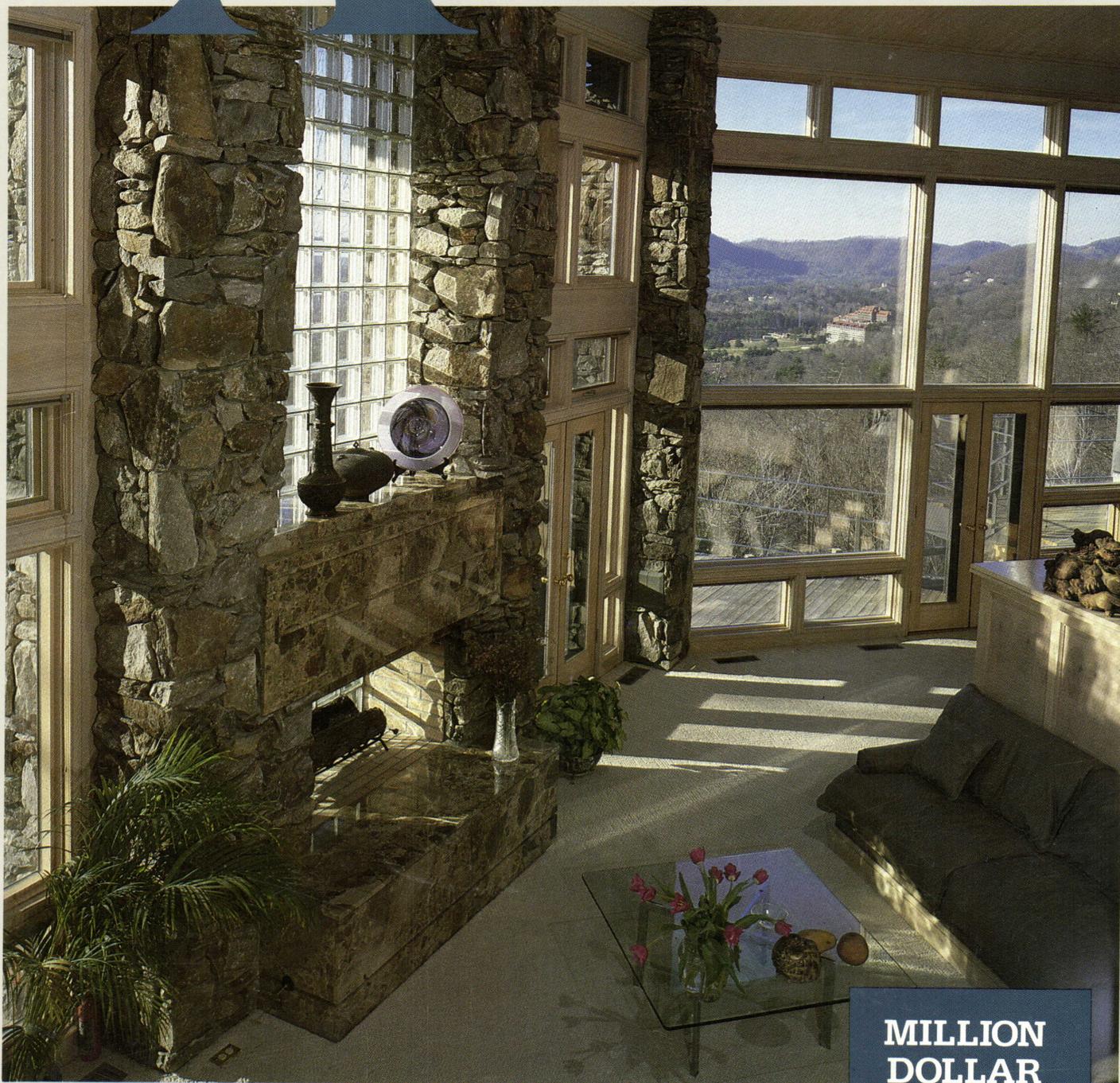


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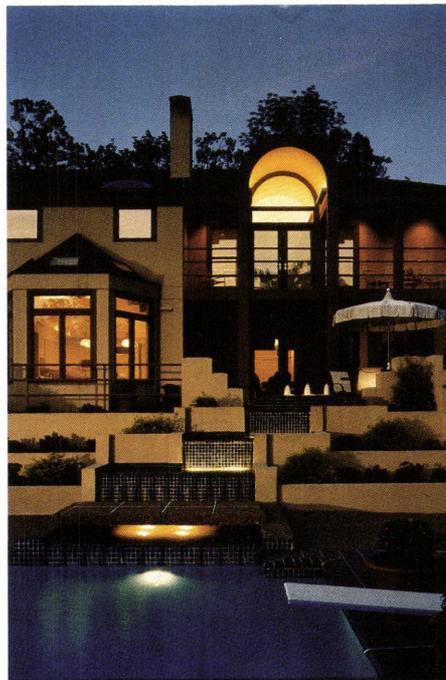
Rooms with Views

From the coast to the Piedmont and into the mountains, North Carolina abounds in dynamic settings for dream houses that commune with nature.

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Weaving an Urban Fabric

Close neighbors, city conveniences, small lots and traffic. Life in the city is grand in these urban-style homes.



Water flows through the grounds of this Charlotte home by Camas Associates like a theme. In the foreground is a swimming pool; in the background a waterfall and a fountain. Photo by Rick Alexander, Charlotte.

Cover: The stone fireplace with a marble mantel is a focal point of this Asheville home by architect R.S. Griffin. Glass block ties the fireplace wall to a bank of windows with dramatic views of the city. Photo by Dee Williams.

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Teaming Up On Interiors

When an architect and interior designer get together to design a home, the results are harmonious.

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This tiered house wraps around an overlook to capture all its spectacular views. Stone and pebbledash historically tie the house with its Asheville setting.

North Carolina Architecture asked the state's architects to show us some million dollar houses. Without intending the figure literally, we wanted to feature dream houses—houses designed to fit an ample budget. We picked a baker's dozen.

NCA examined these "million dollar" homes from two perspectives. In "Rooms with Views," we highlight homes in the dramatic, picture-postcard settings that are abundant in this state. In "Weaving an Urban Fabric," we look at homes that fit in with close neighbors and city streets. Then, in "Teaming Up On Interiors," we show the results when designers work together.

Rooms with Views

The state of North Carolina is bracketed by two of nature's most inspirational works: soaring, mountain highs and endless, sandy beaches. In between is a lush green Piedmont, where lakes, streams and woods are plentiful.

Houses designed for these dynamic settings have a basic obligation to capture the view. Beyond that, the design challenges are considerable. A home embraced by the mountains must measure up to its surroundings without overtaking them. A beach house must stand as a fortress against the harsh environment of sand, water and sun while retaining an air of easy informality.

The architects whose work is featured here have rooted their projects in the vernacular of the region, allow-

ing the houses to harmonize rather than compete with the natural drama around them.

The very shape and position of the house that Robert S. Griffin, AIA, designed for the Turner family of Asheville illustrates the point. It hugs a ridge overlooking this picturesque city, taking on the shape of the overlook and capturing all its views.

"The Turners wanted an organic style house with refinements," Griffin said. "Indigenous materials provided a harmony with the landscape; the framed view dictated the basic geometry of the house."

Each room in this 8,500-square-foot, \$750,000 house offers its own panoramic perspective of the mountains, the sky and the city. The sun rises on the master bedroom and den on the

Project: Turner Residence, Asheville
 Architect: R.S. Griffin, Asheville
 Client: Jim and Pam Turner
 General Contractor: J.W. Gardner, Inc.,
 Charlotte and Asheville
 Photography: Dee Williams, Asheville

main level. The living room, which faces west, yields front-row seats for spectacular sunsets and an impressive view of the city below. From the kitchen and an indoor room called the north porch, one looks down on the famous Grove Park Inn and its golf courses. The second-level bedrooms offer more elevated views, topped by a "crow's nest" bedroom that provides dramatic vistas all around.

At the main entrance, brick pavers lead to a doorway framed on each side by pairs of massive stone pillars. Hori-



Above: This Waynesville house in the meadow nods to the surrounding mountains with pitched roofs and battered stone columns. Right: A view of the kitchen from a balcony above.

zontal, dark bands of color around the house visually tie it to the earth. Terraced roof lines repeat the shape of the mountains.

Inside, a dramatic two-story foyer with maple hardwood floors leads to elongated steps down to the living room, featuring a fireplace with an Italian marble hearth and mantel and flanked by rough stone columns. The space above the mantel is filled with glass block, which lets in light and pulls the fireplace into the wall of windows.

A design in the woodwork of the dramatic staircase establishes a theme of interlocking squares that is repeated elsewhere in the house. A planter and sculpture area fill in the space under the staircase.

From the pagoda-tiered structure of the house itself to the wood details and the simple furnishings, the house reflects an Oriental influence, inspired by the owners' frequent trips to Asia. These influences mix with the stone and pebbledash that are historically linked to Asheville construction to produce a regional, but highly individualized home.

A house in the meadow

When Dail Dixon & Associates of Chapel Hill designed the Nathan home in Waynesville, a beautiful site was also an architectural challenge. The house was to sit in a 22-acre meadow surrounded by the majesty of the Blue Ridge Mountains.



"In addition to offering dramatic views and light, the site also presented the risk of dwarfing a single-family house," Dail Dixon, AIA, said. "The architectural design addresses the scale of the mountains and local vernacular through its steeply pitched roofs, battered stone columns and vocabulary of simple forms."

The house, with its cedar-shake roofing shingles and its dormers, takes on the character of a mountain lodge along the Blue Ridge Parkway. German siding, which is not overlapped like clapboard siding, gives the exterior a clean, tailored look.

Cool mountain breezes called for a porch that nearly wraps around the house and is enlarged at the corners for entertaining. The porch extends into a covered walkway to the garage

Project: Nathan Residence, Waynesville
 Architect: Dail Dixon & Associates, Chapel Hill
 Client: Henry and Julie Nathan
 General Contractor: Charles Lanning, Waynesville
 Photography: Jerry Markatos, Pittsboro

and a studio above the garage where Mrs. Nathan paints.

"A fenced courtyard defines a metaphorical picnic blanket on the large site for the family's three small children," Dixon said.

Interior spaces are zoned horizontally and vertically to provide privacy. Large dormers to the south open the second floor spaces to the sun and spectacular views.

Eastern exposure

Mountains enclose. Beaches expose. A beach house—especially a large one—can't nuzzle up to a sand dune, can't snuggle in scrappy vegetation.

Faced with such stark exposure, architect Hal Tribble, AIA, came up with a design he calls "modern-day Palladian." The 4,000-square-foot residence on Figure Eight Island is sculpted from a cubic block approximately 45 feet in each direction with a central staircase and an east-west axis.

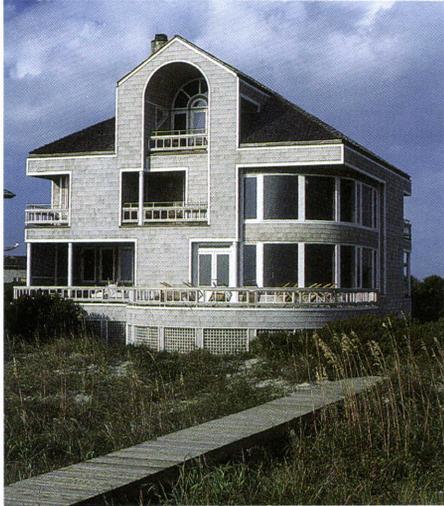
The house is a year-round retreat, used only by the owners. The owner in fact learned to fly to increase the amount of time spent there.

The house, which sits on an inlet, has vistas of the ocean shoreline to the east and higher overlooking views to the marshlands in the west.

The arched dormers that give the house its distinctive outline developed as an interpretation of the widow's watch cupola found perched atop historic seaside roofs. Here the cupola is part of the facade, forming an arched frame of the views beyond. The space serves as a studio for the owner, who is a painter.

A curved deck on the first level serves as a horizontal extension of the curved corner of the house where vaulted windows capture the morning sun. On the front of the house, a

Project: Private Residence, Figure Eight Island
Architect: Hal Tribble Architects, Charlotte
Client: Withheld
General Contractor: A.F. Lee and Sons, Wilmington
Photography: Jerry Blow Commercial Photography, Wilmington



Top left: The curved deck on this Figure Eight Island house is a horizontal extension of the curved corner of the house. Top right: This beach house at Sanderling, which sits between the ocean and Currituck Sound, has its living areas on the upper floors to take in the views. Center right: The breakfast area of the same house has a juniper-clad barrel vault ceiling. Above and right: When the trees are bare in the winter, the wall of windows of this Rock Hill house (shown here from the inside and the outside) soaks up enough rays to furnish 60 percent of the house's heat. In the summer, the leafy trees are a cooling influence.



Project: Oceanfront House, Palmer's Island Club, Sanderling
Architect: Alexander M. Engart, AIA, Kitty Hawk
Client: Withheld
Contractor/Developer: Real Escapes Ltd. Design and Construction, Kitty Hawk
Photography: Real Escapes Ltd.

screened-in porch and a deck provide cozy spaces for watching sunsets.

Reflecting the way the owners live when they are at the beach, the living, dining and kitchen areas are designed as a single room, the separate areas defined with colonnades and changing floor levels and ceiling heights. A game area on the second level overlooks the two-story living room, connecting the two spaces. Each bedroom has a corner position, so it gets cross ventilation, and its own private deck.

Although the house provides views all around, Tribble said, "It doesn't over-focus on the ocean, because you'd almost burn out if you did. The way the house works has a lot to do with how people live at the beach. The way it flows together is as important as views."

On the Outer Banks, Alexander M. Engart, AIA, designed a house with a reverse floor plan, with living areas on the upper level, to best capitalize on spectacular views.

The house is part of Palmer's Island Club at Sanderling, a development of custom-built beach homes, all in the \$1 million and up range. This home sits between the Atlantic Ocean and the Currituck Sound and adjoins a 3,500-acre National Audubon sanctuary.

The house is organized around two rectangular blocks, offset and linked with a diagonal connection. The open plan is zoned and articulated through variations in ceiling height, fenestration and lighting. The raised ceiling of the living room, the barrel vault of the diagonal connector and the glazed vault above the dining table are clad in unfinished, aromatic juniper.

A large, quartered, round window rises above the entry court and faces the southwest view of the sound. Inside, under the barrel vault, grouped doors and a circle window framed the ocean view to the northeast.

Making the most of woods and water

Vistas needn't be extreme to be dramatic.

Dennis Yates Associates of Chapel Hill designed a 7,500-square-foot house in Rock Hill, S.C., that delivers views that extend beyond the small one-acre lot.

The house is on a small natural lake in a heavily wooded subdivision. Drawing on the open spaces in adjacent lots and the lake, the lot appears larger than it actually is, Dennis Yates, AIA, said.

The owners, whose names were withheld, insisted that the house communicate closely with the site. They also wanted it to be responsive to solar energy, but not to the point of sacrificing views or getting heavily into passive-solar techniques.

The architect began by orienting the house, exposing the south and east sides and snuggling the north faces up to the ground. A fireplace wall of heavy masonry construction was designed to give as much mass as possible so the wall could store energy from the window systems. A large circular family room, featuring a wall of windows, absorbs enough heat to provide 60 percent of the house's heating in the winter, Yates said.

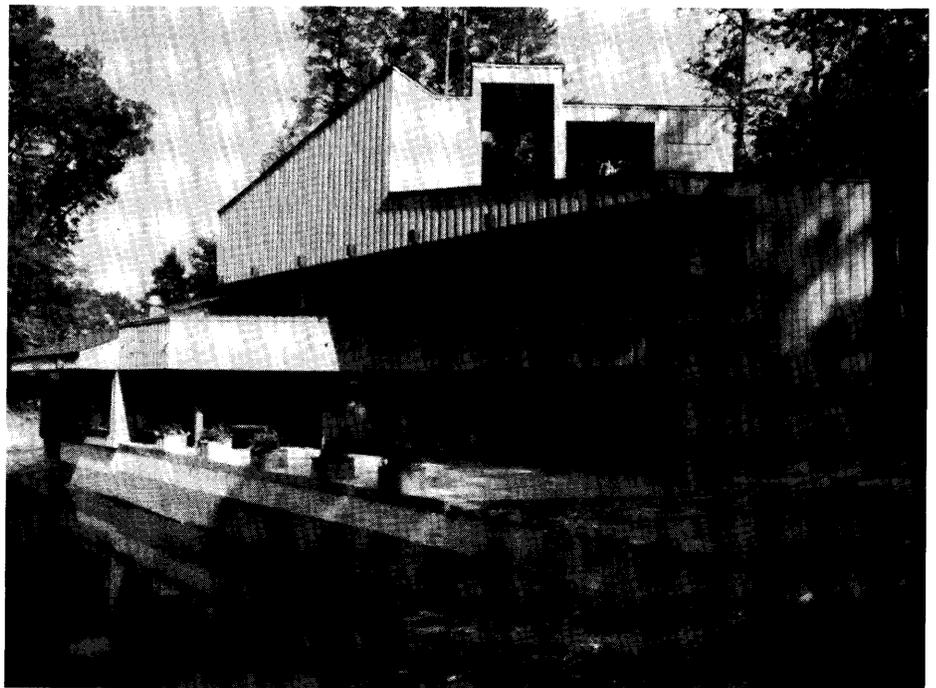
Project: Rock Hill Residence
Architect: Dennis Yates Associates, Concord
Client: Withheld
General Contractor: Leitner Construction Co., Rock Hill, S.C.
Photography: Tim Buchman of Rick Alexander & Associates, Charlotte

"The house turns itself on and off with the seasons," Yates said. "In the summer, when the trees form large green canopies, virtually no sunlight is coming in, just nice ambient light. In winter, the bare trees let direct sunlight stream in."

