styles and sizes to meet every building plan, including a 5' bath/shower unit with integral walls and a flat rim; a 4' shower cove with integral seat; a 3' shower cove, and a 32" shower cove designed to fit through most doorways during remodeling projects. One-piece Walls 'n All construction replaces tile, paneling and other wall coverings above the bathtub or around the shower. It eliminates leaks that are difficult to repair, and the tedious cleaning and replacing of tile and grout.

6. COLOR. Kohler Co. is the acknowledged color leader in the plumbing industry. And Kohler fiberglass means color . . . deep, vivid colors that please the eye and meet decorating demands . . . colors that are fade-resistant and stain-resistant . . . colors that match other Kohler fixtures in the bathroom.

Fiberglass bathing modules are available in eight Kohler colors — Aspen Green, Country Grey, Cerulean Blue, Harvest Gold, Mexican Sand, New Orleans Blue, Parchment, Fresh Green — and White.

7. EASY INSTALLATION. Fiberglass bathing modules are easier to handle, easier to install than conventional bathtubs. Installation takes less time because the units are all one piece . . . Walls 'n All. There's no need for walls of another material . . . no need for several contractors to finish one installation. And in case of accidental damage during installation or anytime, most fiberglass units can be repaired on the site, without removing the fixture.

8. LASTING VALUE. With proper care, you can expect a Kohler fiberglass module to provide years of service. One-piece construction eliminates unsightly seams, cracks and crevices. Gone forever are loose tiles, dirty grouting, and leaks between bathtub and walls. And fiberglass can't rust.

Fiberglass bathing modules are warm to the touch, and help keep water warm longer for more enjoyable bathing. Clean-up is easy; fiberglass surfaces clean best with liquid cleaners like Lysol Basin, Tub and Tile Cleaner.

Kohler fiberglass bathing modules regularly undergo demanding tests by independent laboratories. They meet or exceed rigid criteria set by the American National Standards Institute (ANSI). And each unit carries the Kohler trademark . . . your mark of lasting value.

Contact your local Kohler representative for more information today...

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KOHLER FIBERGLASS COLORS

Kohler offers a wide range of decorator colors for fiberglass bathing modules. Colors that match other Kohler fixture colors in the bathroom. Colors that mix with and complement other Kohler colors for a completely coordinated decorating scheme.

Choose from high-fashion Country Grey, bold New Orleans Blue, or pleasing natural colors like Parchment, Harvest Gold, Aspen Green, or Mexican Sand. Fresh Green brings springtime freshness into the bath. Cerulean Blue is a gentle, refreshing color. And of course, there's White.

Because the colors above are shown in ink, there may be a variation in color fidelity between these samples and the actual bathing modules.

KOHLER

**BEFORE
YOU BUY A
FIBERGLASS
BATHING
MODULE . . .**

**COMPARE
IT WITH
KOHLER**

**YOU CAN'T
PUT A
PRICE TAG ON
EXCELLENCE**

- Compare Kohler's deep-down surface gloss with other fiberglass units
- Compare Kohler's lustrous depth of color and fine gel-coat finish
- Compare Kohler's strength, durability and solid weight
- Look for generous layers of fiberglass reinforcing . . . extra support in the corners . . . reinforcing between apron and sump
- Ask about Kohler's exclusive Rigid-Wall reinforcing process and what it means in terms of durability, strength, rigidity, fire retardancy, less wall and floor deflection
- Compare designs, styles and pleasing decorator colors

It's true. Kohler Fiberglass bathing modules cost more than other units. But for the extra money, we feel you get extra quality. Extra quality and craftsmanship that, in our opinion, lower-priced units simply cannot match. Plus the Kohler name . . . your assurance of enduring beauty and long-lasting value.



• vol. 21 no. 5 •

I RECENTLY READ a brief news report which illustrates the mental idiopathy* suffered by the Washington, D.C. bureaucratic community. OSHA, the federal agency established by the occasional, but well meaning, insanity of Congress to protect the American worker from the perils of job related accidents, has issued a new protective regulation. To safeguard workers from being crushed by the unexpected and/or sudden backing-up of forklift vehicles and backhoes OSHA has required such vehicles to be equipped with automatic buzzers which squawk loudly as the vehicles are shifted into reverse.

Apparently, the devices work too well. The required level of sound emanating from them has caused severe ear damage to the workers in warehouses. OSHA officials have sought to protect these workers from this new health hazard. They have issued regulations requiring such workers to wear ear plugs, the safety buzzers remain, however. While the ear plugs save the eardrums from damage, the worker is, of course, crushed by the squawking forklifts backing over their ear plugged bodies!!

Insanity rules and builds upon insanity. Regulation piles upon regulation. Oh why, oh why do we "sap" citizens continue to put up with such Orwellian Big Brotherism? —JPC

*Idiopathy—"A desire of unknown or obscure cause; a primary or spontaneous disease."



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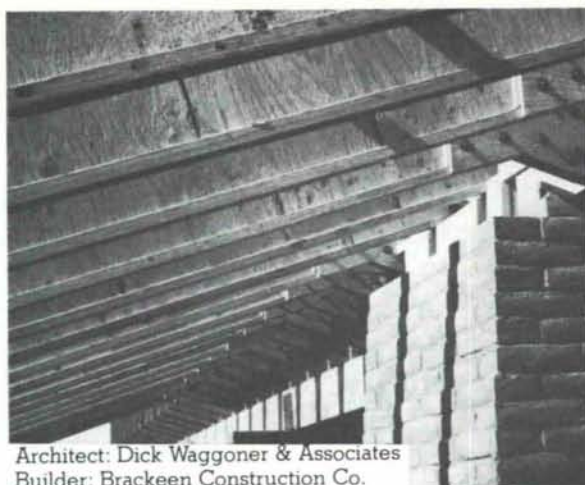
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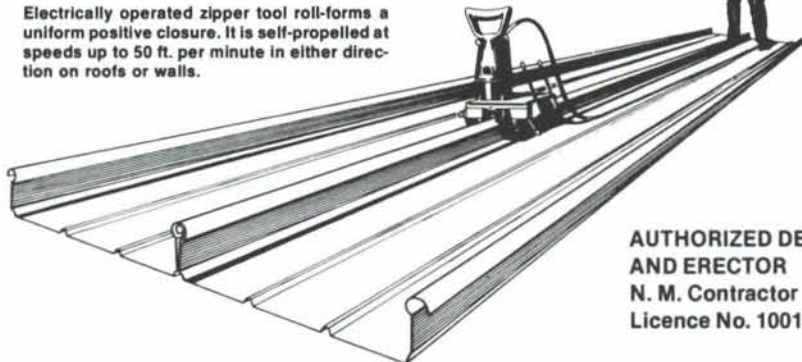


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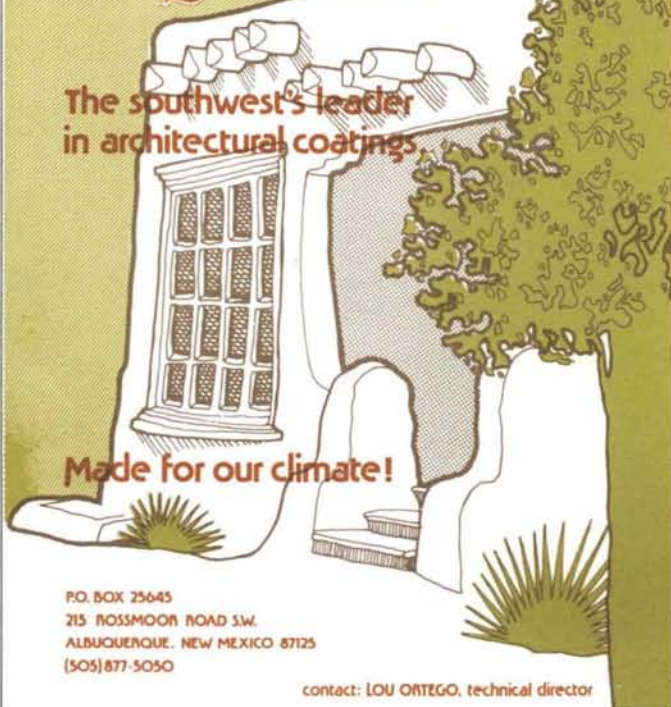
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The Heltons of Terre Haute, Indiana. Three generations of craftsmen, and proud of it.

Elza Helton is on the left. He's been laying brick since 1919. Jim, on the right, has been a mason since the late 1940s. Rick is a relative newcomer with five years of journeyman experience on top of his three-year apprenticeship. Every time he lays a brick, Rick brings to the task the accumulated skills, experience and pride of three generations; and every wall he builds reflects those attributes.

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Their craftsmanship is what gives a masonry wall its beauty, permanence, and durability. Their skill is what makes a masonry wall air-tight, water-tight, sound-resistant and fire-safe. Masonry craftsmen build walls that save money, cut heating and cooling bills, and need virtually no maintenance.

