

REC'D DEC 16 1988

Bulk Rate  
U.S. Postage  
PAID  
Raleigh, N.C.  
Permit No. 455  
Nonprofit Org.

581

ASOC A

Jack L Scott  
McKimmon Edwards Hitch  
4601 Lake Boone Trail  
Raleigh, NC 27607

# NCA

NORTH CAROLINA ARCHITECTURE □ NOVEMBER-DECEMBER, 1988



**CAPITAL IDEAS:  
Designing the Future  
Alongside the Past**

# MASTER PIECES



Let David Allen Company help you construct your masterpiece. We can supply you with the finest marble, granite, tile and terrazzo as well as over 68 years of experience. We are also available to assist you with technical information, specifications, product recommendations and budget prices.

For more information call:

Raleigh, NC  
(919)821-7100

Washington, DC  
(703)690-4422

Orlando, Fla.  
(407)420-1000



DAVID ALLEN CO.

PUBLISHER  
North Carolina Chapter  
of the American  
Institute of Architects



VOLUME 36 NO. 6 □ NOVEMBER-DECEMBER, 1988

Cover: *The new Museum of Natural History will be a contemporary reflection of the old Capitol, picking up its vertical and horizontal lines but taking them in new directions. Rendering by O'Brien/Atkins Associates. Photo by David Hall Associates.*

#### STAFF

EDITOR  
Sharon Kilby

ART DIRECTION  
Blagdon Smart Design Studio

EXECUTIVE DIRECTOR,  
NCAIA  
Lillian Woo

DIRECTOR OF  
ADMINISTRATION/  
SPECIAL PROJECTS  
Michelle Goode

ACCOUNTANT  
Grace Li

PRINTING  
PBM Graphics, Inc.

#### ADVISORY BOARD

Walter T. Vick, III, AIA  
Alva H. Ward, III, AIA  
John F. Thompson, AIA  
Stephen L. Meehan,  
Consultant

NCAIA is not responsible for statements or opinions expressed in *North Carolina Architecture*, nor do such statements necessarily express the view of NCAIA or its committees.

*North Carolina Architecture* is published six times a year by the North Carolina Chapter of the American Institute of Architects. Advertising and editorial offices are located at 115 W. Morgan St., Raleigh, N.C. 27601. Address editorial, advertising and circulation correspondence to *North Carolina Architecture*, 115 W. Morgan St., Raleigh, N.C. 27601. Telephone (919) 833-6656. Subscription rate: \$30 a year for non-NCAIA members. Third class postage (permit number 455) paid at Raleigh, N.C. Copyright 1988 by NCAIA. POSTMASTER: Send Form 3579 to *North Carolina Architecture*, 115 W. Morgan St., Raleigh, NC 27601.

2

### FILLING IN THE FOOTPRINTS— THE STATE GOVERNMENTAL COMPLEX

North Carolina's Capital City is being reshaped by new buildings and revamped public spaces in a rare series of coordinated developments downtown.

4

### PROPER PLACES FOR WHALE BONES AND OLD LACES

The state's museums of history and natural science, long housed in inadequate spaces, will move into facing spaces in a complex designed to embrace visitors.

8

### FILLING THE VOID AT THE STATE GOVERNMENT MALL

New homes for the Education Department and the Revenue Department will enliven the northernmost end of the governmental complex.

13

### GROUND RULES FOR A GRAND OLD LADY

Even the long-neglected Capitol grounds are getting fixed up with contemplative places and better views of its monuments.

19

### ELEVATIONS

A Capital City scribe ponders the prospects for Raleigh's mammoth monument to its namesake, which is being pushed aside by progress.

16

### THE COST OF CONSTRUCTION MANAGEMENT

A look at how one school system found it could save money by eliminating the construction manager.

22

### OFF THE DRAWING BOARD

Who's designing what, where in North Carolina, plus names and changes among the state's design firms.

26

### NEW PRODUCTS

New ideas, new solutions, new equipment and new twists on old angles for designers and builders.