A flowing, open floor plan caters to the couples' love of entertaining large groups. The focus of the three-story house is the fireplace on the first level. As the flue ascends to the roof, it penetrates all levels and forms with the staircase an internal focus.

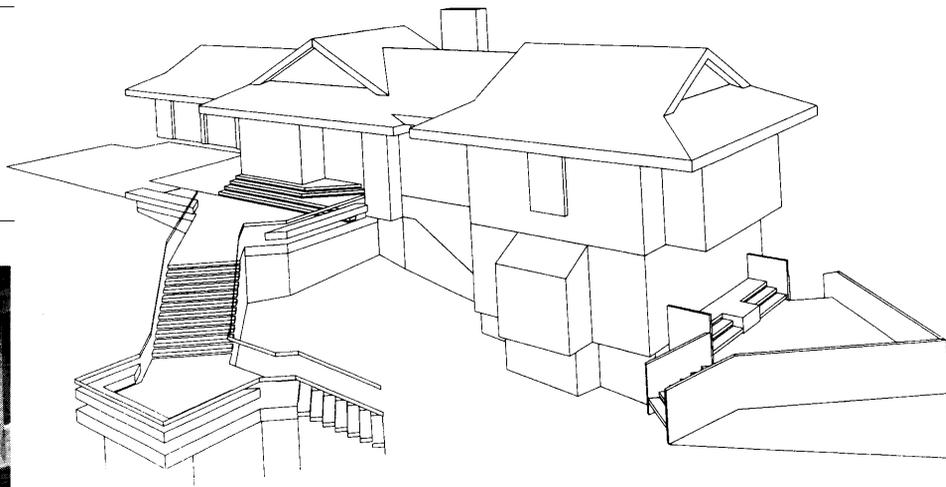
Ellinwood Design Associates reclaimed an old farm pond to lend a lakeside feel to a 4,000-square-foot house designed for the John R. Adams family of Raleigh.

The profile of the public side of the house was kept low and unobtrusive, for effect, security and privacy. In addition, the design had to limit access and view to an adjacent area that was zoned for multi-family dwelling.

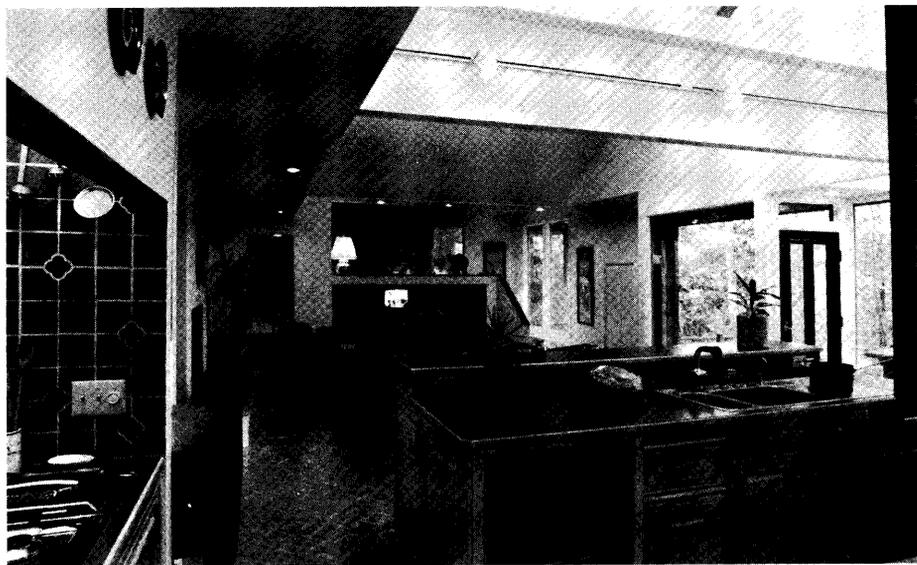


A reworked farm pond lends a lakeside feel to this low-profile house in Raleigh.

Project: Adams Residence, Raleigh
 Architect: Ellinwood Design
 Associates, Ltd., Raleigh
 Client: Mr. and Mrs. John R. Adams,
 Raleigh
 General Contractor: John R. Adams,
 Raleigh
 Photography: Artech, Inc., Raleigh



Above: A guest apartment, with kitchenette, sleeping loft and sitting room, takes the place of guest bedrooms in this Raleigh house. Right: An open floor plan suited the needs of the bachelor who lives in this house in the woods in Greensboro. Below: The stairs are a labor of love for the owner of this Black Mountain home. He laminated them himself on site.



Project: Toman Residence, Greensboro
 Architect: Mario Grigni, Greensboro
 Client: John R. Toman, Greensboro
 Construction: Grigni Enterprises, Inc.
 Photography: Mario Grigni

signed by Mario Grigni, AIA, blends into a five-acre woods and overlooks a lake. The house takes on the natural coloration of the trees. Decks extend into the woods, tying the open living spaces within the house to the outdoors beyond. A specially designed structural system based on girders permitted unobstructed interior spaces. The house, situated for privacy from neighbors, offers the quiet and isolation of a cabin in the woods.

In Black Mountain, a 4,000-square-foot, \$500,000 house nearly disappears into the surrounding woods and accommodates trees by wrapping decks around them. Moore Associates, P.A., Architects, Planners, brought the outdoors inside through extensive use of natural wood surfaces. A gracefully curved stairway forms a dramatic focal point.

These houses illustrate a variety of approaches to site and client needs. In each, the architects worked with a silent but highly visible and demanding partner—nature.

The house is opened up on the south with a wall of windows at two levels and third story clerestory monitors. The dam to the farm pond was restored and the pond reshaped to bring it close to the south perimeter.

Circulation in the house is open, with the exception of doors leading to the master bedroom suite and study area. In lieu of guest bedrooms, the house was designed with a guest apartment, with a sleeping loft, kitchenette and sitting room.

Passive solar considerations include a thermal mass concrete floor slab, insulated rolling shades and an extended overhang to reduce summer heat gain.

A 2,500-square-foot bachelor house for John Toman of Greensboro, de-



Project: Black Mountain Residence
 Architect: Moore Associates P.A. Architects, Planners, Asheville
 Client: Withheld
 Photography: William O. Moore

Weaving an Urban Fabric

Small lots, zoning and site restrictions, surrounding homes—all are part of the challenge of designing the urban home. Not only must this home take advantage of the potential of the site and respond to its restrictions, it also must build on the urban character, tap the conveniences of city life and live in harmony with its close neighbors.

Meyer•Greenson Architecture/Interior Design PA of Charlotte delivers a complete house—from the first sketches to the hanging of pictures, from picking foundation materials to selecting towels and linens. The firm specializes in traditional homes, because there is much demand for them.

A \$1 million, 5,000-square-foot retirement town home in Charlotte provides traditional detailing to complement the owner's extensive art and antique collections. But it wed the traditional with an open, contemporary use of space that lends itself to entertaining large groups of friends.

The Daugherty house, which was built in a planned restricted development with zero-setback, townhouse-type lots, fronts on a private street. The space is arranged for maximum convenience. The house can be entered at the basement level, which contains the garage and a 2,000-bottle wine cellar with its own climate system.

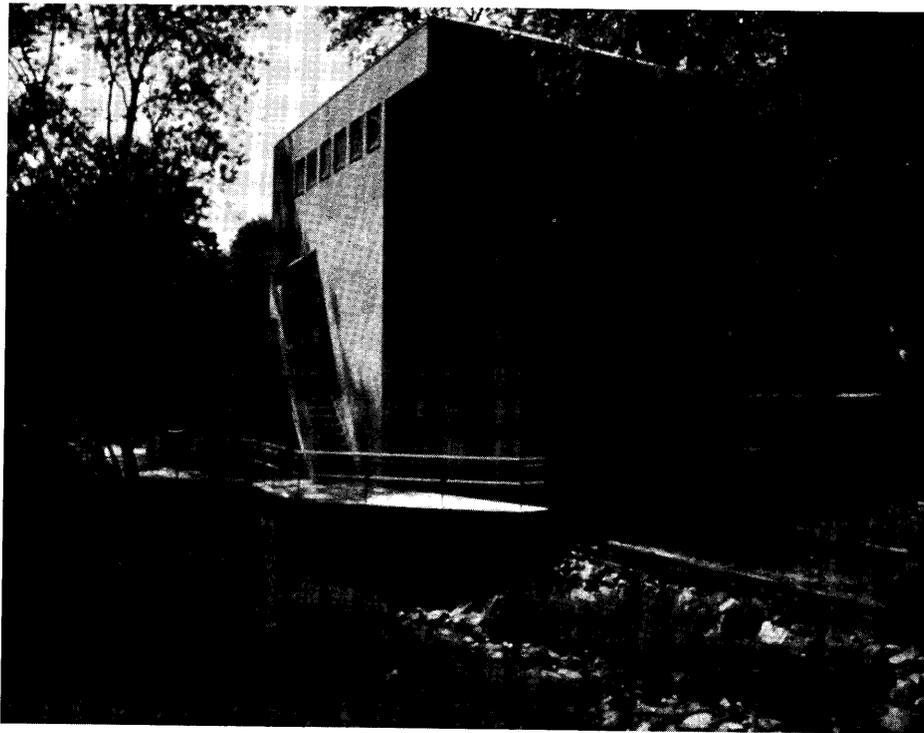
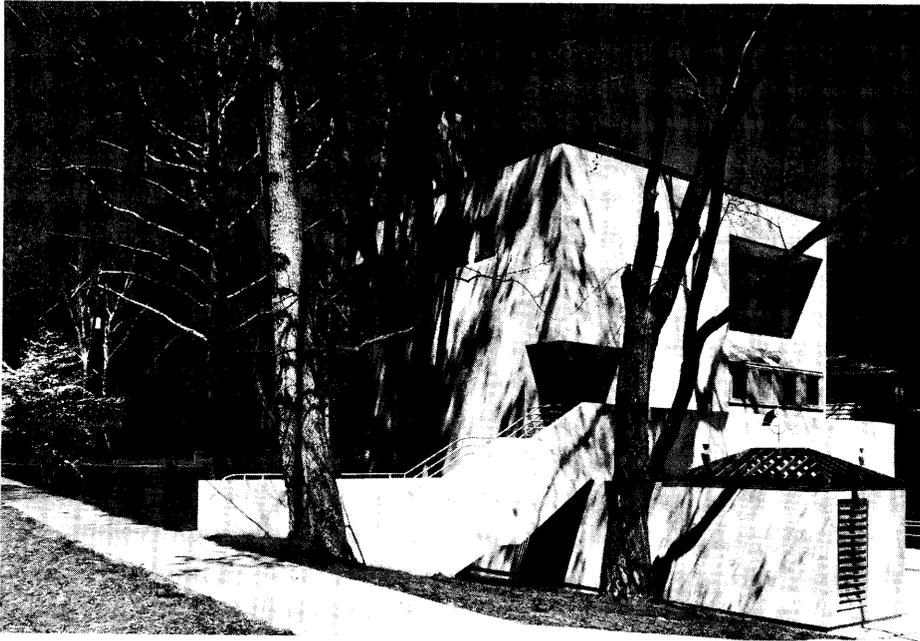
A mahogany-lined elevator takes groceries and/or the residents themselves to the first floor, the main living quarters. Guests enter through an enclosed foyer leading to a gallery, off of which open the living room, dining room, stair hall and kitchen. The second floor, which houses guest rooms and a sitting room, has its own mechanical system, so it may be shut down when not in use.



Above: This traditional home in Charlotte was built in a planned restricted development with townhouse-type lots. Below: A Charlotte artist was commissioned to design and install this inlaid pattern of exotic woods, one of several custom details that make this house unique.



Project: Daugherty Residence, Charlotte
Architect: Meyer • Greenson Architects Interior Design, PA
Client: Dr. Harry and Marjorie Daugherty, Charlotte
General Contractor: W.T. Starnes, Charlotte
Landscape: Brian Zimmerman, Charlotte
Photography: Joann Sieburg-Baker, Charlotte



Top: Stucco unites this three-story Charlotte retirement home with a retaining wall along a creek and a mid-level bridge walkway to the main entrance. Above: A solarium at the back of the house extends the kitchen, which has its own sitting area, onto a terrace that overlooks the creek.

Special details lend elegance and uniqueness. Charlotte artist David Purser designed and installed in the gallery floor an inlaid pattern of quilted maple, padauk and ebony, edged in brass. Rugs in the living room, dining room and library alcove were custom woven from a pattern in the drapery fabric. Faux marble detailing in the curtain rods repeat the graining of real marble floors in the foyer.

The traditional grand staircase uses a custom-designed, wrought-iron picket and mahogany bannister. The kitchen of pickled ash has Corian countertops and handmade French tiles. The master bath shower is marble and contains a steam unit.

Delivering the entire product allows the architects to complete a detailed design scheme, said Mark Paullin of Meyer-Greenson. "When we do the schematic design, we include furni-

Project: Rosenthal Residence, Charlotte
 Architect: Hal Tribble Architects, Charlotte
 Client: Sanford and Elizabeth Rosenthal
 General Contractor: Andrew Roby, Inc., Charlotte
 Photography: Joann Sieburg-Baker

ture in the design," he said. "That lets us know what we need to do to make the rooms work, how to arrange the conversational areas, where to place the bed. When you control the entire project, you can get the end result you wish."

Another Charlotte house, also a retirement home, was designed for a corner lot in an established neighborhood that was well-positioned to serve the clients' social needs but was physically restrictive.

Hal Tribble Architects solved site challenges in the 2,700-square-foot Rosenthal residence with a three-story design. That design countered the problem of a sunken site, depressed about seven feet below street level. A retaining wall was built along a creek on one side of the house to enhance the site and the visual impact of the creek. To break up the vertical space, a mid-level bridge walkway visually anchors the house to the site.

"Internally, the vertical layering of floors accommodated the clients' request for a sense of privacy," Tribble said.

The lower floor, in addition to housing the garage, was designed as a small guest suite for extended visits by family. The upper level is a large master suite for the owners. The middle level is common ground to both. An elevator serves all three floors.

The kitchen, an important room to the owners, was designed with a sitting area and a solarium wall to "anticipate her fiddling with potted plants in the kitchen," Tribble said. The kitchen flows onto the back terrace, which overlooks the creeks and leads to the front entrance.

Stucco unites the walls of the house with the creek retaining wall and other outdoor partitions.

"The overall sculptural quality of the house articulates an intended quietness," Tribble said, "allowing the elements of the house, trees and creek to form a relativity and a sense of intimacy with each other."

Project: Chapel Hill Residence
Architect: Dail Dixon & Associates,
Chapel Hill
Client: Withheld
General Contractor: Tom Wilson,
Chapel Hill
Landscape Design: Southern Green Land-
scaping, Inc., Chapel Hill
Photography: Jerry Markatos, Pittsboro

Dail Dixon & Associates designed a 7,500-square-foot retirement home for a Chapel Hill couple that overcame site problems with an offset design. The lot ran north and south and was on a 15 percent slope. Offsets allowed light into principal rooms of the house.

The owners wanted as much southern exposure as possible, while taking advantage of long views to the east, and level areas for gardening. The couple also needed close access to the upper-level entry from a chauffeur-driven car.

The downstairs includes a guest room, a servant's quarters, garage and storage. The common living areas, as well as two large master bedroom suites, are all on the upper level.

"The styling recalls a Tudor home that the owners enjoyed earlier in their lives in the use of materials and the complex grouping of windows," Dail Dixon said.