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CHARLES E. NOLAN, JR. APPOINTED

Charles E. Nolan, Jr., AIA, from Alamogordo, New Mexico has been appointed a delegate to the White House Conference on Small Business by New Mexico Congressman Harold Runnels. The Conference will be in January, 1980.

Of the nine million new jobs created between 1969 and 1976, three million were with state and local governments and six million were with small businesses. The nation's unemployment rate has dropped from 8.1% in late 1976 to 5.8% in November 1978, and most of the decrease was due to small business employment. Small business accounts for 48% of the non-farm GNP and 55% of private employment. In short, small business plays a big role in world economics.

The White House Conference on Small Business has taken the position that this role should be expanded to increase competition, improve productivity, enhance export capabilities, increase employment opportunities, and stimulate community development.

The Conference will formulate policy recommendations to be presented to the President in the spring of 1980. These recommendations will focus on issues and opportunities facing small business during the next 25 years and will attempt to utilize existing federal resources more effectively for small business. The Conference hopes to develop a comprehensive strategic plan to encourage the establishment and growth of America's small business.

WOLF PREISER A KEY SPEAKER AT MEETING IN AUSTRALIA

Dr. Wolfgang F. E. Preiser, University of New Mexico Associate Professor of Architecture and Planning, was a keynote speaker at the Biennial AustralAsian Architectural Education Conference held

WHO IS DOING WHAT IN HISTORIC PRESERVATION

The Association For Preservation Technology (APT) has issued a directory entitled "Who Is Doing What In Historic Preservation." The directory contains an extensive listing of over 1700 individuals and firms in the United States, Canada and other countries participating in the historic preservation of buildings, structures, landscapes, industrial sites and the decorative arts.

The directory is cross-referenced

by "fields of interest" and "geographic location" of the members of APT. The 105 page, paper-back book may be obtained from the Association offices for \$10.00 - Non-members, or \$5.00 - members of APT. Please include .75 for mailing.

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NATIONAL REGISTER OF HISTORIC PLACES VOLUME II, PUBLISHED

The second volume of the *National Register of Historic Places*, describing nearly 5,000 properties added to the National Register during 1975 and 1976, has been published by the Heritage Conservation and Recreation Service (HCERS), Interior Secretary Cecil D. Andrus announced today.

The *National Register of Historic Places* is the Nation's official list of properties of historic and cultural value worthy of preservation. It describes publicly and privately owned districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, and culture.

Volume II of the *National Register* completes the bicentennial edition designed as a guide to historic preservation. Volume I, published in 1978, describes about 9,500 properties placed on the National Register from its creation in 1966 through 1974.

Single copies of either volume may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

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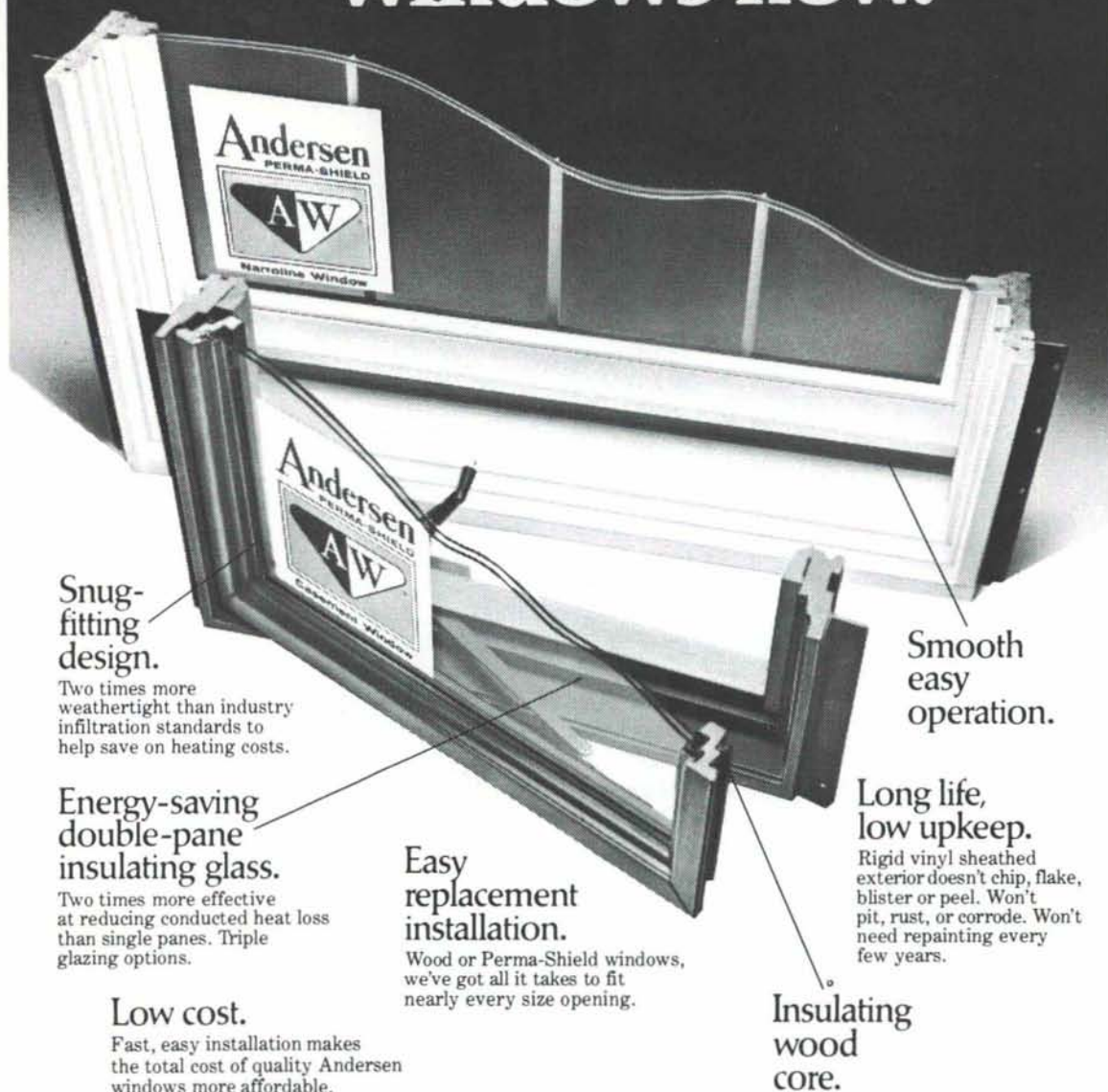
AN ARTICLE ON JOHN GAW MEEM

The July, 1979 issue of the *New Mexico Historical Review* contains an article by Arthur L. DeVolder honoring John Gaw Meem, FAIA. The article outlines the life and architecture of the famous Santa Fe architect. Mr. DeVolder discusses the influences which shaped the man and his architecture, and the influences which John Gaw Meem has imprinted upon the architectural scene of New Mexico.

The *Review* is published by the History Department of the University of New Mexico. Copies of the July issue can be obtained from the History Department. Subscriptions are \$8.00 per year; address the Subscription Manager, *New Mexico Historical Review*, Mesa Vista 1013, UNM, Albuquerque, N. M. 87131.

August 27-31 in Brisbane, Australia. Preiser, who is also co-director of UNM's Institute for Environmental Education, received a travel grant from the National Science Foundation to attend the conference. Dr. Preiser's topic was "Application of the Social Sciences in Architecture and Architectural Education."

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The Otto house (1904) in Clayton, New Mexico. Candle-snuffer roofed tower and Chippendale balustrade decorate the facade.

The Old Otto House: Clayton

by Agnesa Lufkin

A fifteen-year-old boy, sitting at a cobbler's bench and dreaming of wealth in far-off America - it's not hard to imagine that scene in late nineteenth century Germany, at the beginning of the Great Immigration. Millions came, from all parts of Europe, and some did realize their dreams - land, money and mansions. The mansions adorn cities in every part of the United States, including the West, and one of them adds distinction to the architectural makeup of Clayton, New Mexico.

Fifty miles from the Texas panhandle town of Dalhart, and a hundred miles from Raton on the Colorado border, Clayton, population 3,000, is in the middle of ranch country, and ranch money paid for its most notable residence, the "old Otto house." Built in 1904 by sheepman Christian Otto, the house is a monument to that definitive American success story, the immigrant boy who made good.

Christian Otto, born in Germany in 1853, arrived in New York in 1868, thereby escaping the compulsory two years service in the German military which would have faced him at sixteen. From New York he went to the German community in St. Louis and then to Waterloo, Iowa, but his difficulty with the language

and general homesickness made him restless. It wasn't long before he boarded a westbound train and, sustained by a boiled buffalo tongue he bought for sixty-five cents at the Cheyenne train station, traveled hopefully to California.