#### 1988 SPONSORS

Architects Tison Associates, Inc.  
Brockwell/Hoke Architects Inc.  
Burnstudio Architects, PA  
Robert Winston Carr Inc/Architects  
Clark Tribble Harris & Li Architects, PA  
Clemmer Bush Sills Abernethy Architects  
Dellinger • Lee • Nichols  
DePasquale Thompson Wilson  
James F. Dugan III, AIA, Architect  
Foy & Lee Architects, Waynesville  
Hammill-Walter Associates, Inc.  
Hayes-Howell & Associates, Architects  
Hicks Architects  
Jenkins-Peer Architects, PA  
David Patrick Moses/Architects  
O'Brien/Atkins Associates, PA  
Odell Associates Inc.  
Peterson Associates, PA, Architects, Engineers  
Quick Associates, PA  
Ramsay Associates, Inc.  
Shawcroft-Taylor, Architects  
Skinner, Lamm, Hood & Highsmith, PA  
Snowdon and Associates, PA  
The FWA Group  
Ward Associates, Architects & Planners  
Wilber, Kendrick, Workman & Warren, Inc.  
Dennis Yates Associates

# Filling in the Footprints: The State Governmental Complex

The stone of the State Capitol itself tells part of the story behind state government architecture in Raleigh over the last century.

It can't be matched. The quarry it came from has been closed for years.

And so, over the years, changes in available materials, government's self-image and architectural imagination have produced in piecemeal a governmental complex whose dominant characteristic is the lack of a dominant style.

That waywardness is now being narrowed a bit in a rare period of coordinated yet independent building north of Capitol Square.

In 1986, to direct future development, a master plan laid out footprints for new buildings throughout the complex in downtown Raleigh. Now, just two years later, four of the biggest and most strategically located footprints are being filled.

Two new office buildings, two museums and a parking deck—nearly \$140 million in development—are in various stages of planning and construction. North Carolina's architectural firms have been given an opportunity to turn the governmental complex into a place that the state's citizens can visit with pride.

New office buildings for the Education and Revenue departments will complete the east side of the mall north of the Legislative Building. Museums of history and natural science will squeeze into the last available sites around the Capitol, rounding out the Bicentennial Mall. A six-level parking deck for 1,530 cars is under construction on the old Seaboard Coast Line Railroad property. Even the Capitol grounds are getting an overhaul.

And following close behind are plans for a visitors' center and parking deck, to fill in the block across Wilmington Street from the Museum of History. A judicial center is proposed for the block east of the visitors' center, between Edenton and Jones Street.

Overall statewide, North Carolina state government now has \$1.1 billion worth of building projects under way—more than the state of New York.

The buildings that will have the greatest impact on the state's image are in the governmental complex in downtown Raleigh.

"These projects will be a real asset," said Dave Bullock, reviewing architect in the N.C. Department of Administration. "They will be four buildings the citizens of Raleigh and the state can be proud of. We are very excited about the prospects from what we see so far."

So are those who have pushed for the new construction.

While the 51-year-old Education Building is redolent with tradition and character, it is also out-of-date and overcrowded.

"They're using window air-conditioning units. The wir-

ing is dangerous," says Rep. William T. Watkins, D-Granville, who led the fight to fund the new Education Building. "The building doesn't even house all the employees."

The Revenue Department has its problems too. It can't automate because of its cramped facilities, and some folks find it difficult navigating from one wing to the other.

The new building is "going to give us a more efficient operation in that it will be planned for linear processing and that's important in our work," Revenue Secretary Helen Powers says. "What comes in needs to move forward until money goes to the bank or a form goes in a file. . . . The building also will have state-of-the-art telecommunication, security systems and automation facilities."

The N.C. Museum of History, now squeezed into the Archives and History Building, will triple its exhibit space in its new quarters.

"We're going to be able to show a lot more of the collection of the museum than we've ever been able to," Director John Ellington told reporters when final plans were announced. "We have some very important collections that have never been shown."

The N.C. Museum of Natural Science is now housed in the Agriculture Building, in spaces designed to accommodate bureaucrats, not boa constrictors.