The Underwood home in Raleigh was designed for entertaining, inside and out. Dodge and Associates, Architecture, Planning, Interiors, were advised that this home for a realtor and his family should be "so distinctive as to cause public interest and conversation."

The house has 4,700 square feet on nearly an acre lot. Interrelated interior spaces and a protected courtyard at the rear give the house an air of elegance reminiscent of the Gatsby era.

These unique urban homes have a character forged from a combination of factors: the lifestyle of the client, the opportunities and limitations in the site and the architect's vision for bringing the elements together.

Project: Underwood Residence, Raleigh
Architect: Dodge and Associates, Archi-
tecture, Planning, Interiors, Raleigh
Client: Mr. and Mrs. H. A. Underwood III,
Raleigh
Interior Design: Perry and Plumber Design
Association
Photography: Rick Alexander, Charlotte



Top: This Chapel Hill home was designed with offsets to gain light and views in all the principal rooms of the house. Above: A freestanding fireplace and cathedral ceiling are the focal point of the living room. Below: A formal courtyard in the rear of this Raleigh house is part of an overall plan to offer plenty of space for entertaining on a grand scale.



Teaming Up On Interiors

If home interiors are to be designed, not decorated, shouldn't the interior designer be a player on the team that designs a new home?

Absolutely, says Calvin Hefner of Charlotte, the president of the Carolinas Chapter of ASID. Often a client will call on the designer at whatever point he becomes overwhelmed with choices or concerned that his furniture won't work.

"If they will hire an interior designer at the outset," he said, "even while they are putting their plans together, they will get a lot more out of it."

Architect Wayne Camas agrees. Camas, whose firm does interiors as well, insists on a team effort if another interior designer is brought in.

"I'd rather work with the interior designer throughout the project," Camas said, "than come back a year later and find this project completely changed by someone determined to leave his mark on it."

If these two seem to speak as a team, it may be because they worked as a team on the Wojnowich house in Charlotte from the time the foundations were poured.

"At that stage," Hefner said, "we took the plans and looked at room arrangements to see how furniture would fit into the floor plans."

The Wojnowich residence has 7,400 square feet and is located on nearly three sloping acres in Southeast Charlotte. It was designed to be a self-contained residential complex for an active family—well-suited to entertaining, inside and out.

Natural areas were left intact, including a creek at the rear of the property, providing privacy and natural buffers. An auto entry was placed at the upper cul-de-sac, where

Project: Wojnowich Residence, Charlotte
Architect: Camas Associates

Architects, PA

Client: Saul and Lori Wojnowich, Charlotte
General Contractor: Bill Thomas, Charlotte
Interior Design: Calvin Hefner
Photography: Rick Alexander, Charlotte



A balcony overlooks the living room of a Charlotte house in which the architect and interior designer collaborated to provide a unified look.

the house can be seen only through the trees.

The house makes its initial statement with a barrel vault, a paper-clip shape that gets repeated throughout the house—in the leading on the side doors, the outline of a stained glass window over a bathroom tub, a railing in the living room.

The client was emphatic about wanting lots of light. The sun follows the windows in the living room. The dining room has views of the pool, and a balcony off the master bedroom overlooks the pool.

Outside, a fountain at the dining terrace level flows along terraced planters to the pool level, unifying the spaces. A waterfall, using water pumped for the geo-thermal heat

recovery system, feeds a man-made stocked pond below.

It's an unmistakably posh house that reveals more and more as you move from front to back. "The house is supposed to be severe and dramatic when you arrive," said architect Camas. "It is like a beautiful evening gown that is cut high in front, then plunged in back."

To make the interiors fit the architectural statement, Camas and Hefner worked together without drawing rigid lines between their jurisdictions.

When Camas draws up the structural plans, he is also deciding where the furniture will go. For instance, he used black ebony detailing in the floor of the living room to tie in with a black ebony, grand piano.

Likewise, Hefner considers structural shapes when he plans interior arrangements. When Hefner first looked at the living room plans, for instance, he felt that the optimum furniture placement required an additional two feet. Since the fireplace projected into the room about two feet, he suggested the plan be altered to make flush with the wall.

"He (Camas) was very gracious and pulled it back into the wall for us," Hefner said. And fortunately the problem was discovered before the fireplace was built.

Hefner also discovered a window-treatment problem in the dining room. The windows across the back of the house had overlights that a side window in the same room did not have. Camas, who had designed the windows for louvered drapes, agreed with Hefner that these windows should be softened with silk swags. Since the windows had already been ordered, Hefner solved the height differential by adding a mirror to match the overlight over the other windows. Once the drapery was hung, it was impossible to tell the difference.

Camas designed the bed for the master bedroom, which is elevated on a platform to bring it to the level of a raised fireplace. Together the two designers worked out a window treatment that would offer privacy and light control without eliminating the view. Since Camas was adamant that the windows not be covered with yards of fabric, the two settled on lambrequins that repeated the arch over the main doorway.

"The interiors were designed not to detract from the architectural details, but to add to them," Hefner said.

There were some conflicts. In a bathroom that Camas wanted to finish in a rose-colored marble, Hefner advocated a blue French tile. The decision was left up to the owners, who chose Hefner's blue tile.

"It makes for a big statement," Camas said, "but I felt it wasn't necessary. We discussed it. We both knew how we felt about it. But the decision was made, and that was it. It was as simple as that."

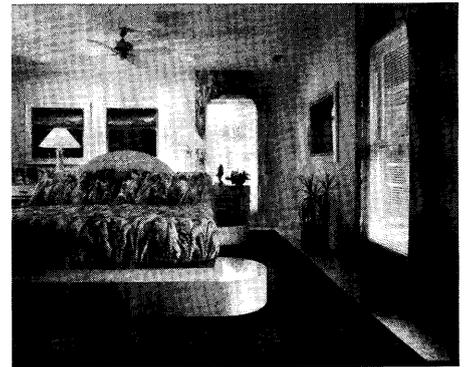
The amazing thing, Camas said, is that there was so little conflict. "Most of the furniture was bought new. When you consider how many decisions were made, how many things were discussed between us and that we are



two people with very strong tastes, we had very few disagreements."

Too often, Camas said, the interior designer moves in when the architect is finished. "There's this dichotomy, this struggle. This next person wants to put his stamp on the job—Victorian poofs on contemporary spaces."

Good contemporary design, Camas



Above: The architect designed this elevated bed to complement a raised fireplace. And he and the interior designer collaborated on the arched window treatments that pick up the architectural arch over the main doorway. Left: The wrought iron railing repeats a theme that recurs throughout the house. The creamy walls and white woodwork provide a clean backdrop for the stairway.

said, is the result of good teamwork. And the key to teamwork is mutual respect.

"You have to go into this with a certain level of respect for the other person as a professional."



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Romancing the Home with Stone



A granite kitchen counter is featured in one of several home-like settings at the Luck Stone showroom in Greensboro.

Stone has come in from the cold. No longer consigned to terraces, landscaping and exterior walls, stone is now making big statements inside the house.

Marble—faux, synthetic, and real—covers floors and walls and transforms bathrooms into luxurious pleasure domes. Polished, speckled granite gives kitchen counter tops a new dignity. Furnishings have gone stone-sober, with marble and granite table tops and bases, desks, columns and pillars. Interest in the ever-popular marble fireplace surround is at an all-time high.

A few years ago, this trend inspired Luck Stone, a Southeast company that has been in the stone business since 1923, to make a major leap in marketing its product. Rather than rely on brochures to show what these stones can do, they started building showrooms.

Borrowing the gallery marketing strategy that has revolutionized the furniture industry, in which furniture is displayed as it would appear in the home, Luck Stone opened a Greensboro showroom two years ago that features vignettes of a kitchen, bathroom, fireplaces and other residential or office settings.

The showroom gives people the op-

portunity to see, touch and feel the stone as it actually appears in the pages of *Architectural Digest* and *Metropolitan Home*.

"Stone is hot," said Michael Fuller, manager of the Greensboro center. "We have seen a real surge in stone in the last four to eight years, and it's on the upswing. So we don't have to create the interest. What we have to do is get to the professional, the person the customer is coming to saying, 'This is what I want.'"

To passersby, the Luck Stone showroom at Patterson Street and Holden Road may resemble any other stone yard. Heaps of flagstone, sandstone and gravel cover the lot. Landscape and building stone account for half of the center's business. Less than two years ago, however, it was 75 percent of the business.

The gallery represents the company's growth product.

Designers and architects bring clients to the showroom to discuss possible uses and colors, Fuller said. Sometimes, they send a client over to pick out for himself the stone he wants to adorn his fireplace or bath.

There, the client can see how various shades of marble can be combined in wall tiles, floor tiles, vanity tops and tub surrounds. He can pick

from a surprisingly varied palette that ranges from the charcoal grays of Breche Nouvelles to the rich magenta of Collemantina. There's the white-veined black Nero Marquina, Rosa Aurora, White Carrara. He can see also that in marble, for instance, a color that dominates in one slab may be quite subtle in another.

Luck Stone has a wall of about 125 sample square-foot tiles of marble and granite that designers or home owners may check out so they can try out the colors in the home setting.

Prices for marble range, on the average, from about \$23 to \$65 per square foot, though they go as high as \$300 a square foot. Granite is slightly higher, \$28 to \$75 a square foot. Custom work is done in the Luck Stone's cutting shop next to the showroom.

Granite tends to be the best choice for kitchen counters because it has a regular pattern and is harder and more impervious to stain. Marble lends itself to bathrooms and decorative table tops and bases.

A customer may pick out the very slab he wants to use as his table, counter top, floor tile or fireplace surround in the fabrication shop. Workmen will cut, edge and finish it to specification. The shop also does repairs and restores old stone, removing stains and repairing cracks so they seem to disappear.

Fuller thinks stone's appeal is part of an overall interest in natural products and quality products. Just as people have returned to natural cotton, silk and wool for their clothing, they are again recognizing the classical beauty and elegance of stones that have dignified buildings and monuments for centuries.

Once in a while, Fuller said, a customer has difficulty accepting that the veining in marble does not conform to the rules of symmetry. That customer, he said, probably would be happier with synthetics.

But for most customers, the lack of uniformity is the stone's appeal. No two pieces will ever be exactly alike.

Good News Travels Fast.



Hickory 10-87



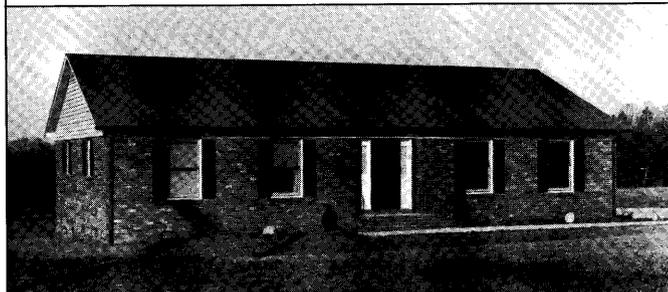
Winston-Salem 12-87



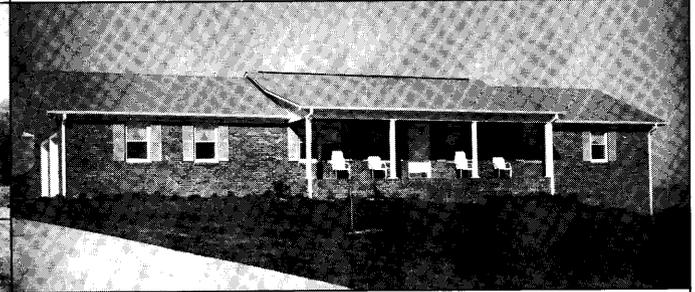
Charlotte 12-87



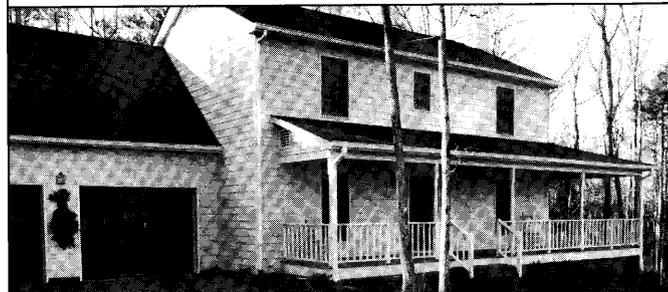
Greenville 2-88



Lincolnton 7-88



Spartanburg 8-88



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Spinning Dream Homes Out of Whole Cloth

W. Randall Bray, AIA, of Bray Associates in Wilmington graduated from N.C. State University with a bachelor of architecture and Massachusetts Institute of Technology with a masters in architecture. Before starting his own firm in 1976, he worked with Edward Durrell Stone; Leif Valand & Associates; Toombs, Amisano & Wells; Thompson, Ventulett & Stainback; and NBCS Architects, of which he was president.



By W. Randall Bray

In the early 1940s through 1970s, 70 to 80 percent of Americans could reasonably hope and ultimately afford to own their own home. Those percentages are quickly changing. Official projections for the 1980s and 1990s indicate that fewer and fewer people, perhaps only 25 percent of the population, will be able to own their own homes.

Owning a home is a basic component of the American dream. But the cost of the average home in the United States is now \$130,000, a staggering amount for the average person. For most people, a dream home is never more than a dream.

As architects, we enjoy the privilege and luxury of designing for the wealthy. But we also have a professional obligation to look for ways to build homes for the average person, to address the housing crisis we are so fast approaching.

Most work in that direction has been limited to modifying conventional housing systems to make them more affordable. This has brought us prefabrication, miniaturization and what may best be described as "minimalism," coupled with streamlined production and distribution systems. These approaches are useful as stop-gap solutions, but I don't sense that they furnish long-term practical and aesthetic answers to the housing problem.

Other solutions, such as double-wide mobile homes, are relatively inexpensive but ignore considerations of aesthetic appeal and quality.

Essentially, we have continued to use Stonehenge techniques to box people in on little plots of earth. As poor as this solution ultimately is, it has been acceptable as long as most people could afford a Stonehenge box and plot. That the result often lacked quality or took an unreasonable toll on income, time and energy was overlooked.

Think of the freedom people would enjoy if we could cut in half the cost of average, reasonable housing and the energy to run it. I think that can and should be done, if we are willing to take off in entirely new directions, use new technologies and new materials—and, at the same time, remain sensitive to curb appeal.

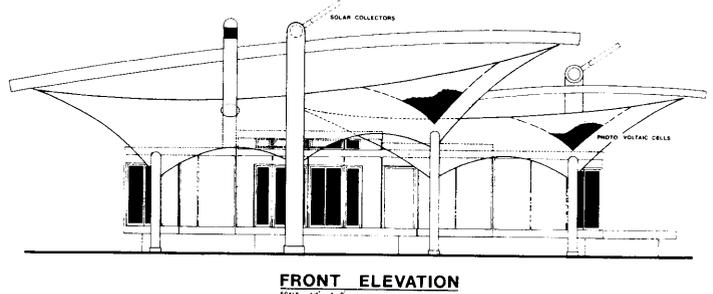
Some of the new spun urethane homes, for instance, are innovative and provide new live-in environments, but they have gone too far too quickly to gain public acceptance.

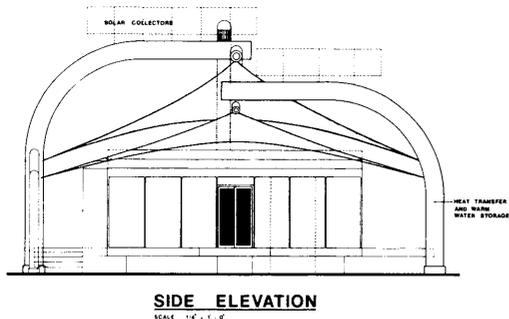
If I didn't care about public acceptance, I would consider a single, pedestal-supported, spherical enclosure, with openings that are computer-controlled for light and sun-screening. But this concept, no matter how cost effective, environmentally attractive and flexible, will not readily secure public market support. It has no curb appeal.

Our office has been working on an inexpensive housing design that is acceptable, as well as aesthetically pleasing and of high quality. This house is made primarily of fiber.

Technological developments in recent years have made fabric a highly desirable building material. It is fire resistant, rot resistant and water repellant. And it comes in different textures, colors, strengths and with a 20-year warranty. As a material for enclosing a rectangular volume of space, fabrics are much less expensive than sticks and bricks.

The fabric home our office has developed is expandable in stages to three bedrooms and two baths. It has an entry foyer, kitchen, dining room and living area—for a total of 1,450 square feet. The plan makes use of an





economical but unconventional drilled tube foundation. The support structure and floor are of reinforced fiberglass/plastic, hollow tubes.