In Red Bluff, California, Otto first worked as a shoemaker, the trade he had learned in Germany, and then was able, after several years, to save enough to buy the boot shop. He was in business for himself. By the early 1880's he had switched his investment to the sheep business, and joined forces with another German immigrant, Charles Schleter. Otto would buy a flock in California and drive them to Wyoming in the spring. However, the Wyoming climate was severe and the sheepmen began to head farther south to Colorado, in Denver holding the herd on the land which would later be the site of the Brown Palace Hotel.

Weather and misfortune would push them farther and farther south. In 1884 they wintered at Fine Ernest's ranch in Byers, Colorado, and the next spring camped at the foot of Greenhorn Mountain, where 600 head died from eating wild larkspur. In the winter of 1885 half the herd died because of hard conditions - grass on the mesa and water at the bottom of a steep

canyon. That summer they went down to Los Cedros Ranch, in what is now Union County, New Mexico, and this was the country where they prospered. By 1890 Otto was able to buy 3,900 acres of land near Clayton; Otto and Schleter were both wealthy men.

In 1893 Christian Otto demonstrated his wealth by building his first mansion on the five-acre site at the northwest edge of the town of Clayton. When the house burned in 1904, he rebuilt immediately.

The present house was built in 1904 on the foundations of the older structure, except for the tower at the northeast corner. This tower was a fashionable (in 1904) addition requested by Mrs. Otto. According to John Otto, the Christian Otto's son, the builder was A. M. Blake of Trinidad, and the 3500 square foot house cost \$10,000. When the present owners were working on the walls they found under the exterior wood siding, first 7/8 inch sheeting, then 4" adobe, 4" dead air space and finally 3/8" lath and plaster on the interior. This seems to have been what is called in the area "adobe filled" - that is, the wall is framed with 2 by 4 or 2 by 6 studs and the spaces between the studs filled with adobe bricks placed on edge.

The two-story frame displays a restrained Queen Anne style, the corner tower its most fanciful expression. Painted a soft gray-green with darker green trim, it blends into a sympathetic setting of surrounding trees and generous lawn. The ornamental details include a gable bargeboard with sunburst and circle-pierced edging, a bold cornice supported by carved brackets, and a porch distinguished by fat wooden columns below and a Chippendale-style balustrade above.

The addition of windows has converted the porch into a garden room, in part replacing a conservatory which formerly opened off the living room. Many porches in Clayton are glassed in, a practical approach to the exigencies of the weather on the eastern New Mexico plains.

If it were not for the homey air of the porch, the entrance to the fourteen room mansion would be quite formal, opening into the 16 by 22 foot entrance hall with its staircase rising on the right. The stair is handsome if not elaborate. It has stock turned balusters and handrail ending in a square newel with applied molding and a footed ball finial.

Double doors which slide into wall pockets separate the hall from the living room at left. This large, high-ceilinged room now has a fireplace opposite the hall doors, but it is a recent addition. Clayton is situated in grasslands, not timber, and when the house was built firewood was too difficult to get. Another pair of sliding doors opens from the living room to a dining room of equal size; large multi-paned windows make this a very attractive room. According to Clara Toombs Harvey, a Clayton resident since 1895 and author of a history of Union County, the dining room table could seat forty guests and the Ottos set it elaborately with damask and silver. As a child, Mrs. Harvey was impressed with the servant's bell placed under the table near Mrs. Otto's foot.



Typical Queen Anne sunburst and decorative bargeboard, and bold, bracketed cornice.

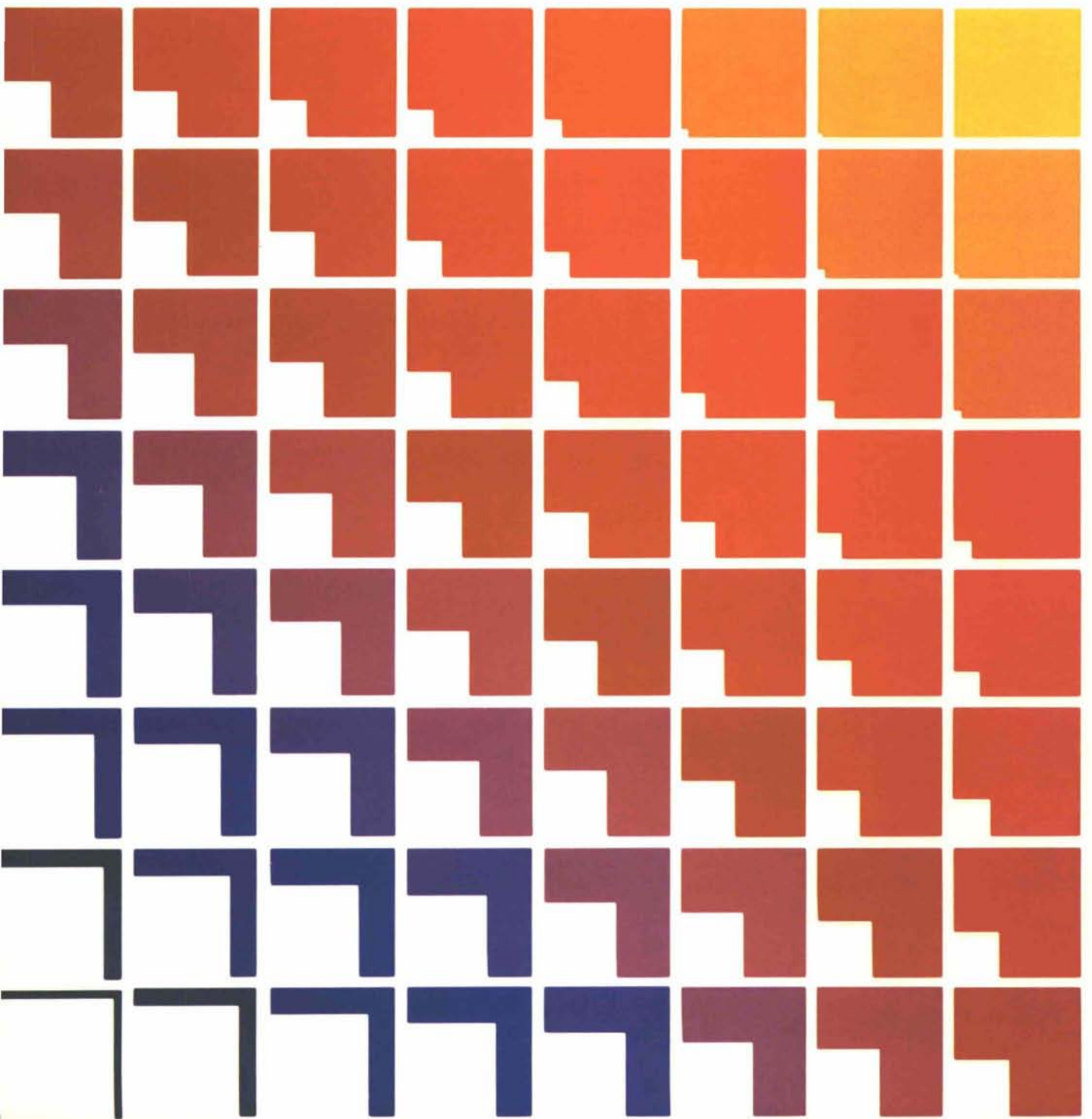


Spacious entrance hall now opens into remodeled kitchen. Molding on new French doors was saved from walls removed elsewhere.

Dining room once held oak table which seated forty.



Economy



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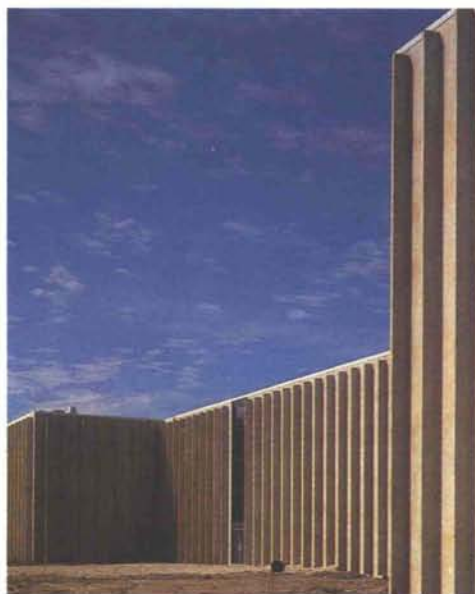
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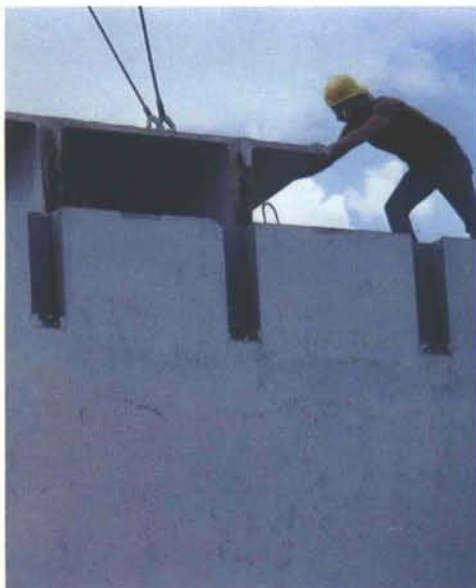
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Two large stair halls give the Otto house an open feeling, add drama to each floor.