"Because the Agriculture Department is cramped for space, we haven't been able to expand our operations," says John Funderburg, the museum's director. "Many of the kinds of things we do in the museum create problems for the other sections of the building. Some things don't smell too good, for example. People upstairs complain."

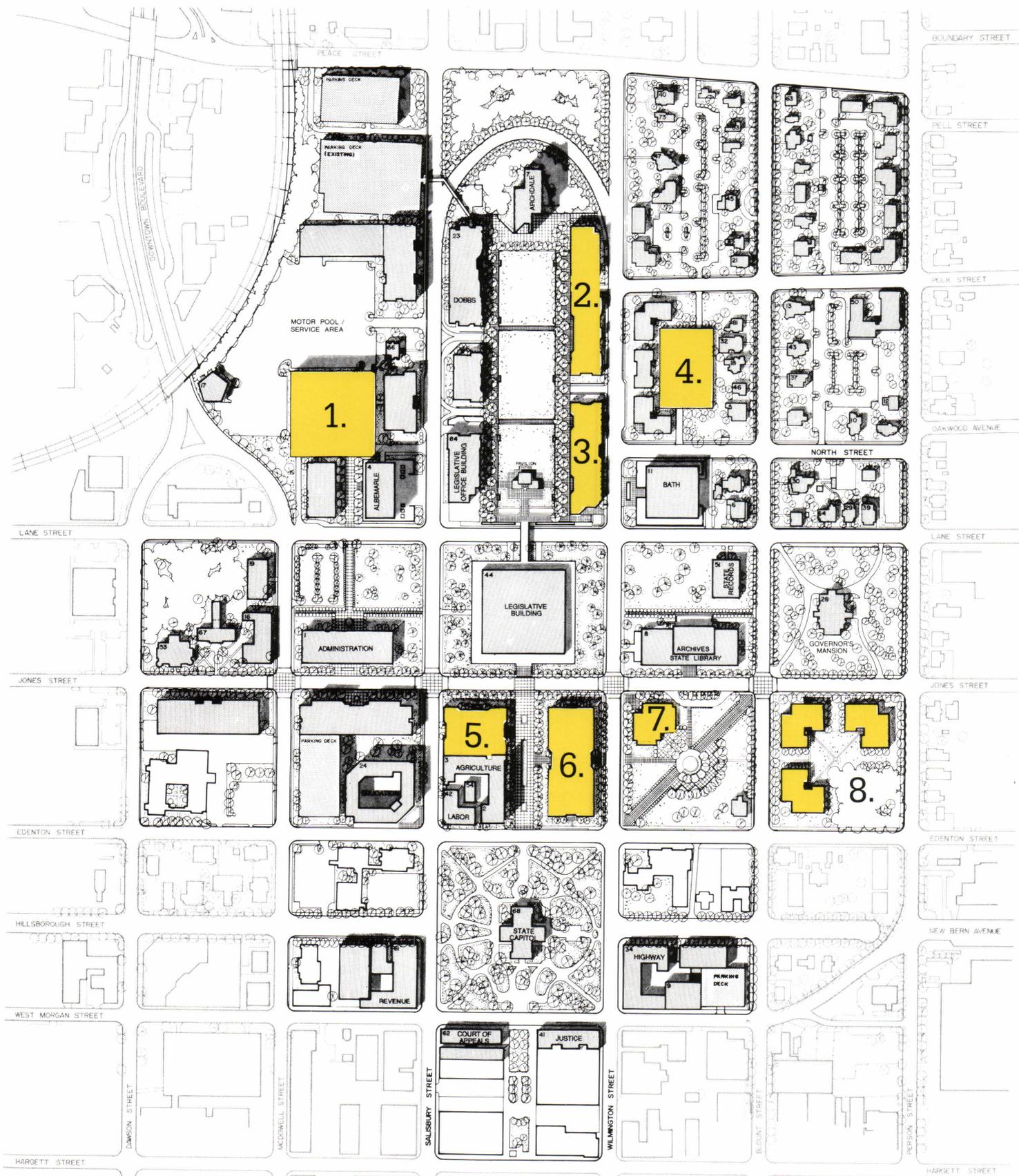
And so now architects are solving these problems with wide-ranging structural solutions that, nonetheless, remain true to the character of the Capitol—picking up its vertical and horizontal lines and its monumental character. And, for the first time, a substantial block of buildings can be tied to one another and the entire complex.