The interior and exterior walls are formed with a one-inch-thick quilted fabric that is acoustically and thermally insulated and is prefinished inside and out. The ceilings, suspended within each space, are a prefinished, double-envelope fabric. Ceiling heights are 8 feet in the bedroom, 9 feet in the kitchen and dining room and 10 feet in the living areas.

General interior lighting is through the translucent ceiling fabric. The roof system is a synthetic fabric membrane supported by a method patented by this office.

Mass produced, this system could sell for as low as \$45,000 completed or \$25,000 in a build-it-yourself kit, designed to be assembled in 45 days or less. This includes plumbing, electrical, heating and air condition-

ing—the whole dwelling. Such work as cutting to shape, length and pattern, drilling, painting and finishing would be done in the factory. Utilities, as well, will be prefit so that the homeowner may snap, twist or match end A to end B without tools or a need to call in building contractors.

This solution, admittedly, is a compromise in design. The goal is to provide a housing concept that won't be rejected as too radical, yet introduces cost-reducing innovations without sacrificing aesthetics and quality.

This concept allows for a relatively normal house that will grow as the family's income and spatial needs grow. It offers flexibility and is highly adaptable to manufacturing standardization.

I would very much like to be part of a team effort to assemble and promote an example of this type of solution to the housing needs of the future.

Share your thoughts on subjects architectural or remotely related. Send manuscripts (800 words or less), your photograph and a brief biography to North Carolina Architecture, AIA Tower, 115 W. Morgan St., Raleigh, N.C. 27601.

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Designs That Move



The North Carolina Dance Theater raises symbolic buildings with real spring-loaded rods in "Archidance," a blending of architectural design and dance. Photo reprinted by permission of The Charlotte Observer.

Can buildings dance?
Can dancers build?

Can an architect design dancing structures that dancers can build?

H. Woodward (Woody) Middleton, AIA, of Charlotte, teamed up with the North Carolina Dance Theater in an innovative project called "Archidance" that answered these questions with an emphatic "Yes."

"Archidance" is a collection of three dance theater pieces that combine architecture and dance in a modern parable of construction and destruction—life, death and rebirth. It premiered at Spirit Square in Charlotte in January, played in Winston-Salem the same month and was taken on the troupe's Florida tour, where it was seen in Boca Raton, Miami, Vero Beach and Key West. It has become a staple in this feisty dance company's repertoire and will be performed again next season.

Sal Aiello, NCDT artistic director, choreographed the first and third pieces. Principal dancer Mel Tomlinson choreographed the second.

Middleton's role was to provide sets that could become part of the choreography as opposed to sets that are a static backdrop. These sets would change during the dance, as part of the dance, and not during the intermission.

"As we discussed this," Middleton said, "I thought of something that would have almost a magical appear-

ance of evolving—now you see it, now you don't."

Middleton, a partner in the firm of Middleton McMillan Architects, Inc., was reminded of his days at Clemson University when Buckminster Fuller came to lecture. Fuller was talking about the future of building techniques and asked the group to consider what they would take with them if they were going to the moon and could only carry what they could fit into a fist. He then threw out a fist full of rods, and they grew into a 15-foot geodesic dome.

And that is what Middleton came up with— $\frac{3}{8}$ -inch polished aluminum rods that are spring-loaded to form geodesic panels. A dancer can carry a handful, flip a hinge-type connector to relieve the tension in the springs and the structure grows into 18-foot arcing walls. The rod structures have a high-tech, stylized edge that fits the ever-changing, evolving dance environment.

Middleton even knew of a company that makes the spring-loaded structures for displays and trade shows, Nomadic Structures Inc. of Springfield, Va. This company not only made the sets Middleton designed, it also donated them to the dance company.

At the premiere, the performance had begun long before the audience knew it. Dancers in jeans, hard hats and tool belts walked around the lobby, stood on the balconies in the theater and had to be roused from

seats when ticket-holders arrived to claim them.

The performance begins with "The Construction Company," in which the dancers build a city to atonal music that conveys the incessant beat of the hammer, drill and jackhammer. Then they take breaks and celebrate pay day with energetic clogging, square dancing, and rock and roll—to the music of the likes of Janis Joplin, Ricky Skaggs and Bob Seger.

As they dance, the dancers lay a road with sheets of vinyl laid edge to edge in a geometric pattern. At the apex of the road, an 18-foot pylon begins to rise. The dancers release half the circle, then flip the form to complete it.

Tomlinson's "Habitation," set to the music of Saint-Saëns' *Carnival of the Animals*, centers on the search for an apartment by two main characters, Mrs. Tortellini (the tortoise) and Harry Harestein (the hare). Along the way they run into a zoo of characters, including a garbage collector on roller skates with a trunk on wheels and a pianist who shoots her shadow.

The third piece, "Destruction," turns somber, depicting a child hiding from the terrible vision of a city in decay and ruin. But, in the end, the architects of the future enter—children carrying teddy-bears who will rebuild the cities and a new future.

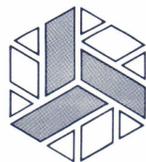
Middleton, who has practiced architecture in Charlotte for 22 years, spent time in the 1960s designing and building sets as a volunteer for the Charlotte Opera Company. He also designed the renovations for Spirit Square, now underway. And, just before he was approached about this project, he had seen an exhibit in Washington of stage sets done by architects. He was fully primed for the opportunity.

"This was just a real fun experience," he said. "It isn't something you do every day."



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Coatings
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From humble beginnings in Germany in 1935 to plants and offices around the world, STO's reputation for innovative, quality products that solve specific needs for the construction industry has grown to global proportions. The same spirit of innovation that has catapulted the company to world leadership is that which ensures the best quality products and services possible.





Recognized for its design excellence, Phase 1 of the Tegeler Harbor Housing Complex was completed in 1987 for the International Building Exhibition in Berlin. Master-planned by Charles Moore, FAIA, and Moore Ruble Yudell, winners of the design competition, it represents classic Post Modernism at its best.

Tegeler Harbor also exemplifies the extraordinary quality and versatility of STO materials through the project's magnitude and award-winning design. Based on STO's theories of Applied Color Use in Architecture, extensive color analysis and renderings were produced by the STO Color Studio. The final colors and forms of Tegeler lend each new housing complex its exquisite appeal and accomplish its playful yet dignified integration into the surrounding environment of old Berlin.

Tegelerhafen
Berlin, West Germany
Architect: Moore Ruble Yudell,
Architecture and Planning

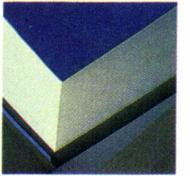
STO Systems shatter the inherent limitations of traditional building materials. Tremendously energy efficient and durable, **STO Exterior Insulation Systems & Finishes** (EIFS) perform like a protective skin that breathes and resists moisture, yet remains flexible even in extreme or changeable climate conditions.

With the insulation on the outside of the building, the system forms a shield against the elements. Thermal voids are eliminated and replaced by consistently high R-Values. Advanced features include superior weatherproofing seals, foundation insulation, and waterproofing. The result is full above and below grade protection other materials and wall systems just can't deliver.

STO Wall Systems provide unprecedented freedom of design as a protective "skin" that follows all of the curves, bends and sculptured details imaginable. Then it can be finished with textures and colors that will enhance your design. Instead of limitations, STO Exterior Insulation Systems offer inspiration.

STO technology has dissolved the limitations of EIFS itself. No longer is the industry limited to one or two general, multi-purpose systems. STO offers a range of wall systems wide enough to answer virtually every building need and problem, whatever the substrate, condition or environment. Each STO Wall System has been extensively tested and subjected to strict quality control prior to market release. The following series represents only a portion of the STO wall solutions possible.





- A Renaissance Tower**
Surfside Beach, South Carolina
Architect: Stevens and Wilkinson
- B Schwartz Residence**
West Stockbridge, MA
Architect: Schwartz/Silver
Architects
- C Kendall Corp. Center**
Miami, Florida
Architect: Stewart Cohen
- D Residence**
Rutland, Vermont
Architect: Robert Carl Williams
Associates, P.C.
- E 3556 on the Bay**
Virginia Beach, Virginia
Architect: Lgm, Inc.
- F Orchard Hill Place**
Novi, Michigan
Architect: DesRosiers Architects



SYSTEM I

Opportunities for architectural excellence unfold with the new standards of technological innovation built into SYSTEM I.

The highest quality, completely 100% synthetic EIFS available, STO SYSTEM I provides unsurpassed flexibility, durability and protection. But what's truly innovative about SYSTEM I is the superiority of every individual system component. Unlike the materials in competitive systems, every STO component is 100% synthetic and utilizes the highest quality materials for optimum performance.

SYSTEM I can be utilized on all types of construction with the outstanding performance and aesthetic beauty STO systems are noted for.

SYSTEM II

Here is a perfect medium for providing the durability, protection and versatility of EIFS, together with the exceptional quality of STO Systems—all at an economical price.

SYSTEM II surpasses the competition's best because it's composed of 100% synthetic material combined with 20% cement. That translates into superior performance when compared to the industry standard composition of 50% synthetic and 50% cement.

Whenever high quality marries competitive pricing, the response is widespread popularity.

C-SYSTEM

The STO C-System is fully cementitious and the most economical STO System on the market. C-System combines the latest in cementitious technology with STO's EIFS experience in a system that's ideal for residential use. Because of its cementitious nature, C-System provides fast curing in cold temperatures. The components are packaged in a bag, ready to mix at the job site and can be stored dry, in moisture-free, unheated areas through the winter months.

The C-System can be applied to virtually any substrate, and can be detailed and applied in the same manner as Systems I and II for a high level of thermal efficiency and durability.

TOUGHWALL

The key to puncture protection lies in TOUGHWALL, the system specifically designed for the protection of structures from vandalism and high traffic abuse. Mechanical fasteners lock TOUGHWALL™ to any substrate, whether new or old.

The core of the system is composed of STYROFOAM® brand insulation, the Blue™ rigid foam insulation made only by The Dow Chemical Company, and STO TOUGHWALL Ground Coat. As the only pre-mixed ground coat among hard coat systems, STO TOUGHWALL Ground Coat requires nothing but water added, thus assuring the highest level of quality control at the job site. The result is a complete thermal system that boasts superior water resistance, puncture resistance and compressive strength.

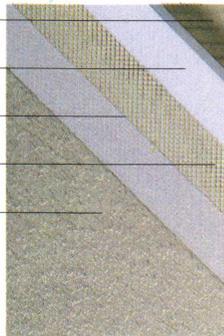
A. Attachment

B. Insulation

C. Ground Coat

D. Reinforcement

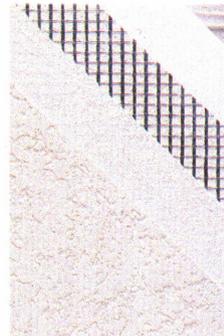
E. Finish



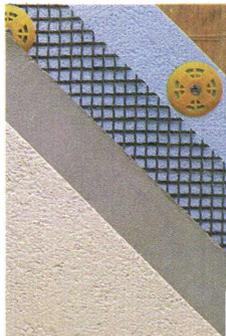
A. STO Dispersion Adhesive
B. STO 1# EPS Insulation Board
C. STO RFP
D. STO Reinforced Fiberglass Mesh
E. STO Finish



A. STO BTS-B Adhesive
B. STO 1# EPS Insulation Board
C. STO BTS-B
D. STO Reinforced Fiberglass Mesh
E. STO Finish



A. STO ADH-B
B. STO 1# EPS Insulation Board
C. STO Ground Coat-C
D. STO Mesh-C
E. STO Mineralit



A. STO Fastener Disk
B. STYROFOAM® Brand Insulation
C. STO Toughwall Ground Coat
D. STO Mesh-C
E. STO Finish



M-SYSTEM

When faced with the renovation of walls with damaged or brittle substrates, the long-proven solution is the mechanically fastened STO M-SYSTEM. Because its rigid PVC tracks are mounted onto the substrate and hold the insulation system away from irregular surfaces, M-SYSTEM completely eliminates the need for surface preparation or removal of the substrate. The transformation from old to new is complete with the application of STO SYSTEMS I or II, resulting in attractive walls that are more durable, thermal and flexible than the original walls ever were.

PANELIZED STO SYSTEM

Time. It's one of the most important intangible measures of success in building construction. And it relates directly to the tangible one: cost.

The focus of panelized STO Systems is successful on-time application. Fabrication by skilled panelization contractors in a climate-controlled facility assures superior quality and timely delivery. On-site installation of the lightweight panels is swift—a fraction of the time required for conventional field construction.

A range of STO products and application techniques are specifically designed for panel construction. And, of course, the completed structure boasts all of the superior thermal and protective properties STO Systems are noted for. System I is ideally suited for panelization. The Noncombustible System may be utilized as well.

BELOW GRADE SYSTEM

Once a breakthrough in the industry, the STO Below-Grade System still continues to elude competitors. It remains the only completely waterproof exterior insulation system for foundation protection on the market. STO FLEXYL, as the adhesive and ground coat, is absolutely waterproof, when used according to specifications. Yet, it's as flexible as fabric, even in the coldest temperatures. STYROFOAM® brand insulation, the Blue™ extruded foam insulation manufactured only by The Dow Chemical Company, provides the excellent thermal properties.

NONCOMBUSTIBLE SYSTEM

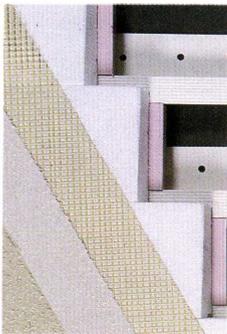
The noncombustibility of this system meets the standards set forth by the Los Angeles Dept. of Building. This is now the only exterior insulation system approved for use in L.A., one of the most code-restricted cities in the U.S. It was also approved in N.Y. City in 1984, three years before the approval of other exterior insulation systems. STO Mineral Wool Board, its key component, has been successfully utilized in Europe for over a decade. In addition to the noncombustibility of the system, it provides superior thermal properties, durability, flexibility and lasting beauty.

STO SEAL SYSTEM

As a combination of STO SEAL with one of the STO Exterior Insulation Systems, this wall system combines all of the benefits of exterior insulation with the most efficient, weather tight window and door seals possible.

A self-adhering, expanding tape, STO SEAL is quickly installed at the same time as the STO System is being applied. This important feature eliminates the extra time and cost incurred by caulking after the wall system is in place. When applied against properly prepared adjacent surfaces, STO SEAL expands to effectively seal all irregularities against air and moisture infiltration.

The STO SEAL System has long been proven effective on even the most moisture prone projects.