Second floor bedroom is spiced with wooden tracery at alcove.



The house was well designed for entertaining. Mrs. Harvey says the hall, "formal parlor" and dining room were thrown together for dancing and other large affairs, and refers to the Ottos' daughter Myldreth remembering "the carpets being covered with wagon sheets upon which wax candles were shaved to make the floor suitable for dancing...the canvas sheets were drawn tight and fastened to the baseboards, then the wax applied."

To the right of the entrance hall were two rooms, the music room in front with a round alcove in its corner tower, and back of it the library. These rooms have now been combined to create a master bedroom. Across the opening to the alcove a band of flat wood tracery suggests an arch, one of the interior details which shows the most Queen Anne exuberance. Moldings used throughout the house are typical of the era, and of other residences in Clayton. They are six-inch-wide facings, flat except for grooves on either side of a center half-round, the corners filled by six-inch squares with a circle motif at the center.

The kitchen is at center back. Originally it was designed to be used by servants, of course, and offered no more or less than any similar kitchen of its time. The present owners have greatly enlarged the area, incorporating two porches, as well as opening the entirety to the front hall through double French doors. Back of the library is a bathroom - original with the house - and a back stairway. Both the second stair and the bath's six-foot walnut-rimmed enameled tub were noteworthy in the Clayton of 1904.

Upstairs, the Otto house is much more spacious than many of its time, owing largely to the upper hall which repeats the generous dimensions of the lower. This hall is lighted by French doors onto a deck above the front porch, and from it open six bedrooms and one bath. The front bedroom over the former music room also retains the lacy woodwork at its tower alcove.

Outbuildings on the property include a carriage house - local legend has it that the two Otto children were transported to and from school in the carriage - and a commissary. The latter was the distribution point for supplies destined first for the various houses on the ranch, and then to the sheepherders who would load their packs on burros before heading out to the range.

Mrs. Otto enjoyed her grand new home less than a year. She died in 1905, leaving two young children. A housekeeper was brought to Clayton to look after them and subsequently married her employer. The second Mrs. Otto, according to some of the family's old acquaintances, was not inclined to be sociable with the townspeople and disassociated the children also, sending them back East to school. Christian Otto himself continued to be prosperous and influential until his death in 1932; among other things he was the part owner of the largest hardware and general store in the area, the Otto-Johnson Mercantile Company.

After Otto's death, the house slipped into a decline. For years it was lived in only by a female relative, and then locked up, still furnished but uninhabited. Trees

and shrubs grew until the house was hidden in its own grove; children whispered that it was haunted and hurried past. Then in 1969 Mr. and Mrs. J. B. Kimble, Jr. moved to Clayton from their ranch, bought the "old Otto house" and started the enormous job of restoring and preserving it. Now, after nine years, the house shows it is well cared for again, resplendent with refinished woodwork and new flowered carpets.

More than a hundred years after Christian Otto landed in New York, his house stands solid and impressive with a touch of the fanciful in its tower and trim. It might be making a strong, if silent, statement about imagination and hard work and what a shoemaker's apprentice in the old country could become in Clayton, New Mexico.



SOURCES

The facts of Christian Otto's life were taken primarily from Clara Toombs Harvey's *Not So Wild, the Old West* (Denver: Golden Bell), 1961.

Other sources:

Kimble, Mrs. J. B., Jr. Interview 2 October, 1978. Clayton, NM
Otto, John. Letter to Mrs. Kimble, in her possession.

Thompson, Goldianne. *Clayton, the Friendly Town in Union County, New Mexico* (by Mrs. Harry Thompson (and) Wm. H. Halley. Collaborator, Simon Herzstein. (Denver: Monitor), 1962.

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Union County Leader, 23 April 1969, p. B3.

Carriage house - the end with the high roof accommodated the carriage - behind the Otto house, and the plains just beyond.

NMA POETRY CORNER

On the subject of Post Modernism we offer the following song to lift your fall and winter spirits which proves that our architectural students are keeping up the creative traditions. These new words to "The Street Where You Live" are by Mark Denton and Scott Finn, both class of 1980, School of Architecture, Yale University.

I have often walked down these halls before.
But I've never had to choose a style to use before.
Turning back a page, for it's all the rage
I'll design in the Post-Modern Style.

I will cast out Mies; call the Bauhaus bad;
Say the International Style was just a silly fad.
Free now under Moore, less is just a bore.
I'll design in the Post Modern Style.

From Venturi's books, there is much to learn.
I'd love to do a luscious house like Robert Stern;
And for ornament, a broken pediment.
I'll design in the Post Modern Style.

And OH, the wonderful feeling
Just to know that anything goes
But from the confusion I'm reeling
Can a metaphor shed rain when painted rose?

There's so much to learn
I've so much to know
Bottecelli, Borromini, Michelangelo;
All this history, it should set me free
To design in the Post Modern Style.

And then look at Phil, who has done it all:
Cromium steel and tinted glass make up a curtail wall.
But that Chippendale, it's so out of scale!!
Can I design in the Post Modern Style?

So I've thought it through, and I have to say:
That Post-Modernism isn't really here to stay.
Looks like Corb was right - I'll go back to WHITE!
And to hell with the Post Modern Style!!

We are indebted to Mr. Denton, Mr. Finn and to the *Alumni Newsletter*, School of Architecture, Yale University.

So You're Going to Build a New.....!

By Laban W. Wingert, AIA, Architect

Regardless of whether it is a new office building, school, factory, laboratory or hospital that you are going to build and regardless of your relationship to the project as financier, developer, board member, trustee or administrator, there are some things of which you should be aware about planning and designing that new building. Now that you're going to build a new facility, what do you do next? Hire an architect of course! But wait, what is it that the architect is going to design for you? Believe it or not, "what is it" seldom is identified adequately. Read on and find out a few things that you should do and a few things that your architect should do **before** (s)he starts to design that new building.

In the architectural profession the "what it is" is called the **program**. Within the profession, however, there is not a universally accepted definition of a program, although it is usually considered by both architects and clients to be a list of spaces that must be incorporated within the building. Because of lack of accord as to what constitutes a program and because development of a program by the architect is considered as an extra service, whatever the client takes his architect as the "program" usually is accepted unblinkingly. From that "program" the architect will begin to design something.

At this point you may ask yourself so what does this have to do with you and the new building -- you know how much you want to spend, you know how big it has to be and you've got a site. Let's get on with the design! Please read on. It may save you a lot of money and it should certainly provide you a better building.

In 1973 the National Council of Architectural Registration Boards (NCARB) instituted a new professional registration examination for architects. Twenty-five percent of the new examination is devoted to programming. For the first time in the history of the profession programming was defined by the NCARB as "problem seeking". The implication of that definition is far-reaching and may have a bearing upon that upcoming project of yours.

Converting the verb programming to the noun program, it may be inferred that the program is the problem. Now if that is so, does the traditional perception of the program as a list of spaces make much sense? Moving on with this logic, historically both architects and clients consider a design a solution. A solution to what? A list of spaces? Of course not. The Solution is a solution to a problem more comprehensive than a list of spaces. It is a solution to many other considerations -- cost, site, space, codes, organization, function and activities, climate, etc.

Although some of these considerations are beyond control, your architect has, at some point in the process, to take account of them. The earlier the better, and the more that you are aware of them the more sense the ultimate design will make. Your architect

should be given time before proceeding with design to thoroughly analyze the implication of these considerations upon the program -- upon the problem.

Traditionally, once the architect is hired, most clients expect him/her to proceed immediately with the design, in fact most architects themselves are anxious to get on with it. Usually any analysis of these considerations occurs concurrently with the development of the design. It is this concurrent practice which is inefficient and which often leads to solution compromises that are disappointing to both the architect and client. It is this practice by which the problem is defined through design. Such a process represents a trial and error approach and such a process can leave a lot of errors in the solution.

By paying your architect an additional fee for a distinct problem-seeking predesign phase, chances are that cost overruns will be eliminated (or at least minimized), design will proceed more efficiently, the building will work better for you, and the solution will be better in every respect.

This may sound too good to be true, but after personally applying such an approach to projects with a total construction value of more than two billion dollars and after observing the results of projects to which the approach was not applied, I am convinced that a distinct predesign phase is immeasurably advantageous to both client and architect.