"We in the central government complex, which includes the State Capitol, follow the same pattern of architecture," Funderburg says. "We have come up with a building that's going to make an architectural statement. It's not exactly like any of those other buildings, but still maintains elements common to the others."

Dick Bell of Bell/Glazener Design Group, whose landscape design is threaded throughout the governmental complex, says the works in progress offer a grand opportunity.

"The legislature is certainly putting the money there," Bell said. "If we don't do beautiful buildings, it's our fault."

*Jason Lesley contributed to this story.*



## STATE GOVERNMENT CENTER MASTER PLAN

The numbered footprints have been earmarked for projects in various stages of planning and construction.

1. Parking deck, under construction.
2. Revenue building, funded through design and construction drawings.
3. Education building, construction to begin early 1989.
4. Proposed parking deck that is being reevaluated and may not be built.
5. Museum of Natural History, design in process of being approved.
6. Museum of History, ready to begin construction.
7. Proposed visitors center, not funded.
8. Proposed judicial complex, not funded.

# Proper Places for Whale Bones and Old Laces



*The new Museum of History will span the space between the Capitol and the Legislative Building. The columns that form an arcade along the mall reflect the massive columns of older government buildings nearby. Rendering by O'Brien/Atkins Associates.*

What better place to put the state's Museum of History than on one of its most historic spots? There, between the Capitol, the architectural jewel of the government complex, and the Legislative Building, where North Carolina history is made and, of course, new buildings are funded.

Some have argued that the site is one of the most significant in the state government complex, the last open space facing Capitol Square.

How better to enhance the history museum than to give it a distinguished, compatible neighbor, a new Museum of Natural Science. And for the finishing touch—a lively pedestrian mall to pull it all together, where school children may romp or be shushed before entering the museums. Underneath it all is a three-story parking deck for 500 cars.

It adds up to a rare opportunity to produce workable and visually exciting urban design, the people involved in the projects say.

"You've got the two buildings influencing each other and the mall influencing the buildings and vice versa," said Dick Bell, whose Bell/Glazener Design Group has helped pull the elements together as consulting landscape architect for the Bicentennial Mall and the Museum of Natural Science.

Two Research Triangle architectural firms were chosen for the two museums, each of them working with a different Boston architect specializing in museum design.

O'Brien/Atkins Associates of the Research Triangle Park worked with Cambridge Seven Associates on the design of the Museum of History. Bids on the \$27.2 million museum are expected to go out in January 1989, and the building should be completed by January 1991. O'Brien/Atkins also was given primary responsibility for redesigning Bicentennial Mall.

The architect of the new Museum of Natural Science is Robert W. Carr

Inc., Architects of Durham, working with E. Verner Johnson and Associates of Boston. This museum, projected to cost \$27 million, has been funded through the design stage only. At the time this issue went to press, the design had not yet been approved, and drawings and plans for the building were unavailable.

All that activity in such a small area increases the potential for friction. John Emerson, director of the State Construction Office, said it pretty much guarantees a short-term nightmare when two architectural firms and as many as six contractors start working in that tight space. But the long-term perspective is of a rare opportunity for harmony in a special place.

"In the past, a building was a building and the area around it was not a part of it," said Edgar Carr of Robert W. Carr Inc. "This gives the chance for something to be totally completed."

## The N.C. Museum of History

### Architect of Record

O'Brien/Atkins Associates  
Research Triangle Park

### Consulting Architect

Cambridge Seven Associates  
Cambridge, Mass.

### Contractors/Consultants

Lighting Consultant: Howard Branston  
Associates, New York, N.Y.

Acoustics Consultant: Bolt Beranek &  
Newman, Cambridge, Mass.

Consulting Mechanical Engineer: Alteri  
Associates, Norwalk, Conn.

Electrical Engineer: Knott & Roberts,  
Durham

Structural Engineer: Lasater Hopkins,  
Raleigh

Traffic Consultant: Barton-Aschman  
Associates, Washington, D.C.