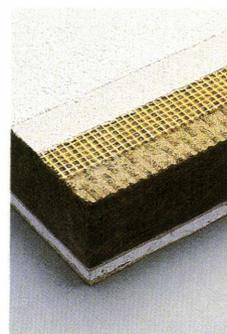
A. Mechanically Fastened STO Track System
B. STO Pre-Grooved 1# EPS Insulation Board
C. STO RFP
D. STO Reinforced Fiberglass Mesh
E. STO Finish



A. STO Dispersion Adhesive
B. STO 1# EPS Insulation Board
C. STO RFP
D. STO Reinforced Fiberglass Mesh
E. STO Finish



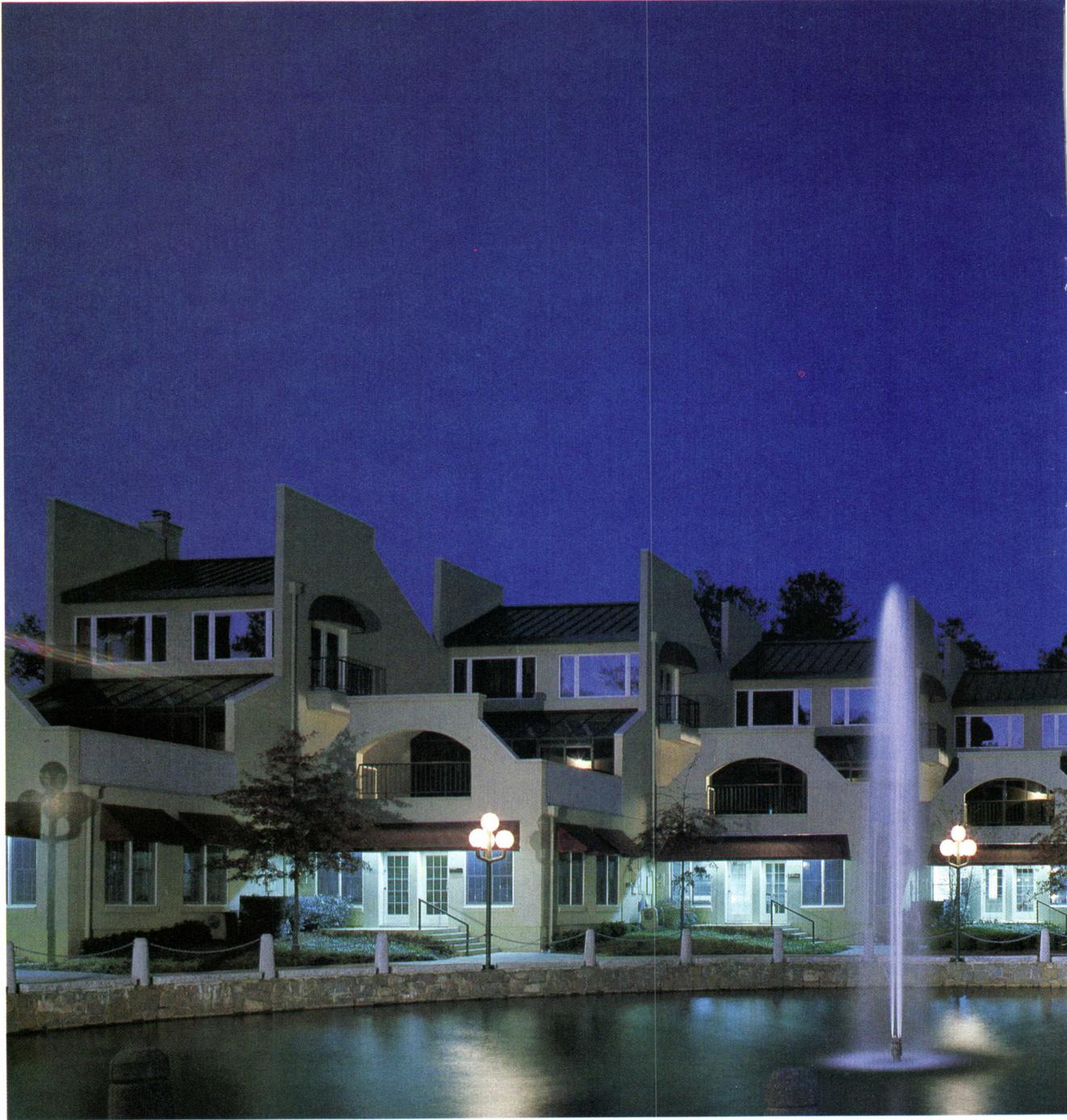
A. STO Flexyl Adhesive/Waterproof
B. STYROFOAM® Brand Insulation
C. STO Flexyl with STO Primer
D. STO Reinforced Fiberglass Mesh
E. STO Finish



A. STO Dispersion Adhesive
B. STO Mineral Wool Board
C. STO RFP
D. STO Reinforced Fiberglass Mesh
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D. STO Reinforced Fiberglass Mesh
E. STO Finish
F. STO Seal (Joint Sealant Tape)





In climates frigid and hot, locations wet and dry, elevations high and low, structures new and old, STO Exterior Insulation Systems outperform other materials – like night and day.

That's because STO wall systems envelop the outside of your building like a protective shield that insulates and resists moisture, yet remains flexible even in extreme or changeable conditions – beautifully.

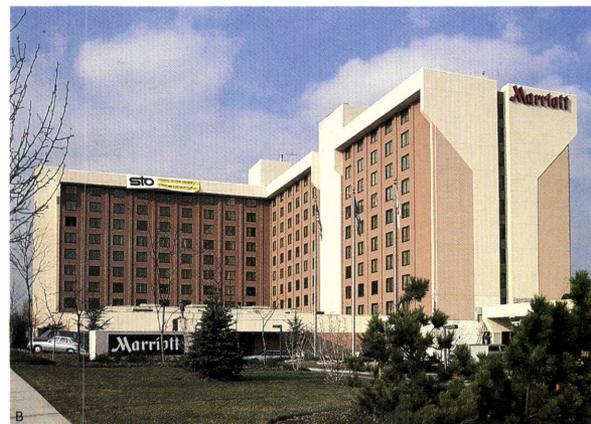
Century Lakes
Atlanta, Georgia
Architect: Porter and Associates

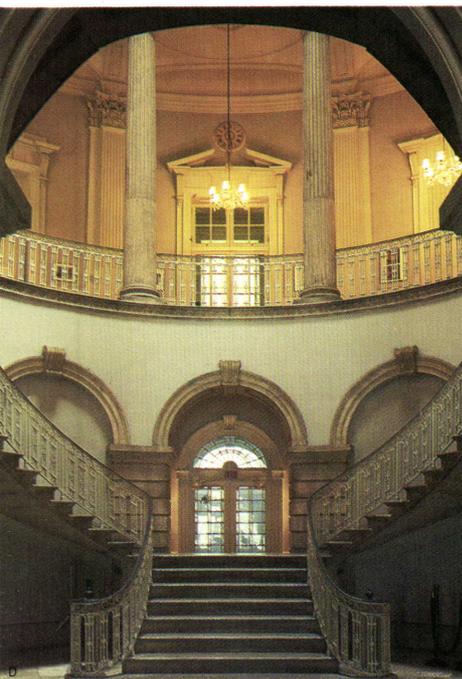
The deteriorating walls of buildings whose glory has long passed present a formidable challenge: to find new materials that are compatible with the old.

STO offers the widest range of proven wall systems specifically designed for **Restoration and Renovation**. And they're more than compatible – STO products outperform older materials in every way. Because of their thermal efficiency, weather resistance, durability, versatility and unlimited design freedom, the results are often dramatic transformations, both aesthetically and functionally. Above all, STO Systems can minimize or completely eliminate wall preparation simply and economically. Trained STO Technicians are available to evaluate problems and assist in formulating solutions utilizing STO materials.

Europe's extensive reconstruction in the 1950's inspired STO to develop superior materials, beginning their reputation for fine restoration. Today, that reputation remains unchallenged as scores of carefully restored buildings around the world stand as testimony to STO technology.

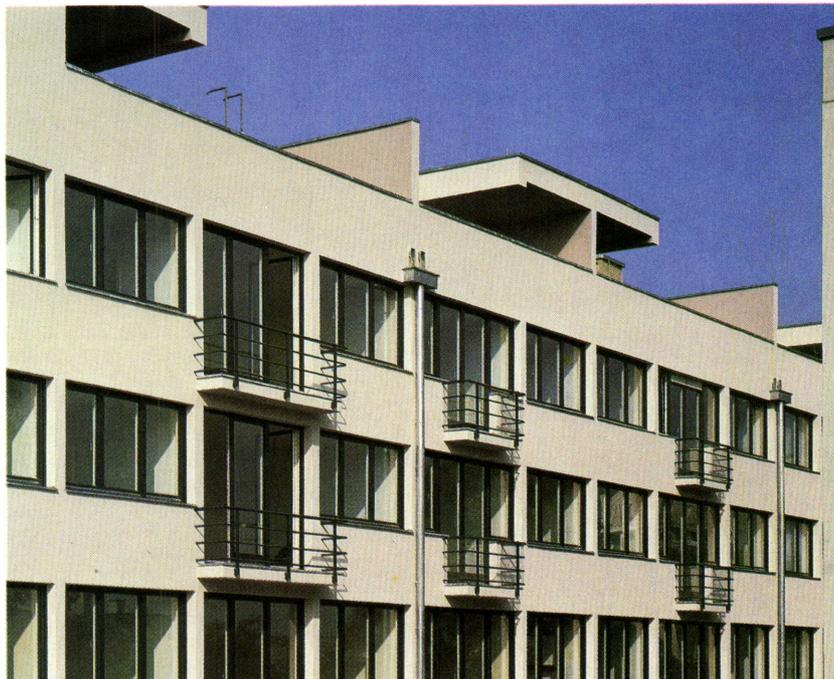
- A **Freemason Harbor**
Norfolk, Virginia
Architect: Bucher/Myers
Architects
- B **La Guardia Marriott**
New York, New York
Architect: Russell, Gibson,
von Dohlen, Inc.
- C **Waldorf Astoria**
New York, New York
- D **New York City Hall**
New York, New York





BEFORE

Under the leadership of Mies van der Rohe, assisted by 16 other renowned architects, the Weissenhof Colony came to represent the height of the Modern Movement. Built in 1927, it was one of the world's first significant affordable housing projects. Four decades of use and abuse necessitated extensive analysis by STO in its restoration. A specific system was designed utilizing adhesive intermediaries to prepare the concrete block substrate; a STO Exterior Insulation System for flexibility and superior protection; and a vapor-permeable, water resistant STO Coating System that provided the same appearance and texture as the original historic structure.



AFTER

Weissenhofsiedlung
Stuttgart, West Germany
Architects:
Mies van der Rohe
Le Corbusier
Walter Gropius
Peter Behrens
Bruno Taut
Max Taut
Mart Stam
Adolf Schneck
Hans Scharoun
Adolf Rading
Hans Poelzig
J.J.P. Oud
Ludwig Hilberseimer
Josef Frank
Richard Dopper
Victor Bourgeois

Since STO introduced its revolutionary, high quality synthetic resin coatings to the European market in 1955, the performance standard for the worldwide coatings industry has been redefined.

STO 100% Synthetic Coatings and Finishes provide the most long lasting protection and durability possible for interior and exterior walls. Weather resistant, vapor permeable surfaces are created that are ecologically safe and highly resistant to air pollution.

And, with over 350 colors and 30 textures, the widest range available, as well as color matching capability, freedom of color and texture design is at your fingertips.

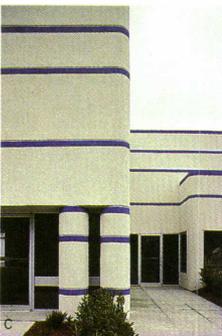
But the value of freedom without knowledge is minimal. After years of research, development and experience, STO presents systems of Color Theory and its application in architecture. This sophisticated STO methodology allows utilization of color as an integral design element that creates new possibilities for architectural excellence.



A **Park Inn International Ocean Key Hotel**
Virginia Beach, Virginia
Architect: Cox, Kiewer & Company, P.C.

B **Tegelerhafen**
Berlin, West Germany
Architect: Moore Ruble Yudell, Architecture and Planning

C **TRC Center**
Virginia Beach, Virginia
Architect: Walsh/Ashe Associates





The inspired design of this shopping center is brought to reality with STO Coating Systems. The dynamic interplay of color and form was uniquely developed through the use of sculpted polystyrene board to create walls with dimension. STOLIT 1.5, in meticulously selected colors that lend the structure its special appeal, was applied as the finish coating. It provides superior durability and long-term low maintenance, much needed properties in such a high traffic area as this.

Bakery Center
Coral Gables, Florida
Architect: Cohen, Freedman
and Associates

Given the exquisite appearance of

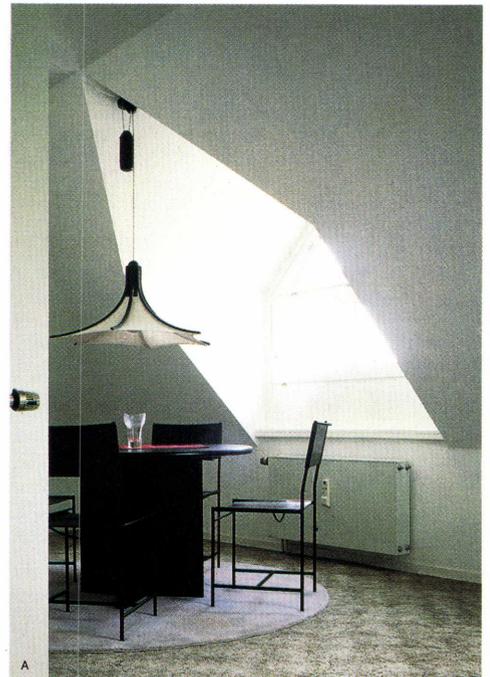
Interior Surfaces covered with STO Coatings, one would assume they were used simply for aesthetic appeal.

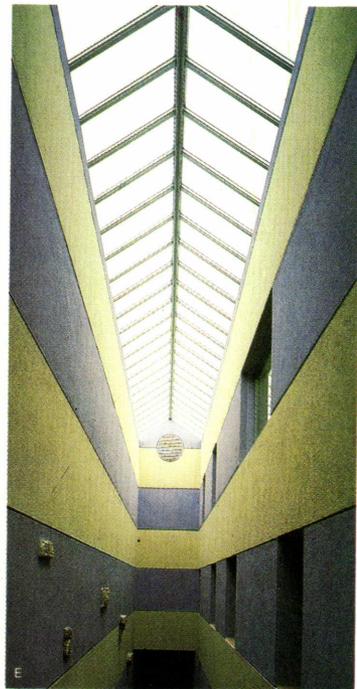
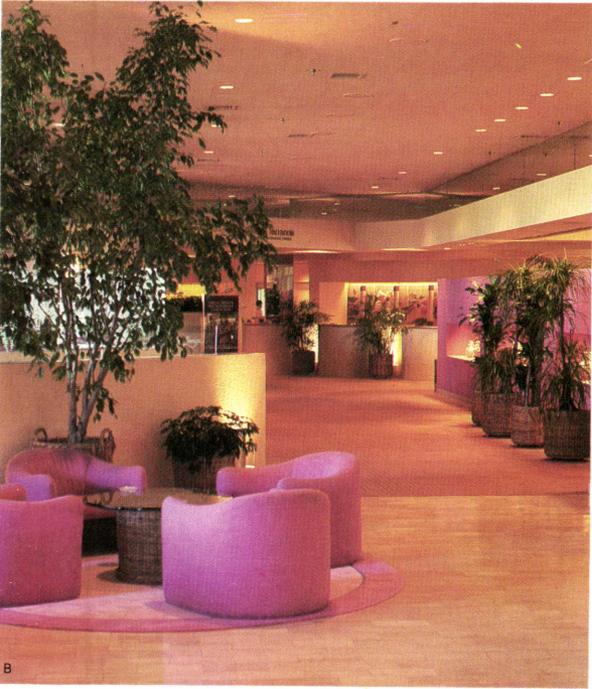
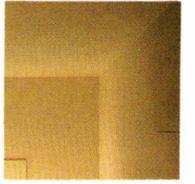
The fact is, STO 100% Synthetic Coatings and Finishes produce tough, seamless surfaces with the durability to withstand the abuse of constant high traffic flow. They're stubbornly resistant to scratches and cracks and their integral color composition minimizes any signs of wear and tear that may occur.

STO Coatings are easily and quickly applied and subsequent maintenance consists of little more than washing with ordinary detergents. They're safe, non-toxic and Class A fire rated.

With total systems for interiors that include a full range of sealers, primers, levelers and finishes, STO offers innovative solutions that effectively solve almost any interior wall problems from restoration through new construction.