PRINCIPLES

There are several principles inherent to a predesign phase. First is the **involvement of people**. As client, you should appoint an individual within your organization to serve as liaison with the architect and should also involve a number of other key individuals from your organization to explain the operations of the various units, the interrelationships among these units and how these may change through time. As this time it may be worth citing a project where the client, the Director of a community college, preferred not to involve his staff in the predesign phase. Upon our insistence, however, we received his skeptical cooperation and reached a point at the end of our analysis when decisions had to be made regarding important operational and organizational alternatives that would ultimately affect the design. By exposing him to operational aspects with which heretofore he had not been aware, he quickly and concisely was able to make the kind of decisions that were required of him. At the completion of this phase he admitted the value of this approach.

A second principle is that programming should be considered as a **two-phased process** with the first phase devoted to developing project goals, concepts, a budget and a list of spaces, analyzing the site and other considerations, and culminating with a statement of the problem. The later phase should be conducted after the schematic design is determined and should be devoted to identifying detailed requirements of the spaces provided in the design. Such a separation of programmatic information is not the usual practice. The consequences of not separating may be confusion,

a lack of basis for architectural organization, an unrealistic list of spaces, an uncontrolled budget and an unclear understanding of the problem. By not programming in two phases, minor issues may take on the role of major ones and major issues may get lost. Items such as the number and location of electrical outlets or the precise type of interior wall finishes are not major determinants of a design and should consciously be left out of the predesign phase.

Another principle is **abstraction**. Applying this principle in practice is perhaps the most difficult endeavor for both client and architect. It is easier for us to discuss building-related topics in physical terms. If it can be remembered that it is the **basis of a design solution**, not the solution, that we are after in the predesign phase, abstraction becomes easier. However, if you, as the client, have certain physical preferences or prejudices, now is the time to communicate them to your architect, but don't expect them necessarily to be realized in the design solution. Remember the potential impact of all those considerations.

The fourth principle is **objectivity**. It may seem redundant to isolate objectivity in light of the fact that we are discussing an analytical phase. However, in architectural design it is easy to be less than objective about some matters. Our emotions may prematurely inhibit objectivity. The predesign phase is the time to confront the facts in the most clear-headed manner.

If we employ these four principles, chances are greatly improved that you will get a building that will work better for you both upon completion and in the future, that costs will be better controlled, and that the subsequent design and construction phases will be a more satisfactory experience to everyone involved.

GOALS AND CONCEPTS

The two elements of a program that are most often overlooked are **project goals** and **programmatic concepts**. I have observed so many projects getting out of control because the goals have never been articulated. What do you want your project to do? Do you want to improve the image of your organization through the new building, do you want to allow for future expansion, do you want to allow for future changes of some type, do you have to accommodate a specific number of people, do you have to acknowledge a certain budget? By identifying, articulating and documenting the project goals early on in the process, it is surprising how much more smoothly a project proceeds. It can save an immeasurable amount of time by directing both your and the architect's activities and energies.

Programmatic concepts are seldom developed. What usually happens is that in the exposure of some idea, that idea immediately gets translated into some physical concept such as "one department to a floor", rather than to an abstract programmatic concept such as "organize functional units by department". By abstracting the requirement into a programmatic concept, design options are left open and artificial physical requirements are not prematurely establish-

ed. Thinking abstractly in developing programmatic concepts is difficult but produces dividends later in the process.

An example may help to amplify the value of programmatic concepts. In reviewing the design of a new junior college building, I observed the location of some classrooms accessible only through laboratories. In pointing out to the architect the probable inefficiency of such an arrangement, a discussion ensued which revealed that the client had pointed out the same thing the day before. The exercise of drawing this arrangement could have been eliminated and a great deal of client and architect time saved had the concept of "general-use classrooms" originally been developed. Such a concept, properly defined and documented, would have communicated to the designer that all classrooms should be accessible to the student body at large. With a stated concept the designer never would have considered such a physical arrangement. It was back to the drawing board for the architect.

CONSIDERATIONS

We've already mentioned various considerations that should be acknowledged for their possible impact upon the design solution for the new building. In our discussion of them, one consideration should not be viewed as more important than another. During the predesign phase of your project, however, some considerations will emerge with far greater significance than others. Regardless of purely functional considerations which are of prime importance to you, there are others that may become strong determinants of your building.

Space

Prior to selecting the architect, chances are that you have identified the amount of space that you will need. A client sometimes presents the architect with a very specific list of rooms with their corresponding size. Seldom does the client give the architect a detailed list of rooms with corresponding sizes along with a total gross building area. Regardless of the extent and detail of such lists developed by a client, I have never experienced the figures to be completely valid. My observations regarding this matter have concluded that space figures identified by clients are usually generous in size, ambitious in number, and/or do not employ a reasonable building efficiency.

Here it would be useful briefly to discuss "building efficiency". Building efficiency refers to the ratio of programmed space* to non-programmed space*. All buildings consist of both programmed and non-programmed space and there are predictive ratios for each type of building. Some organizations and agencies such as the Building Owners Management Association and the State University of New York have determined reasonable building efficiencies for selective types of buildings through the analysis of a great number of corresponding existing buildings. Such

*sometimes referred to as usable area, net area, or assignable space and non-assignable space respectively.

established figures may be employed directly. I personally find it instructive and useful to conduct an area analysis of the client's existing building(s). Through such an analysis not only may the existing building efficiency be identified, which may be compared with established figures from various sources, but certain existing space standards such as office sizes may be identified and used as a basis for discussion in selecting standards applicable to the new building.

By the completion of the predesign phase, a complete list of programmed spaces should be developed and the resulting total programmed area converted into a realistic gross building area through the use of a reasonable building efficiency. A complete list of programmed spaces with a realistic building efficiency matched to your budget and representing the desired level of construction quality will eliminate the frustration and inefficiency inherent in the more traditional method of identifying necessary spaces and their corresponding sizes through redesigning.

It is time for yet another word of caution. As mentioned earlier, there are predictive ratios for each type of building. A methodology for determining the efficiency of a given floor plan advocated by the American Institute of Architects refers to a type of space called "phantom corridors". Unfortunately the explanation of this methodology is sufficiently vague to allow considerable room for personal interpretation. If an efficiency analysis were completed on the same building by six different individuals, there would probably be six different conclusions. The greatest differences would occur in the identification of "phantom corridor" space. One individual may count it as programmed space, another individual may count some of it as programmed space and another may count it all as non-programmed space. Phantom corridors are non-programmed circulation space not enclosed or defined by walls. Almost every building has some. Some buildings have a lot. If it is counted as programmed space, the building efficiency appears greater than it really is.

How it is counted becomes a numbers game that is sometimes played. To illustrate: open-planned schools or landscaped office space are usually promoted as being very efficient. However, they are generally not any more efficient than traditional versions of their type. The circulation space exists despite the fact that it is not defined by walls. In open-planned schools some efficiency may be gained by the elimination of walls, but many such schools are designed so that internal walls may be constructed later, if desired. Thus the wall space is there. In landscaped office space the movable panels that are used to define individual work stations and to serve as acoustical baffles are substitutes of built walls and consume a surprisingly large amount of space. A large amount of phantom corridor space is there also. The point here is to emphasize the importance of initially employing a reasonable and realistic building efficiency for your project. If it is unrealistic, it will haunt you later by enlarging the gross area and subsequently by increasing the cost or reducing the quality of construction.

Quality

Quality of construction can vary greatly with the selection of materials and finishes. The quality of your project may be established in the predesign phase and without a design. Quality is implied in the unit building cost (dollars per square foot). In the predesign phase it is unnecessary to get into the precise materials or finishes, but nevertheless, options are inherent in the dollar amount of the unit cost. Again a word of caution.

To determine a unit building cost that reflects a certain quality takes experience. That experience must include projects of similar building type that have actually been built. By analyzing the costs of similar projects and by escalating those costs to the same mid-construction date as your project and then adjusting them to the anticipated bidding climate in your locale, a reliable unit building cost may be established that reflects the construction quality that you desire and can afford.

It takes someone with a great deal of experience to have such figures available to him. Architects lacking that experience, however, may obtain such information from other sources. One alternative for the architect is to engage the services of a competent independent cost consultant. The important point here is, regardless of who establishes the budget for your project, be sure that the unit building cost reflects the quality that you expect and can afford, and be sure that the cost has been escalated to the mid-construction date of your project.

Costs

You have undoubtedly anticipated how much you can afford to expend on the project. Usually, however, all costs are not initially included in a budget and, as a result, the client is sooner or later subjected to a shock.

First of course is the cost of the building itself. In addition there is the site development cost that includes preparing the site for construction, bringing utilities to the site and/or to the building, grading the site after construction is substantially completed, paving part of the site for parking, installing sidewalks and exterior lighting, and finally landscaping it. Another cost item is fixed equipment, anything not integrally part of the structure but essential to its operation, such as auditorium seating or drinking fountains. The sum of these three items will represent the construction cost upon which the architect's fees are based. In addition to the construction cost is movable equipment such as chairs, desks or typewriters. Professional fees for the architect, engineer and other consultants should be identified and included in the budget, and a liberal contingency equal to 10-15% of the construction cost should be included. Also included should be a category of miscellaneous cost that budgets funds for topographical surveys, soils tests, and anticipated administrative costs contributable to the project and paid by the client.