Landscape Consultant: Bell/Glazener  
Design Group, Raleigh

## The Museum of History

It's spring. Hundreds of school children gather on the Bicentennial Mall, boisterous, thrilled to be out of the classroom and touring the state capital.

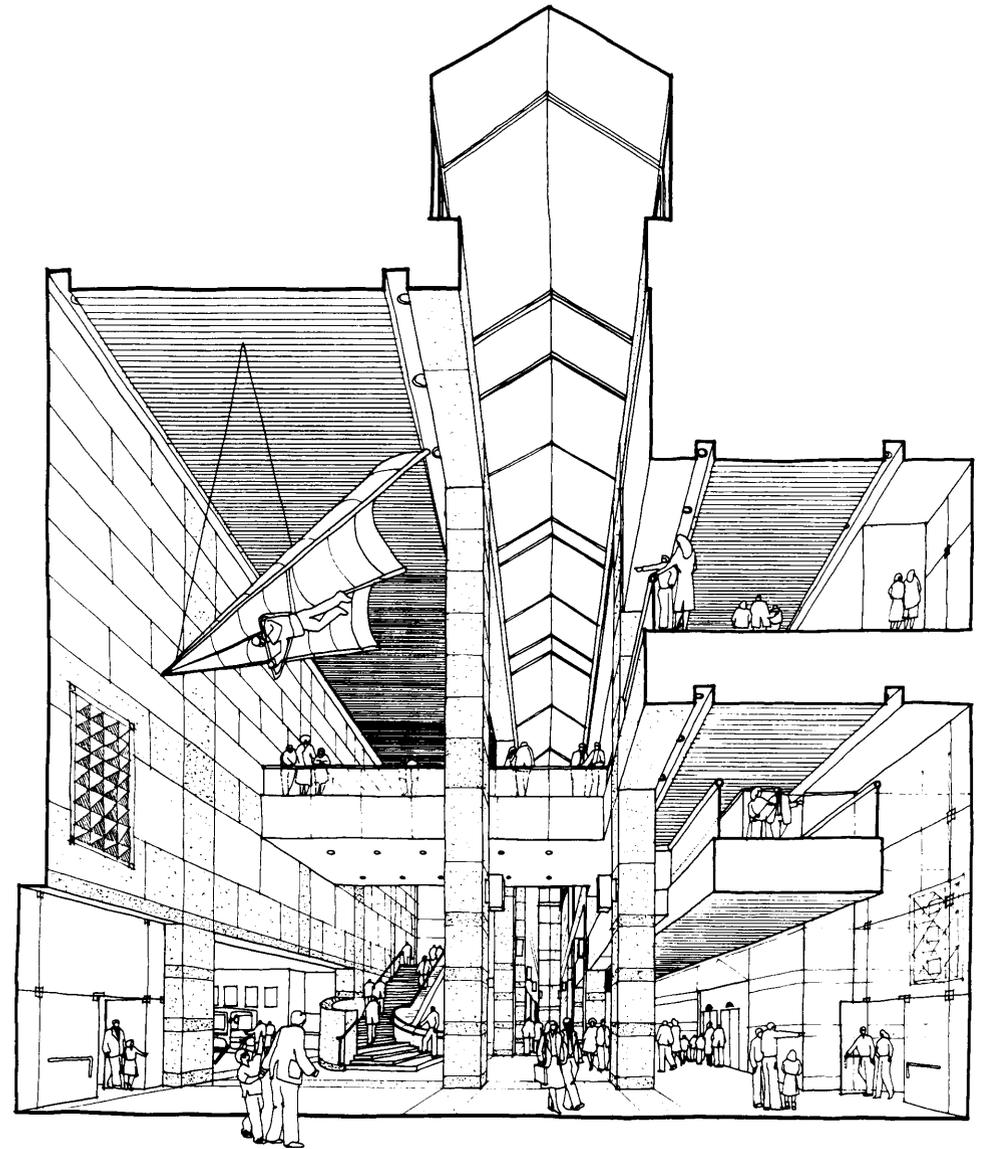
That image was firmly in the minds of the designers when they gave their building a 68-foot-high arcade of massive columns and a trellised outdoor garden, then dressed up its serious monumental face with colorful flags.