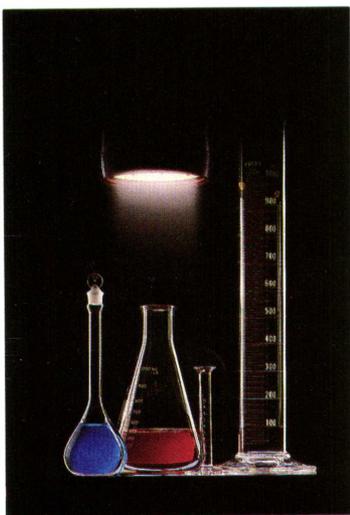
- A **Tegelerhafen**
Berlin, West Germany
Architect: Moore Ruble Yudell,
Architecture and Planning
- B **Pier 66**
Ft. Lauderdale, Florida
Architect: Py Vaura, Architects &
Engineers
- C **Highlawn Pavilion**
Eagle Rock Reservation,
New Jersey
- D **Lexington State Bank**
Lexington, NC
Architect: Briggs & Matthews
- E **The Arthur M. Sackler Museum**
Cambridge, Massachusetts
Architect: James Stirling Michael
Wilford and Associates in
association with Perry, Dean,
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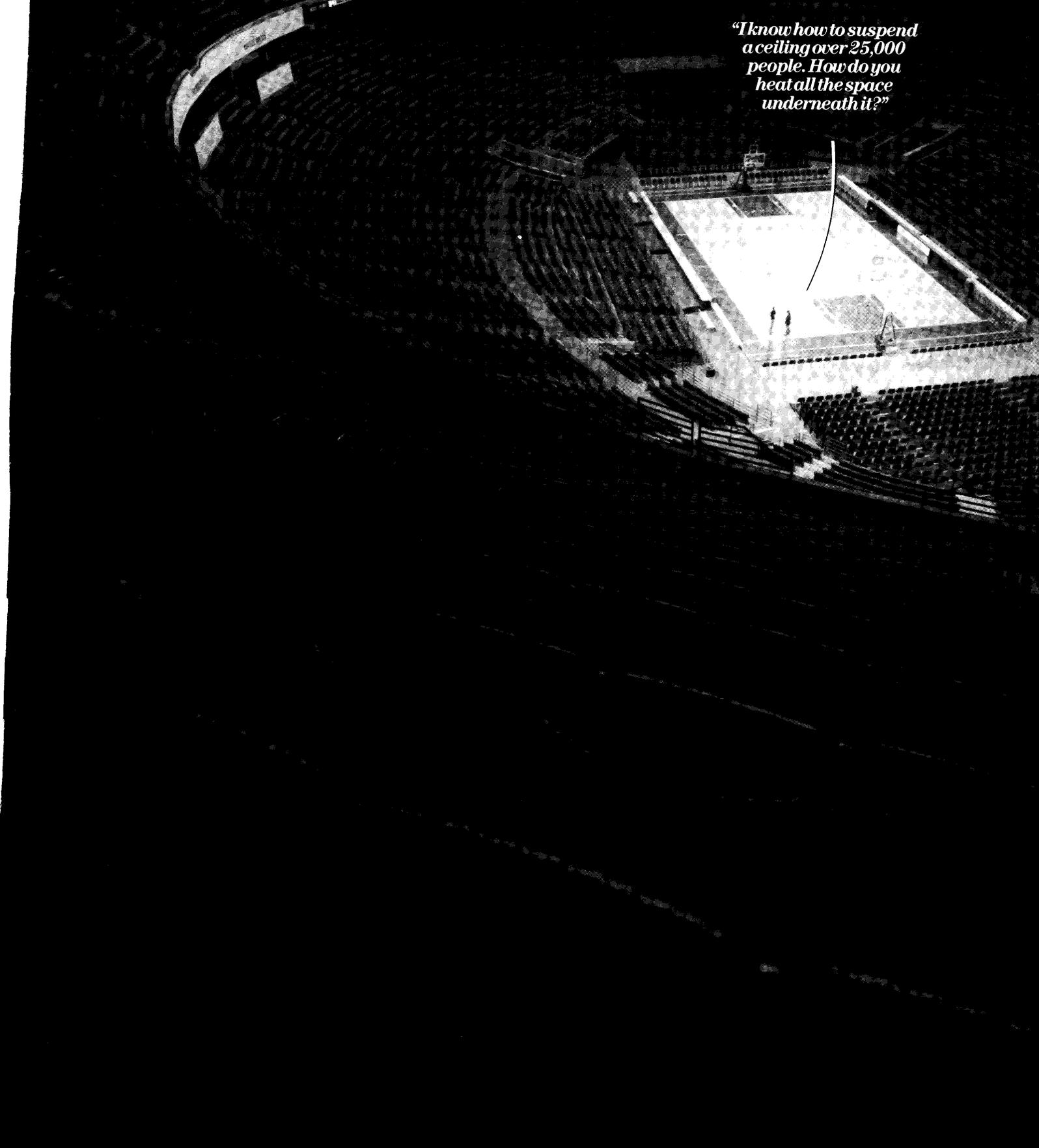
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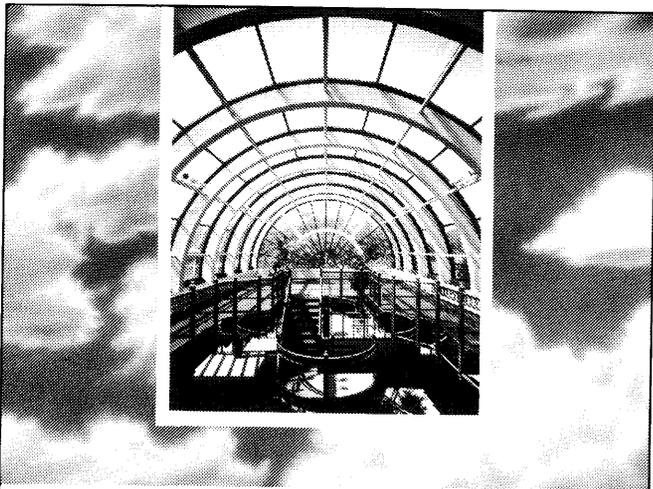
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A System for All Seasons: The Lincoln County Schools Energy Management Program

By Peter P. Cieslak

For Woodrow Hester, the payoff is not having to run up and down the basement steps to check the water in the old diesel fuel boiler. For Steve Rhyne, it means no more cleaning out the cinders from the old coal furnace. And neither of them has to spend long hours cleaning and polishing huge window walls.

Rhyne and Hester are custodians at Lincoln County Elementary Schools. They are benefactors of a new school retrofit construction program in which old heating systems and large window walls are replaced with energy-efficient heat pumps and maintenance-free brick walls. As a result of this program, four Lincoln County schools have saved the taxpayers the cost of constructing new schools, while providing the students and teachers with a modern, healthful and comfortable learning environment.



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The school retrofit program is a response to pressure from students, teachers and parents to provide air-conditioned classrooms during the late spring and summer when school is in session and the temperature is up. In addition, statewide surveys showed that many schools need renovation, and county bond referendums have been encouraged to provide it.

In October 1987, Duke Power Company co-sponsored a series of seminars on updating energy systems in older schools. Following one of the seminars, the Lincoln County Schools hired Williams Design, P.A., a Lincolnton architecture firm, to study how the plan might work for its four elementary schools: Love Memorial, G.E. Massey, Rock Spring and Union.

Dennis Williams, AIA, analyzed costs and energy savings and recommended that the retrofit program be applied in the four schools. A school bond referendum was approved, and construction began June 1988.

Williams' analysis showed that conversion and retrofit would cost about \$7 per square foot—compared to new construction costs of about \$40 per square foot. He found that brick veneer could be used to replace window walls at a cost equal to or lower than that of Dryvit and other "outsulation" systems. Local officials chose brick veneer because of its appearance, durability, sound resistance and low maintenance demands.

Williams has devoted a great deal of time and energy to this project. He has attended workshops by the N.C. Department of Energy and received certification as a DOE consultant. This allows schools, hospitals and other institutions to apply for matching fund grants when using his services for the retrofit program.

"We were able to take this project from idea to reality in less than one year," Williams said. "We want to show our clients that we can do the job and do it better on a local level."

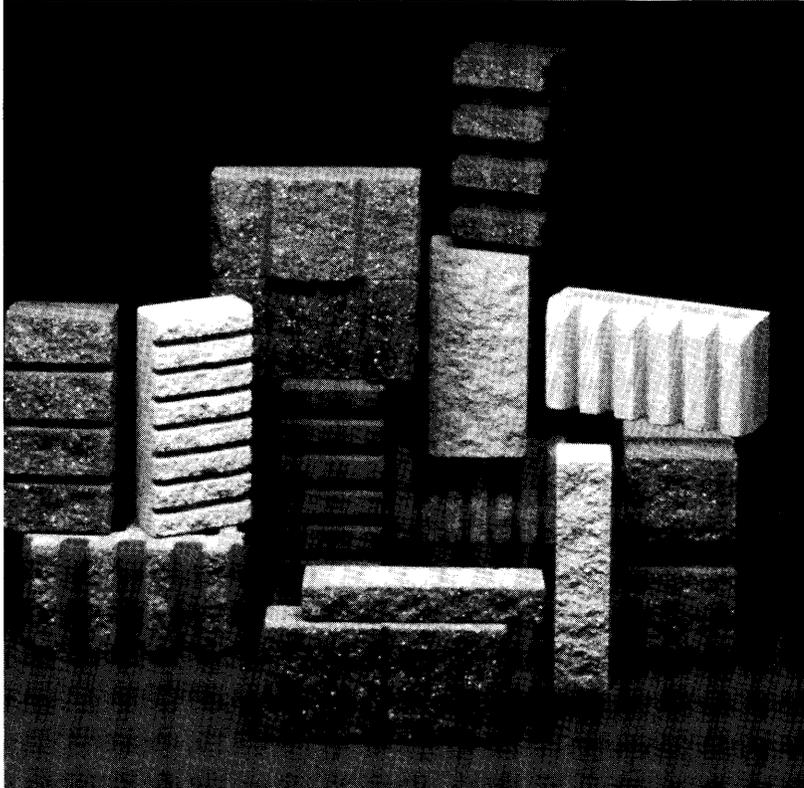
Lincoln County Schools officials apparently agree.

"These renovations ensure a comfortable, healthier and productive environment for our students and teachers," Supt. Martin Eaddy said. "The added bonus is that we were able to install heat pumps which both heat and cool these facilities without increasing our operating costs."

For more information on the retrofit program, contact Dennis Williams, AIA, Williams Design, P.A., Lincolnton, N.C. (704) 732-4515.

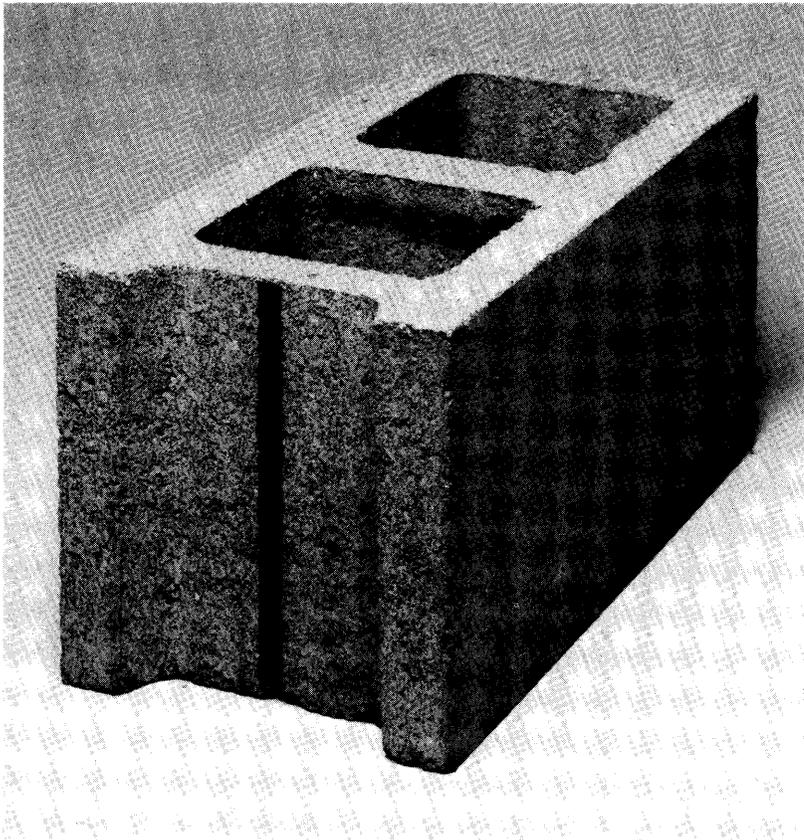
Gary Lutz of Duke Power Company contributed to this article. Cieslak is director of public and government relations for the Brick Association of North Carolina.

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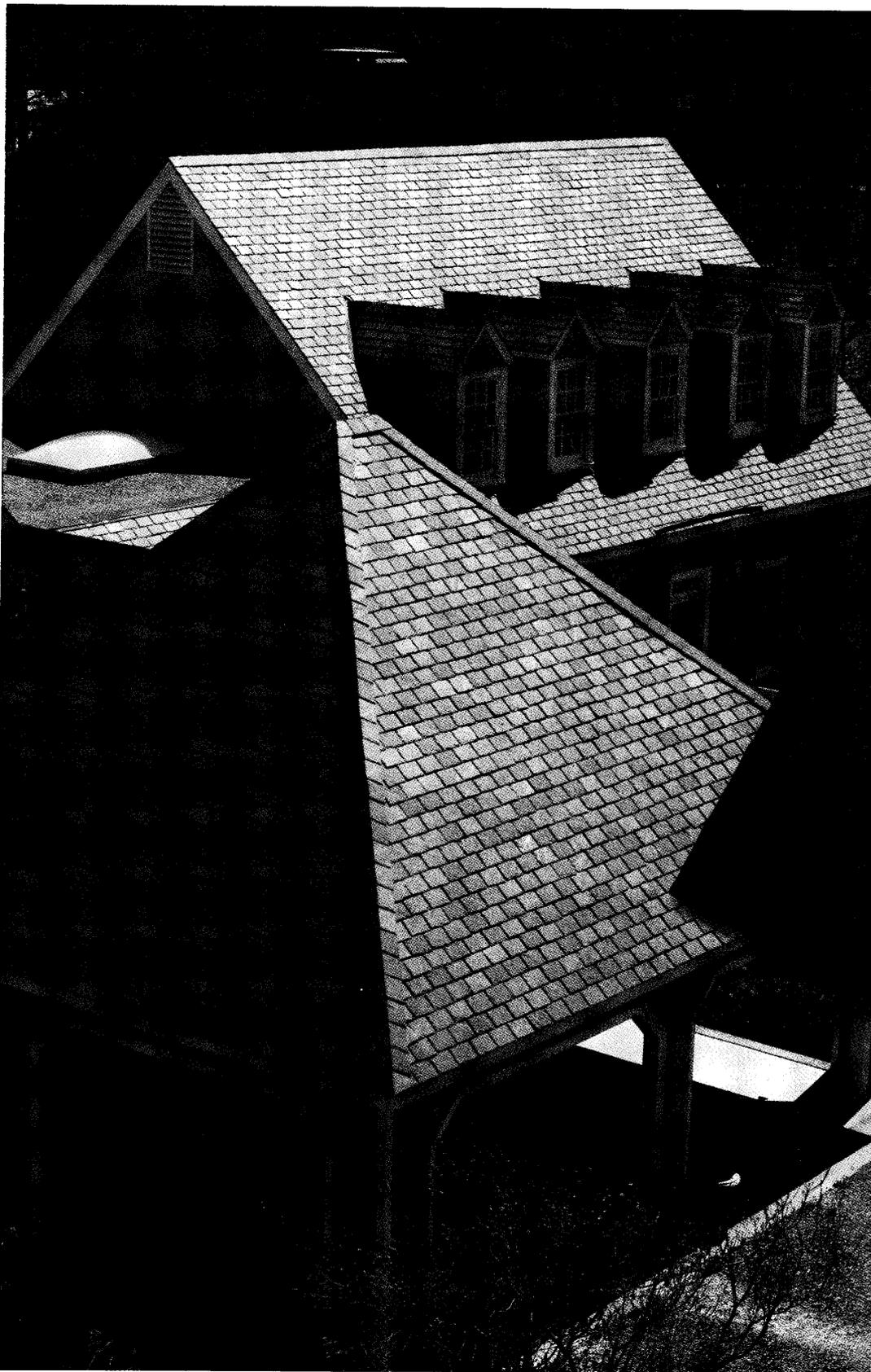
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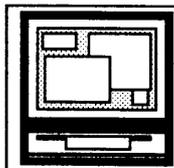
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Charlotte Firm Wins National Recognition

Jenkins-Peer Architects, of Charlotte, has been recognized by the Prestressed Concrete Institute for excellence in design for two North Carolina projects—the Regency Executive Park in Charlotte and One WestChase Executive Center in Raleigh. The two projects were among 30 submitted from the United States and Canada in the institute's 1988 competition. Annual PCA awards recognize architects using precast, prestressed concrete or architectural precast concrete to achieve aesthetic expression, function and economy.

Carpet Design Wins Award

Camas Associates Architects, PA, and First Union National Bank were given the Award of Excellence for Outstanding Interior Design by Bentley Carpet Mills, Inc., for the design of the conference room carpet in Two First Union Plaza. The carpet installed in the lobby and elevators of the new One First Union is also by Bentley with the design by Camas Associates Architects, PA.

National Firm Opens RTP Office

GSGB, one of the top 20 largest architectural/engineering firms in the country, has opened an office in the

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 Ray Killian & Associates ■ Ohio State University ■ Calvin Hefner Interiors ■ Honey and
 Associates ■ Humanna Corporation ■ Lindsay Henderson Interiors ■ St. Lawrence College
 Kron Medical Company ■ G.T.E ■ Rodgers Builders ■ West Chase Development Corporation

Imperial Center on the perimeter of Research Triangle Park. GSGB, which was founded in Pennsylvania in 1948, has nearly 300 employees in offices in New York, Pennsylvania, New Jersey and now, North Carolina. It was responsible for nearly \$500 million in new construction in 1988. The firm served as managing architects for the Statue of Liberty-Ellis Island Restoration and Giants Stadium in the Meadowlands.

Directing the RTP office and the Southeast operations is J.D. Stacy, AIA, who has more than 25 years experience in the industry. Prior to joining GSGB, he was a principal and vice president of a 125-man firm in Charlotte.