Now you may ask how such costs may be identified without knowing what the building looks like or what it will be made of. It can be done. My first exposure to

such a possibility was with a very large project in a foreign country where we had never before had an architectural commission. In the predesign phase we identified a construction budget of \$100 million. When bids were received two years later from construction firms from around the world, the winning bid was \$100,030,000.

If your architect doesn't have the capability, have him engage the services of a cost consultant. A word of caution here. Cost consultants like to get very detailed. If they have had a great deal of experience with projects similar to yours or if they have access to cost information through other means, they should be able to develop a predesign budget in the form discussed earlier. If they feel more comfortable in developing it first in detail, fine, but then they can summarize it into totals by Building Cost, Site Development, Fixed Equipment, Construction Cost, Movable Equipment, Professional Fees, Contingency, Miscellaneous and Total Project Cost. Such a summary makes it infinitely easier to comprehend where the dollars are going and to control costs throughout the development of the project.

With enough experience and a little research and analysis, the cost items may be identified simply in terms of percentages of the building and/or construction cost. The exact amount of each item will obviously change as the project is developed in greater and greater detail, but the total project cost should remain constant. By the completion of construction documents, the contingency should have been reduced to 3-5% of the construction cost. If everything has been done conscientiously to this point, this amount of contingency will be adequate to cover any minor changes that normally will occur during construction and to accommodate minor unpredicted fluctuations in the bidding climate.

As an example of a Predesign Phase Project Cost Budget let's assume that you are prepared to spend a total of three million dollars for a new elementary school. The funds have become available through a bond issue approved in a public referendum. As part of that referendum the school is to accommodate 600 students and is to be ready for occupancy in September 1980. Construction will take 16 months. Therefore mid-construction will be December 1979 and all costs should be escalated to that date. The School Board is insistent upon a low maintenance building which will require high construction quality. Since the Board already owns the property, no funds have to be expended upon the acquisition of the site.

by researching the Board's experience with the construction of five new elementary schools throughout the past ten years, the unit building cost of \$38.00/SF was determined as a realistic cost that reflected the kind of quality that was desired with a mid-construction date of December 1979. Percentiles were determined by analyzing the actual costs of each item for the five earlier projects.

Once the analysis was completed, the percentiles and unit building cost were applied to the algebraic formula with a total of \$3,000,000. In such a way, the

affordable Gross Square Feet could be calculated as 54,672SF. Below is the predesign phase project cost budget.

1. Building cost (54672SF @ \$38.00/SF)	\$2,077,500
2. Site development (7% of 1.)	145,400
3. Fixed equipment (8% of 1.)	166,200
4. Construction cost	\$2,389,100
5. Moveable equipment (10% of 1.)	207,800
6. Professional fees (6% of 4.)	143,300
7. Contingency (10% of 4.)	238,900
8. Miscellaneous (1% of 1.)	20,800
9. Total project cost	\$2,999,900

Employing a building efficiency of 67/33 identified through an area analysis of the other schools, it was determined that 36,630 usable or net square feet could be built with the available funds ($54,672 \times .67$ equals 36,630 NSF). By estimating the total amount of usable square feet that the client could afford, we could then identify the type, number and size of spaces that might be built.

Site

Various aspects of the site represent considerations outside of either your or the architect's control. These may be very significant determinants of the design of your new building. Allow your architect time to analyze those aspects before proceeding with design. The physical characteristics of the site, its shape, topography, sub-surface conditions and views may influence the location and orientation, perhaps even the materials, of the building. Access to the property and potential for circulation within the site may influence the location of the building. Access to existing utilities or the necessity to provide on-site utilities may affect the budget and influence the location of the building. Neighboring buildings may imply a particular scale, influence the materials or establish a particular character for your building. Because of the potential impact of these considerations, it is especially important that physical preconceptions and solutions be disregarded.

Codes, Ordinances, Standards and Regulations

Regardless of the community in which you plan to construct the building, you will have to incorporate applicable building and fire codes and comply with local ordinances. During the predesign phase it is advisable to have your architect identify and document sections of the codes and ordinances that will significantly influence the initial design such as setback or parking requirements.

Depending upon the type of building that you require, certain standards may have to be met, such as minimum size of specific rooms or of window area in specific rooms and minimum unit areas for the capacity of certain types of spaces. Again, your architect should identify and document those standards applicable to your project.

Barrier-free environments (for the handicapped) and other federal regulations may need to be incor-

porated. Any significant regulations affecting your project should be identified and documented early by your architect.

By identifying the significant codes, ordinances, standards and regulations applicable to your project prior to initiating design, you may be more assured that the initial design will incorporate them. In addition, you will understand more fully why certain actions were taken by your architect in determining the design solution.

CONCLUSION

In conclusion, a predesign phase should not be considered as a project panacea. Subjectivity and emotion will enter into the design phases of a project. Many details will have to be worked out and many decisions will remain to be made. If, however, you do decide to include a distinct predesign phase for your project, those advantages mentioned throughout the article may be realized. Good luck with that new building.
L. W.



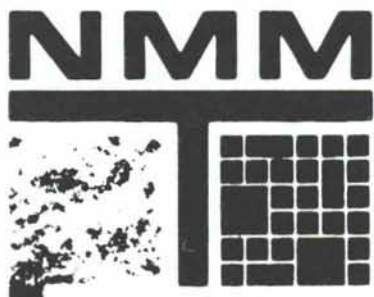
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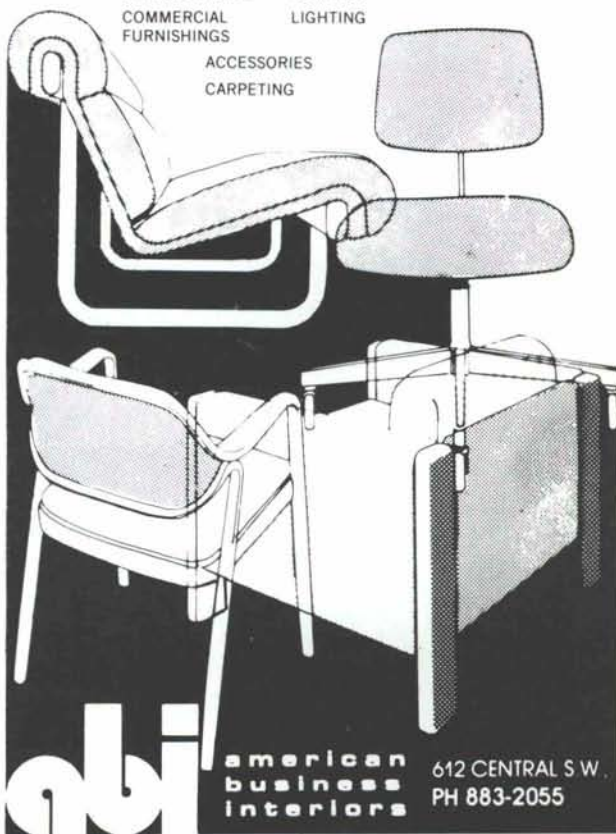
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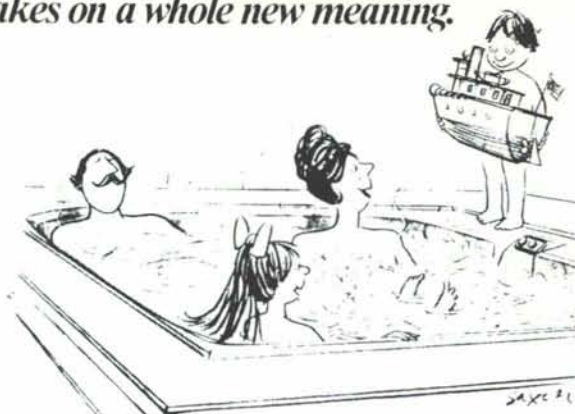
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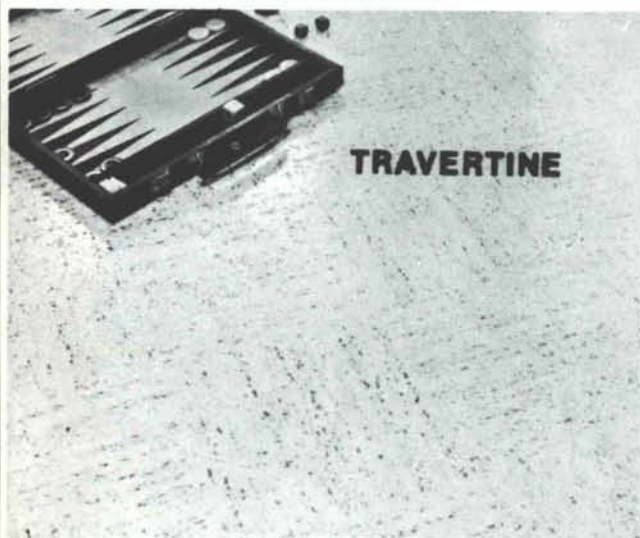