"Museums are often big black boxes," said project manager Blake Talbot of O'Brien/Atkins. "To introduce light, we actually ended up with two different kinds of buildings."

Glass is plentiful in the south end of the 172,000-square-foot building, the end that faces the mall and the Capitol. That area is devoted to office space and, on its north side, overlooks the trellised garden. Exhibit space, 50,000 square feet in all, is concentrated in the windowless north end.

But the entire building is sliced with light from a dramatic 68-foot-high skylighted atrium. The skylight creates dramatic corridor and display space especially appropriate for aeronautic exhibits. Viewed from the outside, the skylight parallels the arcade.

The new museum will be the same height as the Agricultural Building across the mall. Like its neighbors, it will be gray, of limestone and two shades of granite. Four narrow bands of darker granite at the base of the building are reminiscent of the bands of stone around the bases of the Agri-



*A skylight, a monumental staircase and staggered balconies create dramatic display spaces and interesting views in the Museum of History.*

culture Building and the Capitol. More widely spaced bands of darker granite continue up the building, echoing both the vertical and horizontal elements of the Capitol.

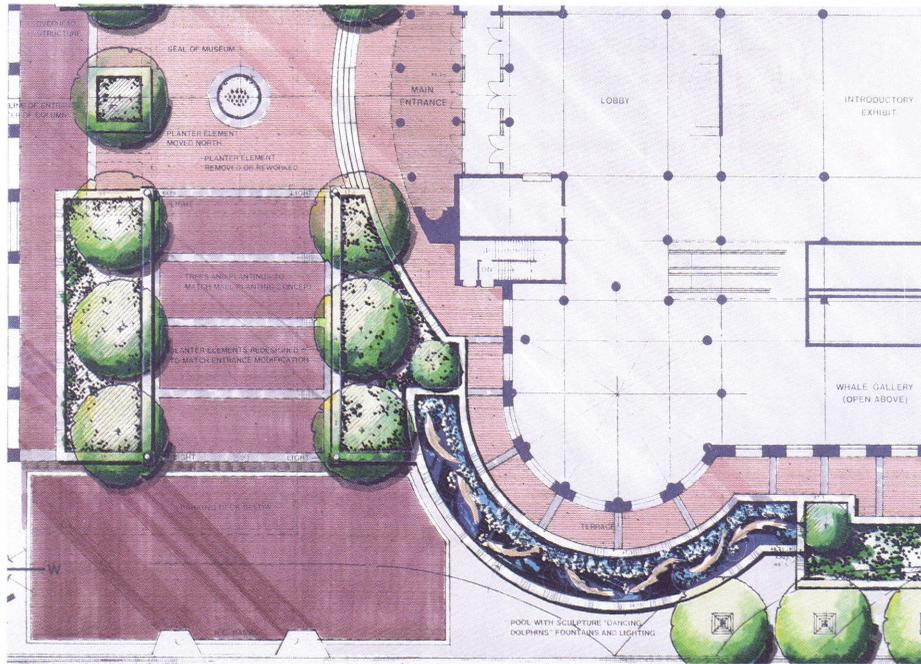
In the 64-foot-high lobby, granite is used in a monumental stair to the second floor. Balconies large enough for exhibits overlook the lobby.

From the entry, one looks across the lobby to the Folk Art Gallery, containing North Carolina quilts, furniture and crafts. This level houses the permanent History of North Carolina exhibit, youth exhibition spaces for school competitions and displays and a gift shop. It also contains the educational core, consisting of a 300-seat

auditorium and a demonstration gallery.

The second floor contains offices and areas for museum associates and volunteers and for publication, research and education operations. The third floor will house the North Carolina Sports Hall of Fame and galleries for touring and temporary exhibits. A service level below the first floor contains the restoration shops, laboratories, and shops for manufacturing exhibits.

A restaurant for 150 people on the service level has a separate ground-level entrance on Jones Street, where it can attract downtown workers in addition to museum visitors.