J.D. Stacy

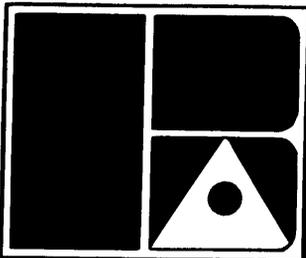
Florida Building by N.C. Architect Gets Award

Billy S. Bryant, an architect with Hager, Smith and Huffman Group PA of Raleigh was the project designer and manager for an Orlando, Fla., business center that received the 1988 Building of the Year Award of the National Association of Industrial and Office Parks. The 110,000-square-foot brick structure was developed by RCM Interests.

Durham Architect Named To Board

John L. Atkins III, AIA, of Durham, was named member emeritus by the North Carolina Board of Architecture at its December 1988 meeting. The board is responsible for examination and registration of architects in North Carolina. Members are appointed by the governor.

Atkins, the president of O'Brien/Atkins Associates in Research Triangle



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John L. Atkins III

Park, has served two terms on the board and was elected president in 1980 and 1984. He also has served on the National Council of Architectural Registration Boards (NCARB) and as president of the Durham Section of the AIA.

Raleigh Firm to Design IBM Fitness Center

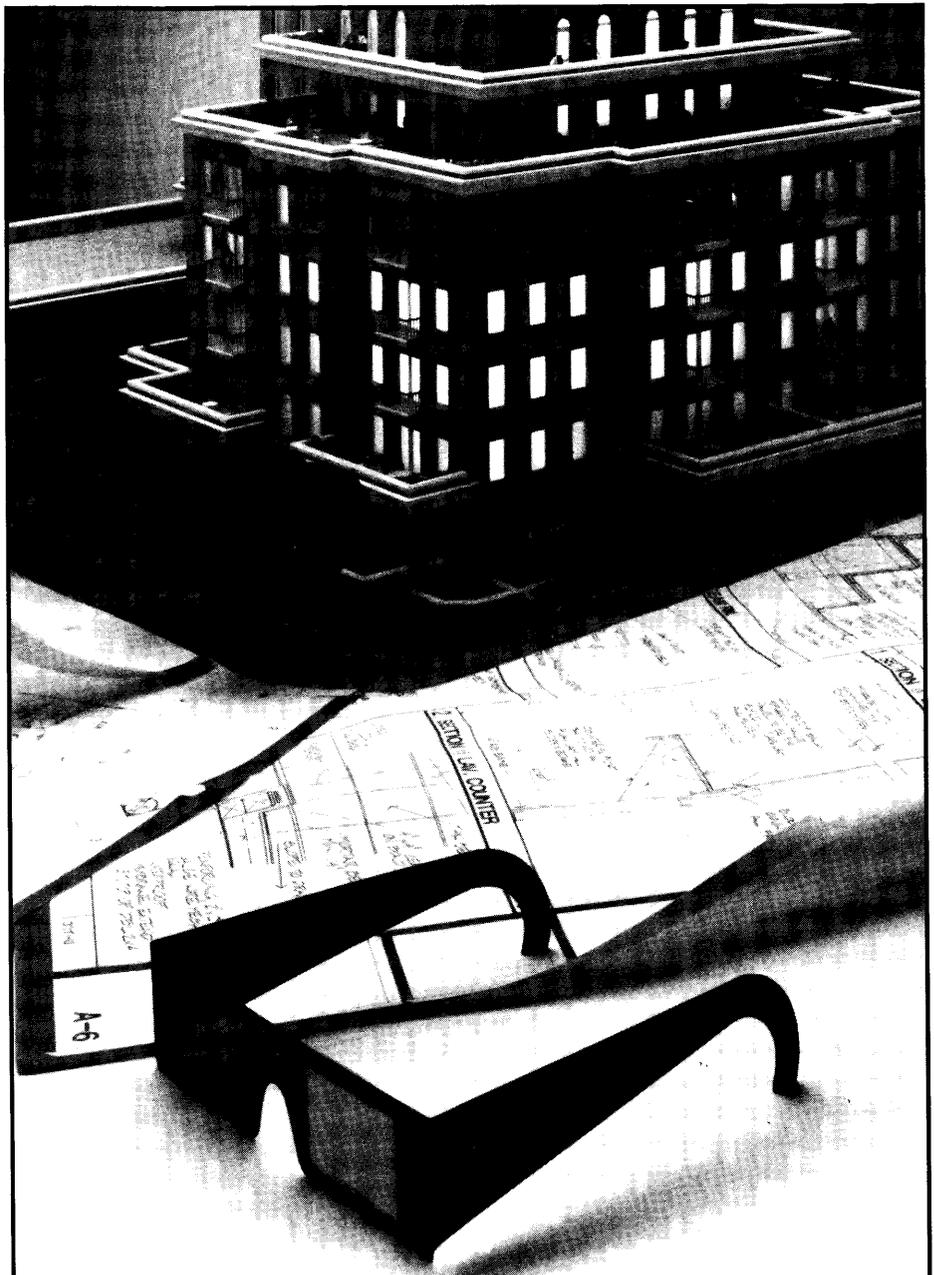
Burnstudio Architects, PA, of Raleigh, has been selected to design IBM Corporation's new employee activities and fitness center in Research Triangle Park. The 20,000-square-foot building will have a 500-seat conference room, an exercise and fitness room, lockers, a game room and office space. The site is a 35-acre park with softball fields, tennis, volleyball and basketball courts, playground and a fishing pond. Bell/Glazener Design Group of Raleigh will provide landscaping.

Firm to Build Church and Jail

Ramsay Associates, Inc., an architectural firm with offices in Raleigh and Salisbury, has been selected to design a fellowship hall addition to the Pleasant Grove United Methodist Church and a \$2 million Stokes County jail.

Asheville Firm Will Update Housing Project

SPACEPLAN/Architecture, Interiors & Planning was selected to design and help carry out a \$5 million modernization project at the Hillcrest Apartments, under one of the first HUD grants of its kind to be received in Asheville. The low-income housing complex has 234 rental units and about 759 residents.



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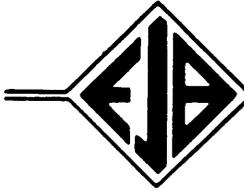
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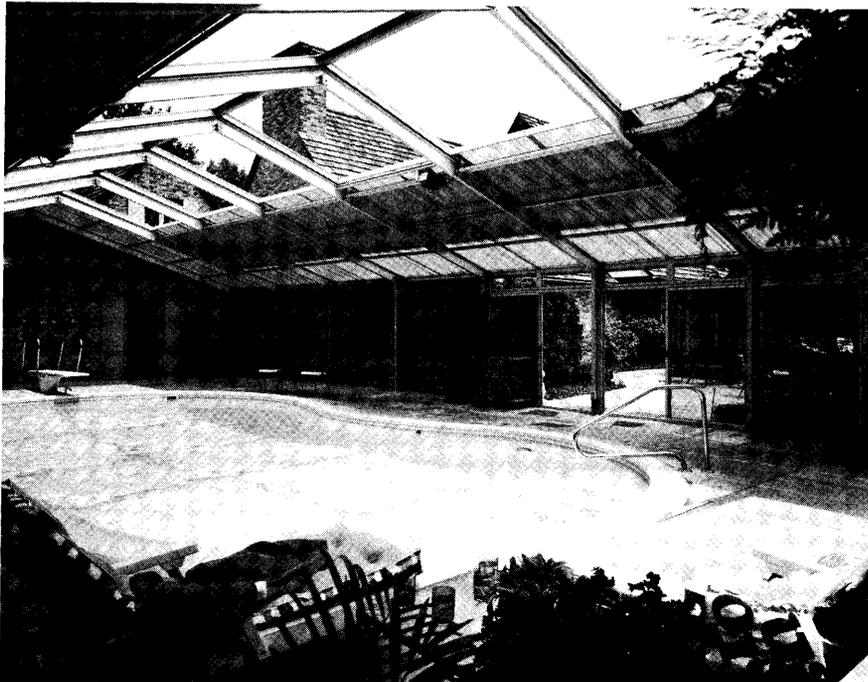
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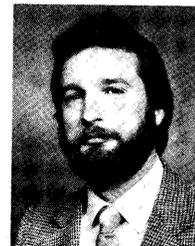
City of Charlotte Honors Renovation

Charlotte's Clean City Committee's Grand Prize for renovation went to the Thomas Cadillac Building, which was converted into an office building with a 2-level parking structure and a 3-story office wing by Dellinger Lee Nichols Architecture of Charlotte.

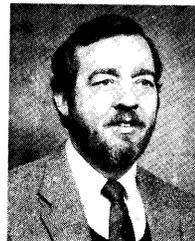
Names and Changes In N.C. Architecture

A Charlotte-based firm has changed its name to Atkinson • Dyer • Watson Architects, P.A., to reflect the addition of **John W. Watson, AIA**, as a principal of the firm. Established in 1977, the firm has grown from the two founding principals, **Richard E. Atkinson, AIA**, and **Michael L. Dyer, AIA**. Watson, a native of Long Island, N.Y., joined the firm in 1982 and was made a senior associate in 1986. He has a bachelor of architecture from Louisiana State University and designed the \$6.3 million Hickory Grove Baptist Church in Northeast Charlotte.

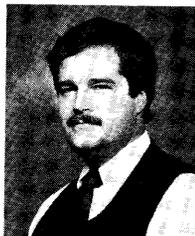
O'Brien/Atkins Associates of Research Triangle Park has added two



John W. Watson



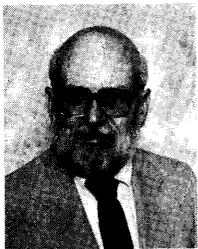
Richard E. Atkinson



Michael L. Dyer

new staff members to the Architecture Group. **K.C. Ramsay, AIA**, who was previously director of architecture for Dewberry & Davis in Raleigh, is serving as project manager. Ramsay is a graduate of the NCSU School of Design and lives in Raleigh. **Kevin G. Montgomery, AIA**, who was most recently with the firm of I.M. Pei & Partners in New York City, is serving as project architect. Montgomery is a graduate of Cornell University and lives in Durham.

S.C. Wilber Jr., one of the founding principals of Wilber, Kendrick, Workman & Warren of Charlotte, has gone into semi-retirement. As a registered architect and engineer, Wilber has practiced with the firm for 33 years. He will continue to work with the firm on a selected project and consulting basis. He also will work with his son at Wilber Associates in Cornelius.



S.C. Wilber Jr.

Donald C. Etheridge has been named an associate with the Raleigh office of Quick-Associates, P.A. Etheridge has practiced architecture for the past six years in Raleigh, where he graduated from the NCSU School of Design with a bachelor of environmental design and architecture.



Donald C. Etheridge

John Gass, a project architect, has joined the staff of Dellinger Lee Nichols. He received his bachelor of architecture from Clemson University. **Michael Christensen** joined the firm recently as an intern architect. He received his B.A. from Auburn University in 1985 and was associated with

Knodell/Thomas Architects of Mobile, Ala.

Clark Tribble Harris & Li Architects, P.A., of Charlotte have announced the promotions of the following: **Michael J. Murray, AIA**, to principal; **Jeffrey C. Floyd, AIA**, and **Wayne Gregory,**

AIA, to senior associate; and **Richard Bartlett, RA, Christopher Ions, AIA**, and **James M. Williams Jr., RA**, to associate.

Susan DeFeo has joined The Freeman-White Associates, Inc., Architects/Engineers in commercial

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business development. DeFeo, who was in commercial real estate sales and development, is responsible for expanding the firm's operation in the areas of commercial, manufacturing, high-tech and retirement development.

Billy Davis, AIA, has recently been hired as project architect for Gross Harbinson + Associates. Davis previously was a project architect with Meyer • Greeson in Charlotte. He has a bachelor of architecture from Virginia Polytechnic Institute and an MBA from the University of South Carolina.

John M. Knight, AIA, founder and president of Knight Hepler & Hall Architects, P.A., has left that firm to form a new firm, John Knight Architecture of Charlotte. Knight is a graduate of the College of Architecture at UNC-Charlotte.

Mary Page Stanley has been named director of marketing for Architects Tolson Associates Inc. of Raleigh.

John D. Herth, AIA, has been promoted to principal with Alpha Design Group, Inc., Architects and Engineers of Raleigh. Herth is a graduate of

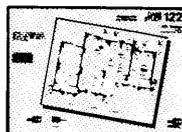
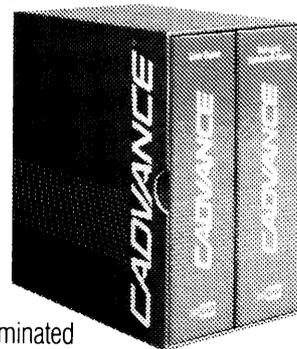
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John D. Herth

Oklahoma State University, where he received both bachelor and master of architecture degrees. He will serve as a principal-in-charge of education and institutional facility design.

Bohm-NBBJ of N.C., Inc., an architectural and planning firm, has two new staff members in the Raleigh of-

ice. **Lisa J. MacCartney-MacDonald**, an NCSU graduate, is an architectural intern. **Lisa H. Johnson, AIA**, a graduate of Louisiana State University, is project architect.

Philip Shive, FAIA, Richard Grubbs, AIA, and John Fryday, AIA/ASID, have joined with Bohm-NBBJ to form Shive/Bohm-NBBJ, a Charlotte architectural firm.

Tise Hanks Architects of Chapel Hill have added **Charles N. Young** as intern architect and **R. Haven Bourque** as office administrator. The firm also has a new branch office on Roseland Street in Greensboro, at P.O. Box 18763, Greensboro, N.C. 27419.

The old Willard Hotel, now the Willard Inter-Continental, was once called the Unofficial White House. During the meticulous Willard restoration, architects insisted on 1,675 custom Pella Windows. Pella created historic accuracy outside, wood's beauty inside and a new lifetime of Pella quality.

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Now, we know every window treatment challenge isn't the Willard. But should that really make any difference?

Willard Inter-Continental
Constructed 1901, Reopened Aug.
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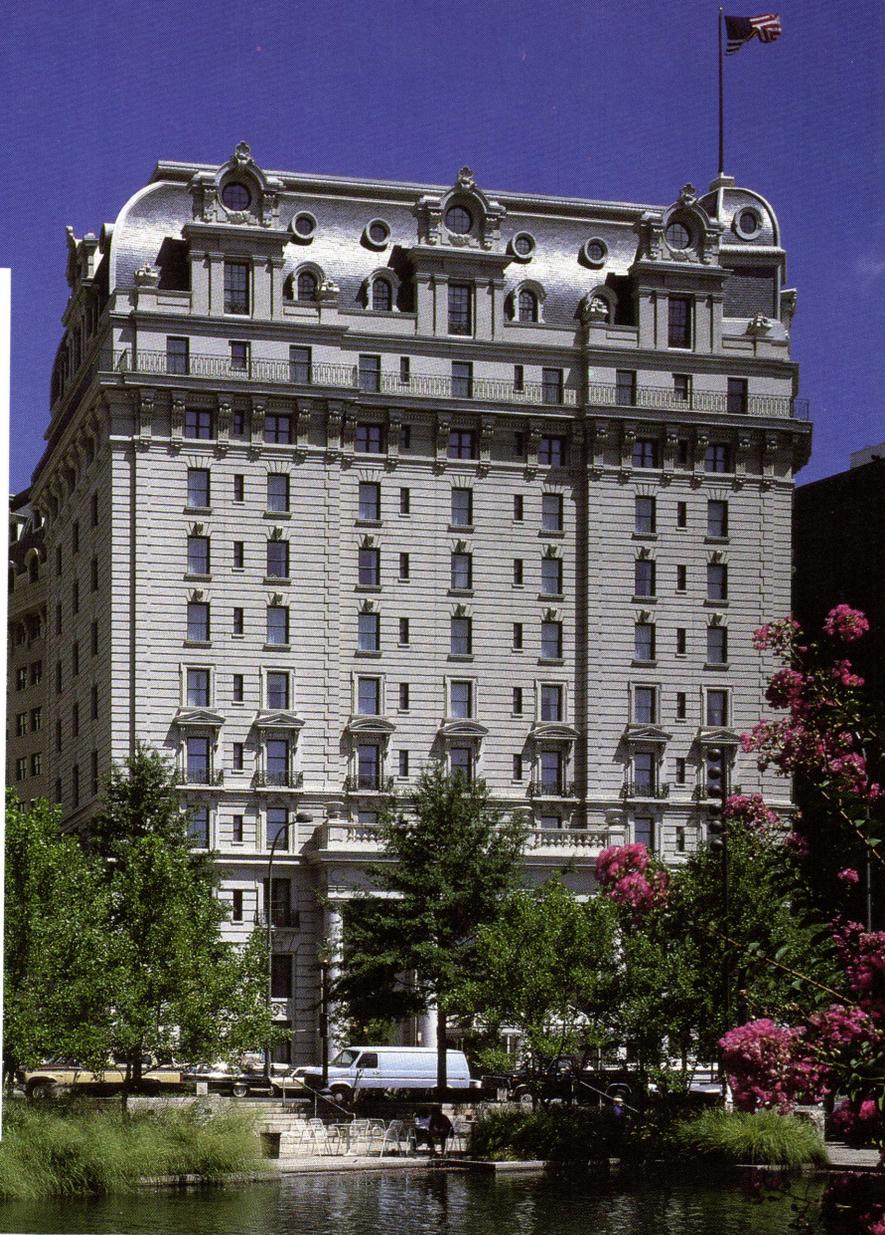
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The Oliver T. Carr Company,
Washington, DC