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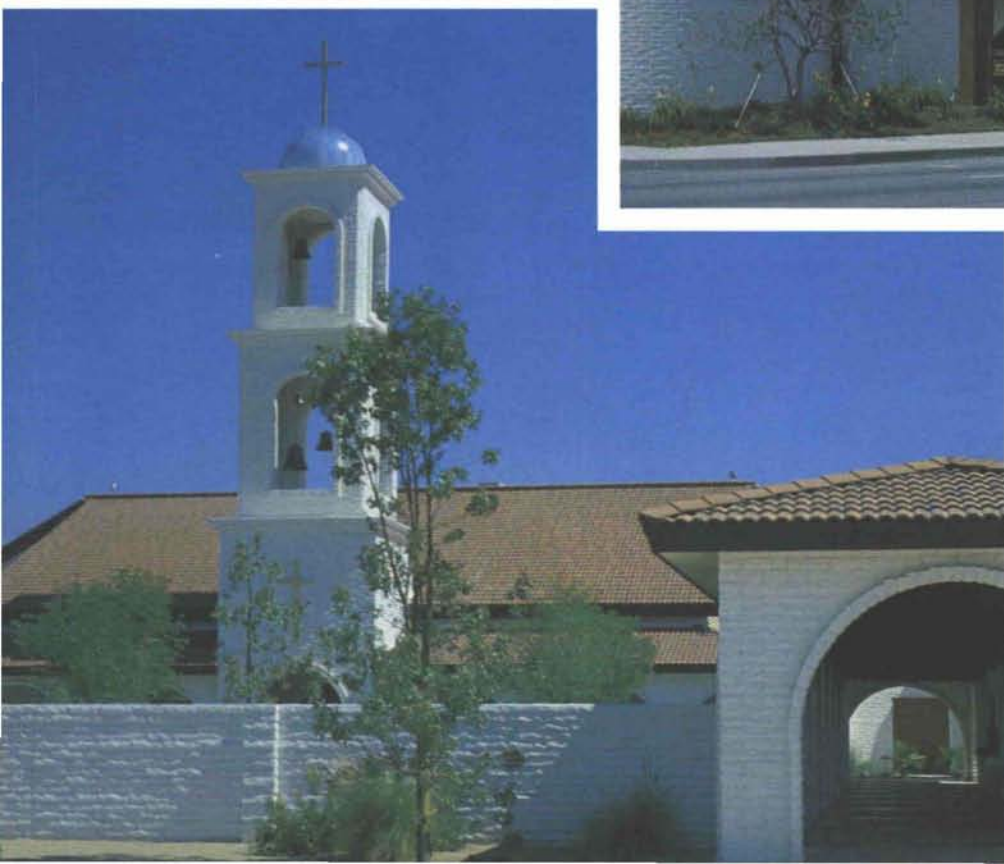
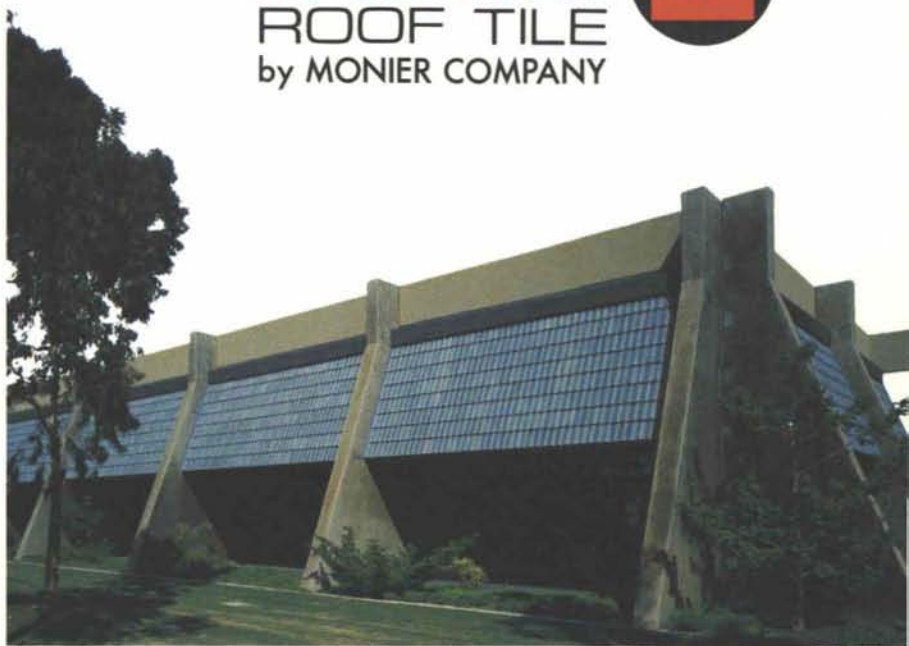
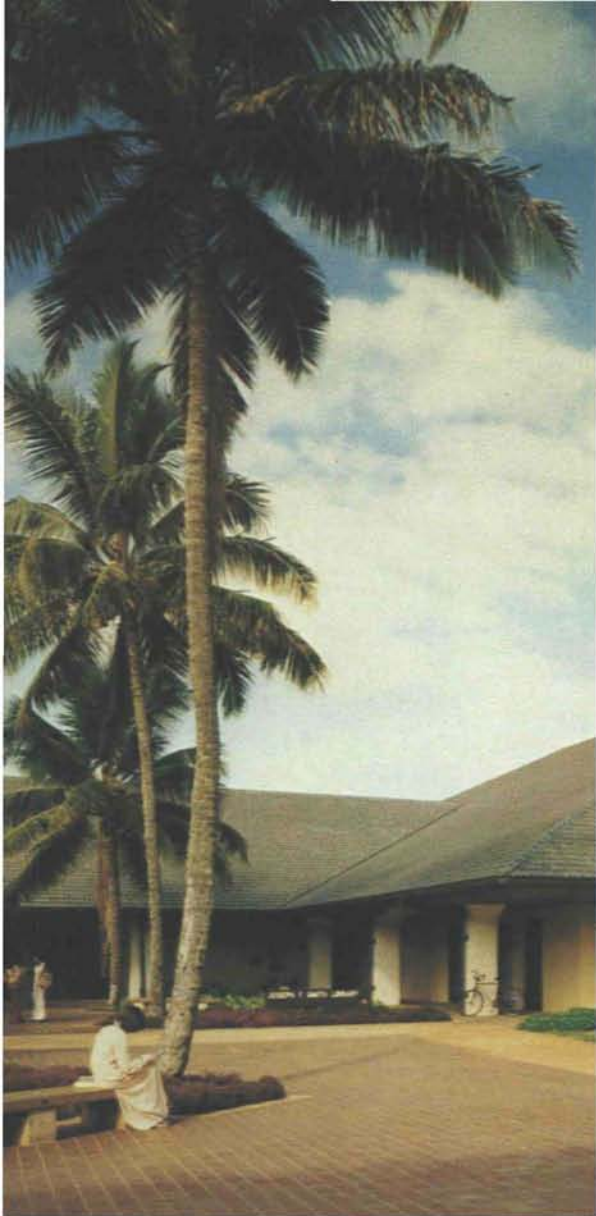
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Monray tile has significant advantages to the architect, engineer, builder, financial institution, and owner of both residential and commercial buildings. No other roofing material can boast all the remarkable features of Monray tile.

BEAUTIFUL

Monray tile roofs with their rich colors and graceful curves beautify even the simplest structures. For more complex structures, Monray provides a vehicle for exciting creativity. It offers opportunity for a wide range of architectural effects—from dynamic vigor to quiet serenity—for one building or for many—accommodating any regional preference.

DURABLE

Monray tile lasts indefinitely. It has a life probability exceeding that of the structure. It is incombustible. It is immune to rot, termites or rodents. It resists sun, rain or salt spray and, being made of concrete, has the unique advantage of starting strong and growing stronger with age.

LUXURIOUS

Tile is reminiscent of opulent old-world palaces and, today, Monray tile provides both physical and visual luxury. Because Monray tile is made of very dense concrete it provides the luxury of sound control and is also adaptable to engineered systems for optimum thermal control—conductive or reflective. For example, summertime temperatures can be 20° cooler below a Monray "cool-color" roof. Most luxurious of all is the visual effect. Richly colored Monray tile is used by today's architects to create a feeling of affluence in a wide variety of structures.