Wrapped around a cylinder that turns the corner on the Museum of Natural Science is a fountain where dolphins seem to leap and dive. Drawing is by Bell/Glazener Design Group, Raleigh.

## The Museum of Natural Science

Robert W. Carr Inc., Architects has been given a second chance to build a new home for the massive whale bones exhibited in the North Carolina State Museum of Natural Science.

In 1983, the architects designed the N.C. Maritime Museum in Beaufort, where the whale bones were to be transferred to be near the waters that yielded them up. But a funding cut reduced that museum's size, and the whale bones stayed in landlocked Raleigh.

Now, these bones are poised to take a premiere spot in the new State Museum of Natural Science—in a two-story Whale Gallery on the entry level.

The Whale Gallery ends in a cylindrical structure that runs the full five stories of the building at the corner where the mall ends at Jones Street, across from the Legislature Building. At the third level, the cylinder becomes a glassed-in conservatory, to be filled with trees and plants—and perhaps a mounted giraffe.

A series of granite columns surround the glass cylinder, in peristyle form. Around this colonnade will be a cascading water fountain, with statues of dolphins. Water jets will create the illusion of the dolphins leaping in and out of the spray.

The cylindrical structure has been

playfully dubbed Jim Graham's silo. It, in fact, is a reflection of the columns of the adjacent, neo-classic Agriculture Building that houses the agriculture commissioner's office.

"There are a lot of attempts to take elements found on the Agriculture Building and not replicate them but repeat their scale and form, so that our building is a compatible structure," architect Edgar Carr said.

Besides the Whale Gallery, the entry level includes an introductory exhibit area, the museum store, an auditorium and a temporary exhibit gallery.

To move people from floor to floor, the architect chose escalators over elevators because they move large groups of people without dividing them and let people view the exhibits from many levels as they pass by.

The first three levels are made up of interlocking two-story gallery spaces. Getting off the escalator at the second level, for instance, a person may look down on the first floor exhibits to his right or up into a two-story space on his left.

The second floor has classroom spaces and a discovery room for hands-on experience with the mysteries of science and nature. The third floor is exclusively exhibit space. The fourth level houses the library and administrative conference rooms.

## The N.C. State Museum of Natural Science

**Architect of Record**  
Robert W. Carr Inc./Architects  
Durham

**Design Consulting Architect**  
E. Verner Johnson and Associates Inc.  
Boston, Mass.

**Contractors/Consultants**  
Structural Engineer: W.H. Gardner and Associates, Durham  
Mechanical and Electrical Engineer: Knott and Roberts P.A., Durham  
Landscape Architect: Bell/Glazener Design Group, Raleigh

The public escalator stops on the fourth floor at a roof terrace, where school groups might eat bag lunches. The terrace is completely wrapped by the fourth floor and topped with a glass canopy. The director's office and his administrative staff are on a smaller fifth floor that is one-third the size of the others.

The building has 190,000 square feet in seven levels, two below grade. The exterior will be of various shades of granite.

Although the footprint is small, the designers chose not to take the structure out to the property line on Jones Street. That side will be landscaped with trees and a terrace, where passersby can walk up to Jim Graham's silo for a peek at the whale bones in their new home.