Architect
The Office of Vlastimil Koubek,
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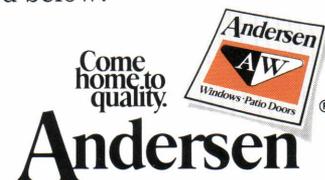


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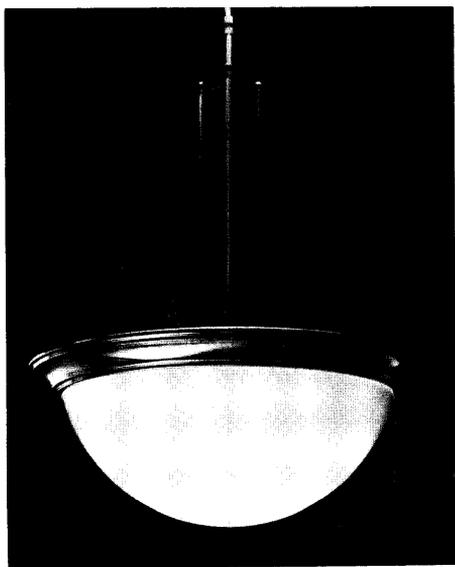
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NEW PRODUCTS

New Designer Light Fixtures

SPI Lighting Inc. has introduced a new "Renaissance" line of pendant fixtures. The new line is designed to provide high-quality indirect, high intensity discharge lighting for a wide range of interior environments including offices, malls, plazas, lobbies and other public places. The luminaries come with translucent or metal domes, and metal trim rims come in brass or chrome finishes. Other combinations of plated or painted finishes are available, and multiple stem designs and chain mounts are options.

Models in the Renaissance series that feature the translucent dome provide 90 percent uplight and 10 percent downlight. Each fixture can accommodate horizontal metal halide or high-pressure sodium lamps ranging from 100 watts to 400 watts. For more information, contact SPI Lighting Inc., 10400 N. Enterprise Drive, Mequon, WI 53092.



No Chimney Needed

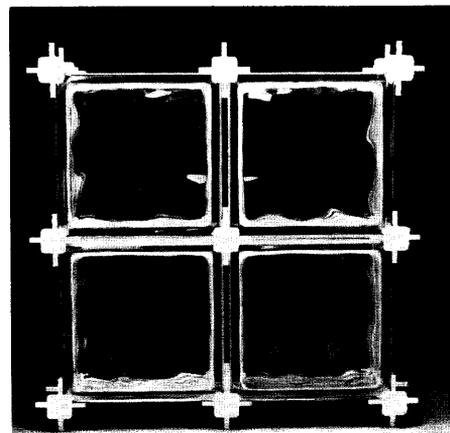
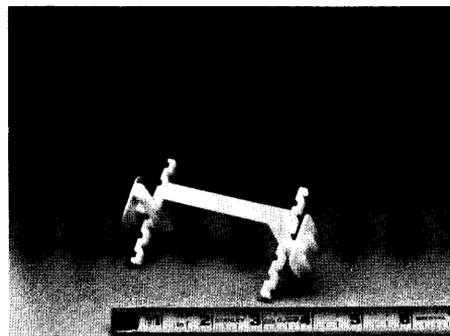
Heatilator Inc. has developed a direct-vent gas fireplace that can be installed in any outside wall of the home, with no chimney required. The new Heatilator G200, which combines leading-edge technology with flexible design, can be installed in a living room or family room, under a window, in a bedroom, bathroom or kitchen. A large solid glass front panel offers a good view of natural-looking golden oak heat-resistant refractory logs and the conventional masonry look of the Heatilator refractory-lined firebox walls.

The fireplace features automatic controls for safe operation and an optional remote wall switch that allows easy ignition without matches or removal of the glass front panel. Other features include a fan kit for increased air flow and a solid brass louver trim kit. For more information contact your local Heatilator sales representative or call customer service at 1-800-331-4996.

Space Age Elevator Button

A new elevator button that illuminates with no bulb and has no moving parts should easily outlast the elevator itself, according to U.S. Elevator which developed the product. The Softouch button is constructed of a special, space-age ceramic material with piezo electric properties. When touched, it illuminates, without the use of a bulb. Since there are no moving parts, there is nothing prone to malfunction.

"During tests we conducted in the factory, a Softouch button successfully operated 20 million times before the test was suspended," a U.S. Elevator official said. Softouch buttons come in a wide variety of shapes and sizes and require little or no special wiring. For more information, contact any of U.S. Elevator's 65 branch offices or call (619) 660-1000.



Spacers Speed Glass Block Building

Glass block spacers eliminate problems and speed the work of installing glass block walls. PC GlassBlock Spacers from Pittsburgh Corning Corp. prevent blocks from floating before the mortar has set up and ensure consistent mortar joints and flush glass block faces. Flush panels and the recommended quarter-inch joints can be obtained the first time, every time, with less effort. By inserting the spacers at block corners, the mason can often lay more courses at once. After the last course is laid, exposed spacer positioning tabs are twisted off and the intersecting joints are pointed and struck.

PC GlassBlock Spacers are available in sizes to match the two thicknesses of PC GlassBlock units, the 3 $\frac{3}{8}$ inch regular series and the 3 $\frac{1}{8}$ inch thinner series. The spacers are not recommended for use in applications requiring fire-rated construction. For more information, contact Pittsburgh Corning Corp., 800 Presque Isle Drive, Pittsburgh, PA 15239.

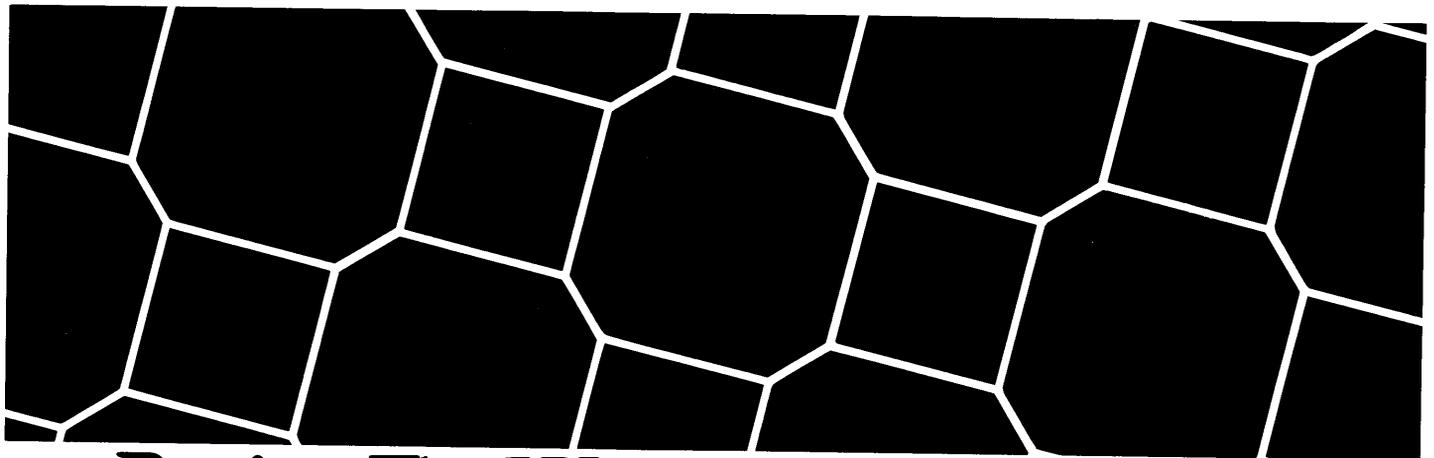
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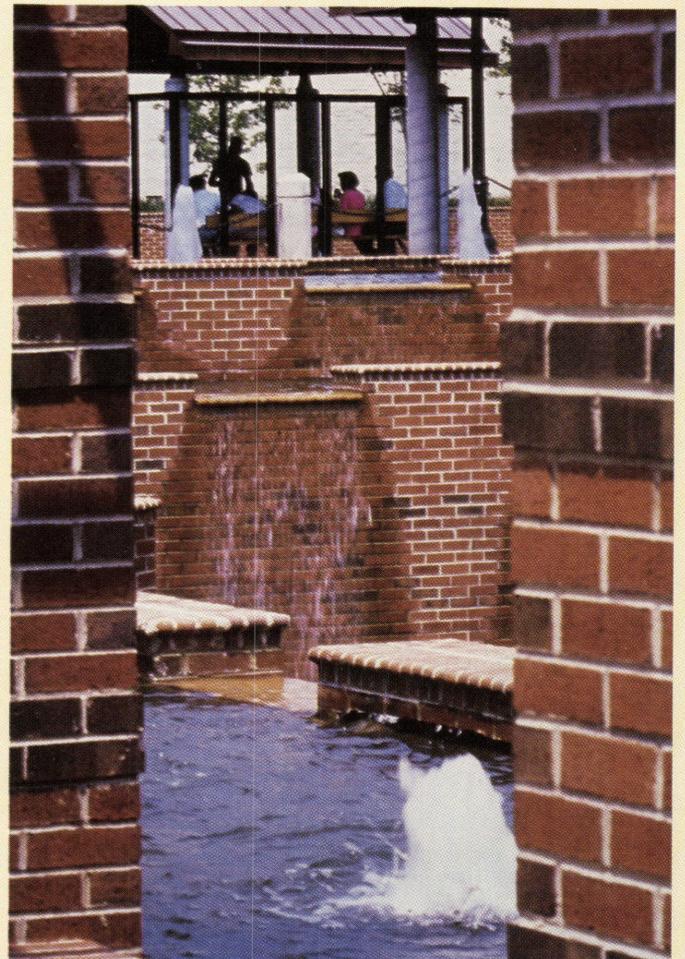
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Walkway and Fountain View

Building/Structure: Moore Square Station
Raleigh, North Carolina
Architectural firm: PDA, P.A.



AWARD OF HONOR

Piers and Fountain View

Building/Structure: Moore Square Station
Raleigh, North Carolina
Architectural firm: PDA, P.A.

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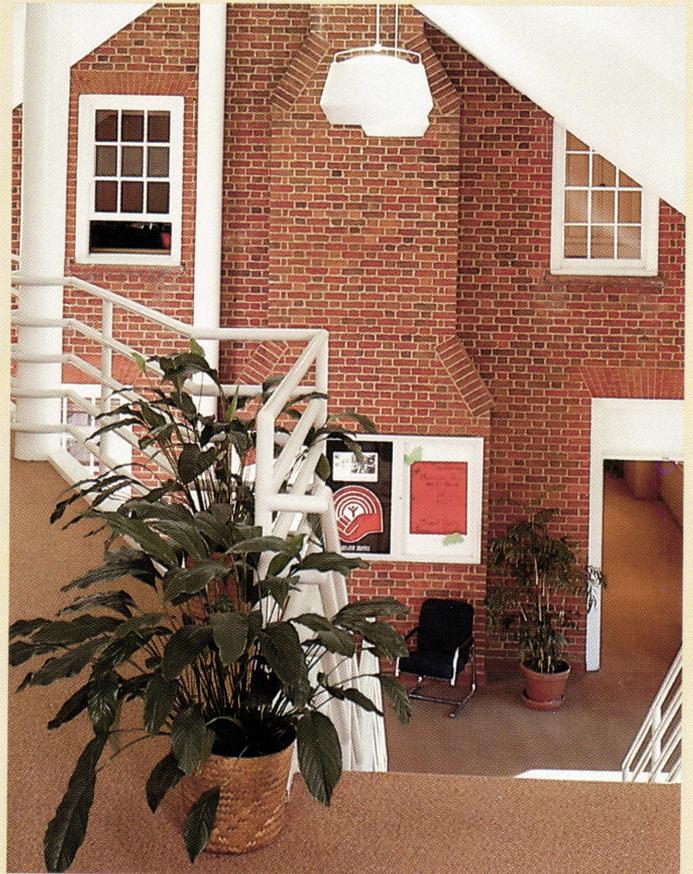


AWARD OF HONOR

Entry View

Building/Structure: North Tryon Street Post Office
Charlotte, North Carolina

Architectural firm: Gantt Huberman Architects



AWARD OF MERIT

Interior View

Building/Structure: YWCA
Winston-Salem, North Carolina

Architectural firm: Edwin Bouldin Architect, P.A.

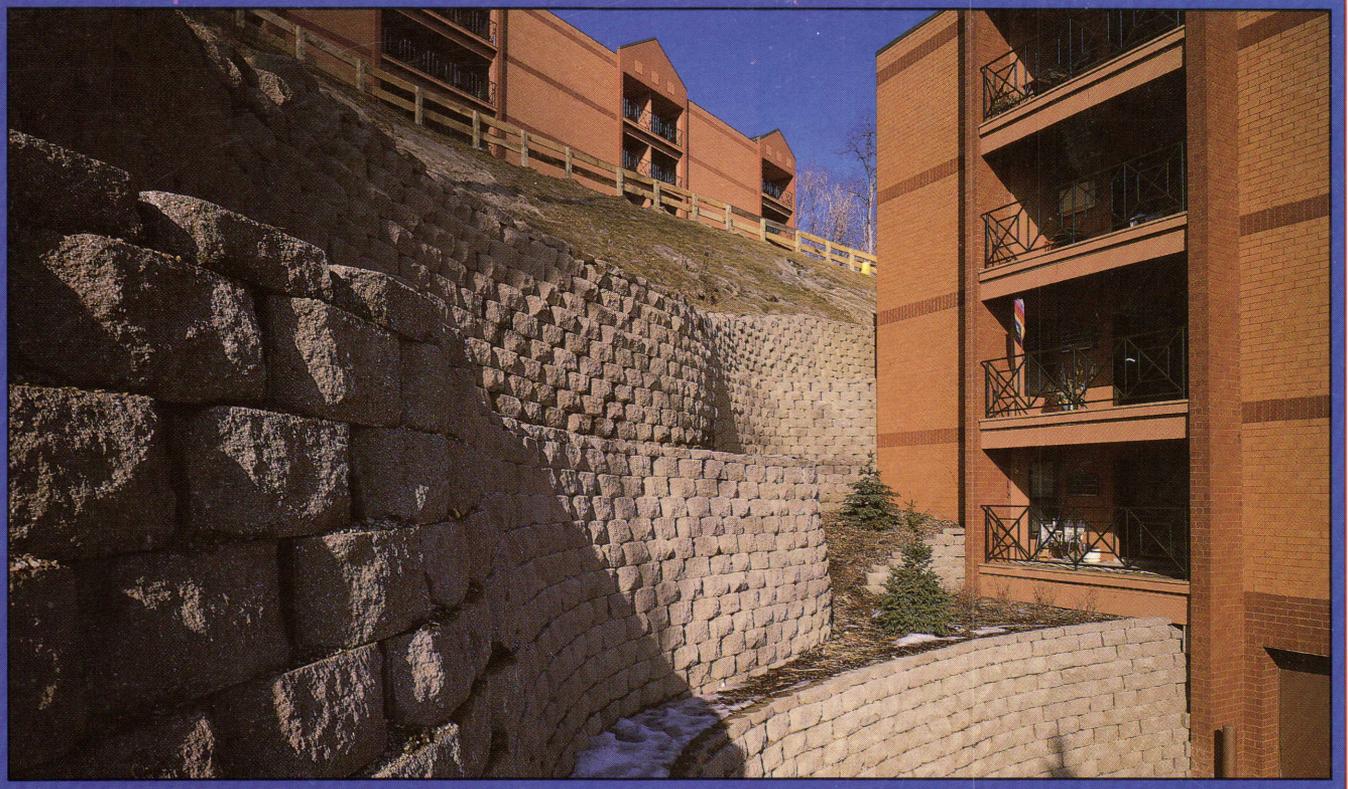


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Architectural firm: Gantt Huberman Architects



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