ECONOMICAL

Because it is mass produced, high quality Monray tile is reasonably priced, and its long life and freedom from replacement makes its life-cycle cost extraordinarily low.



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SIZE AND COVERAGE

The Monray tile has a nominal overall size of 16½" by 13" with an interlocking sidelap of 1¼". At the recommended 3" minimum headlap, 90 Monray field tiles will cover 100 square feet of roof area. Due to the adjustable headlap feature, equal course spacing of Monray tiles can be easily obtained, eliminating horizontal cutting.

WEIGHT IN PLACE

Monray tiles weigh approximately 10 lbs. each. The installed weight per 100 square feet including trim tiles is approximately 950 lbs.

Monray's extremely dense base and virtually impenetrable color glaze eliminate structural problems created by the addition to installed weight caused by the moisture absorbing characteristics of certain other roofing materials.

WEATHER CHECKS

The unique scientifically designed baffles or "weather checks" on the underside of Monray tiles give proven protection against wind-driven moisture. This protection is far superior to that offered by ordinary tiles.

FIRE TEST

Monray tiles are completely incombustible. In order to test the protection afforded to wood substrate and structural members from burning embers, laboratory tests have been conducted using various methods including A.S.T.M. E108 and Uniform Building Code Standard No. 32-7. A 12"x12" (Class A) burning brand placed on the surface of a typical Monray roof assembly, completely expired without charring or scorching the wooden decking immediately below.

FREEZE-THAW TEST

The severe freezing and thawing test in accordance with the A.S.T.M. C67-72 Method B, when performed on Monray specimen tiles, proved that after 50 cycles there was no evidence of fracture or disintegration of any type.

Due to the exclusive Monier extrusion and surfacing process, Monray tiles can be used in the coldest climates.

PERMEABILITY TEST

Each lot of Monray tile is tested for permeability by submitting a representative sample to a static 2" head of water for 24 hours. No water passes through acceptable tiles.

COMPRESSIVE STRENGTH

Is in excess of 4,000 p.s.i. at 28 days.

FLEXURE STRENGTH

Independent laboratory tests as well as tests conducted daily at Monier manufacturing centers ensure consistent strength. In these tests, the average Monray tile, with a concentrated load applied at midpoint, in a normally installed position, is capable of supporting more than 400 lbs.

COLOR AND STYLE AVAILABILITY

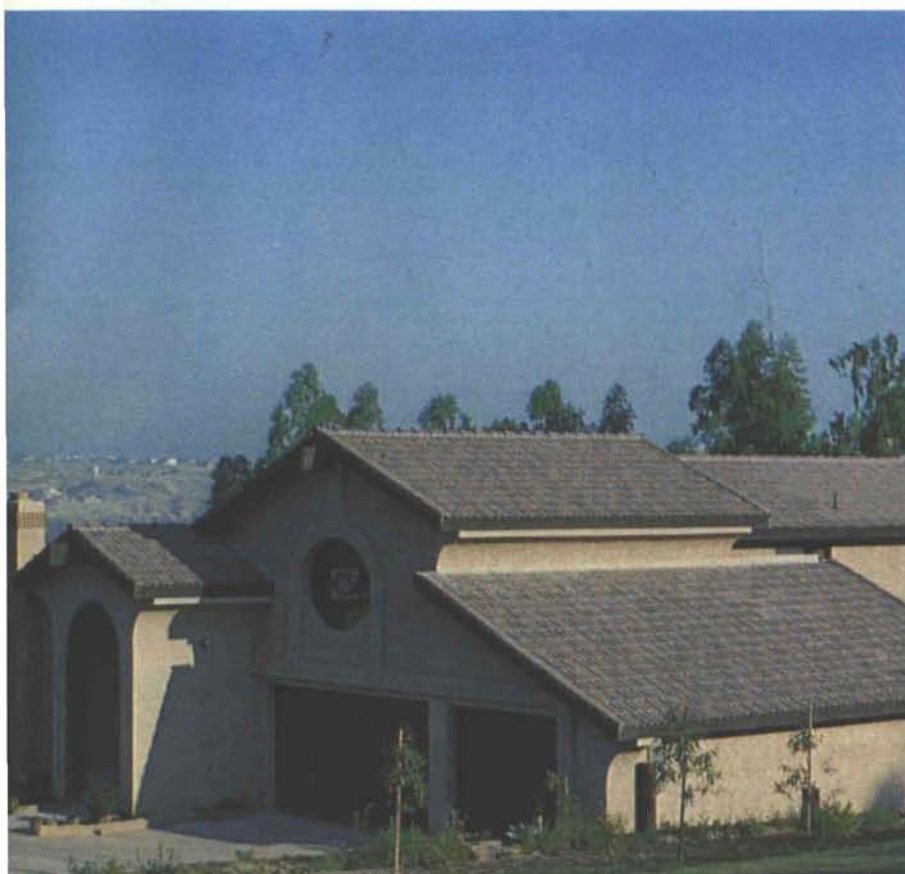
Monray tile colors and styles are selected to meet regional preferences. Information concerning colors and styles available in specific areas can be obtained from the nearest Monier sales office. Printed colors shown may vary from actual tile colors.



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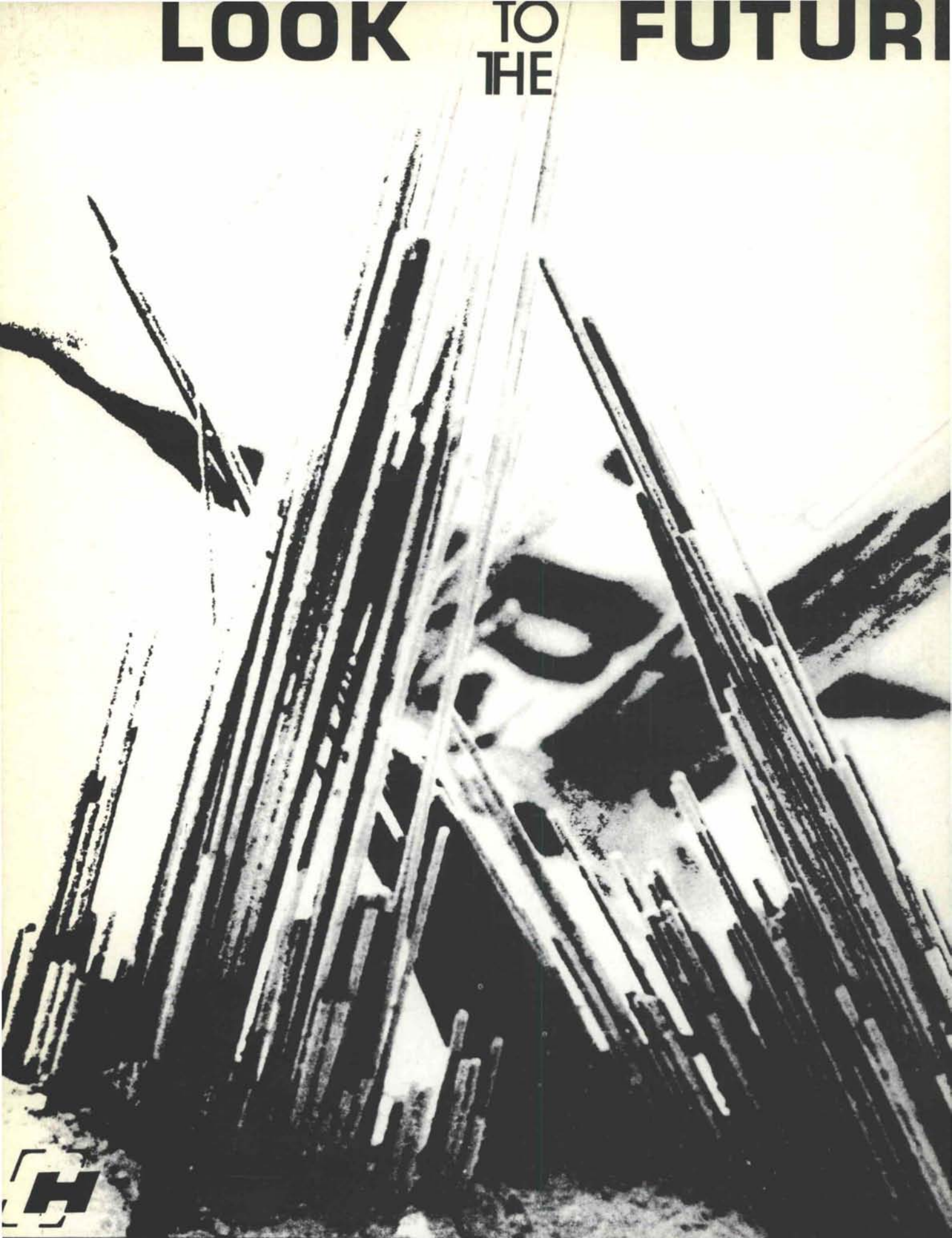
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