## Bicentennial Mall

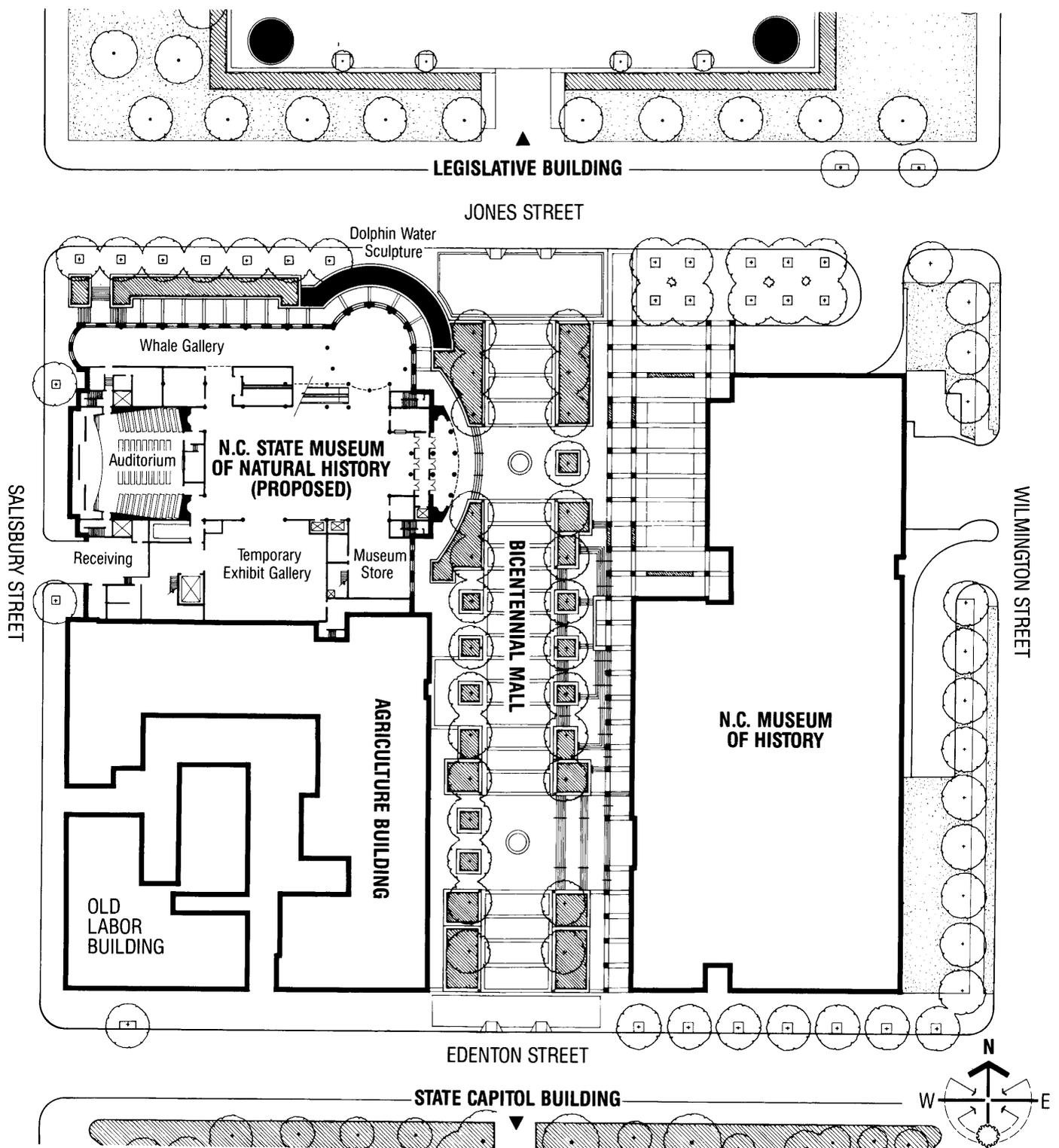
When the landscape design team was brainstorming about what to do with the Bicentennial Mall, they were struck, eventually, by the realization that the most important buildings they needed to consider were not on the mall.

More than anything else, they decided, the mall had to relate to the Capitol and the Legislative Building, the two most important buildings in state government.

The new design emphasizes access and symmetry. Existing humps and berms will be removed for a clear view from one end to the other—from the Capitol to the Legislative Building.

"The important thing with urban design is to take off the blinders and look at the fabric of the city," said Jay Smith, a landscape designer with O'Brien/Atkins. "You still have to look at the big picture."

The existing mall had been de-



Drawing by Bell/Glazener Design Group, Raleigh.

signed as a quiet place between two parking areas, said Dick Bell, who designed it in 1976 and is now consulting with O'Brien/Atkins on the redesign. "Then it was like an urban plaza. Now it is more like a mall, a paved street with trees."

The new design is understated and neutral in order to blend with both of the new buildings that face it. "We had to be careful that the geometry

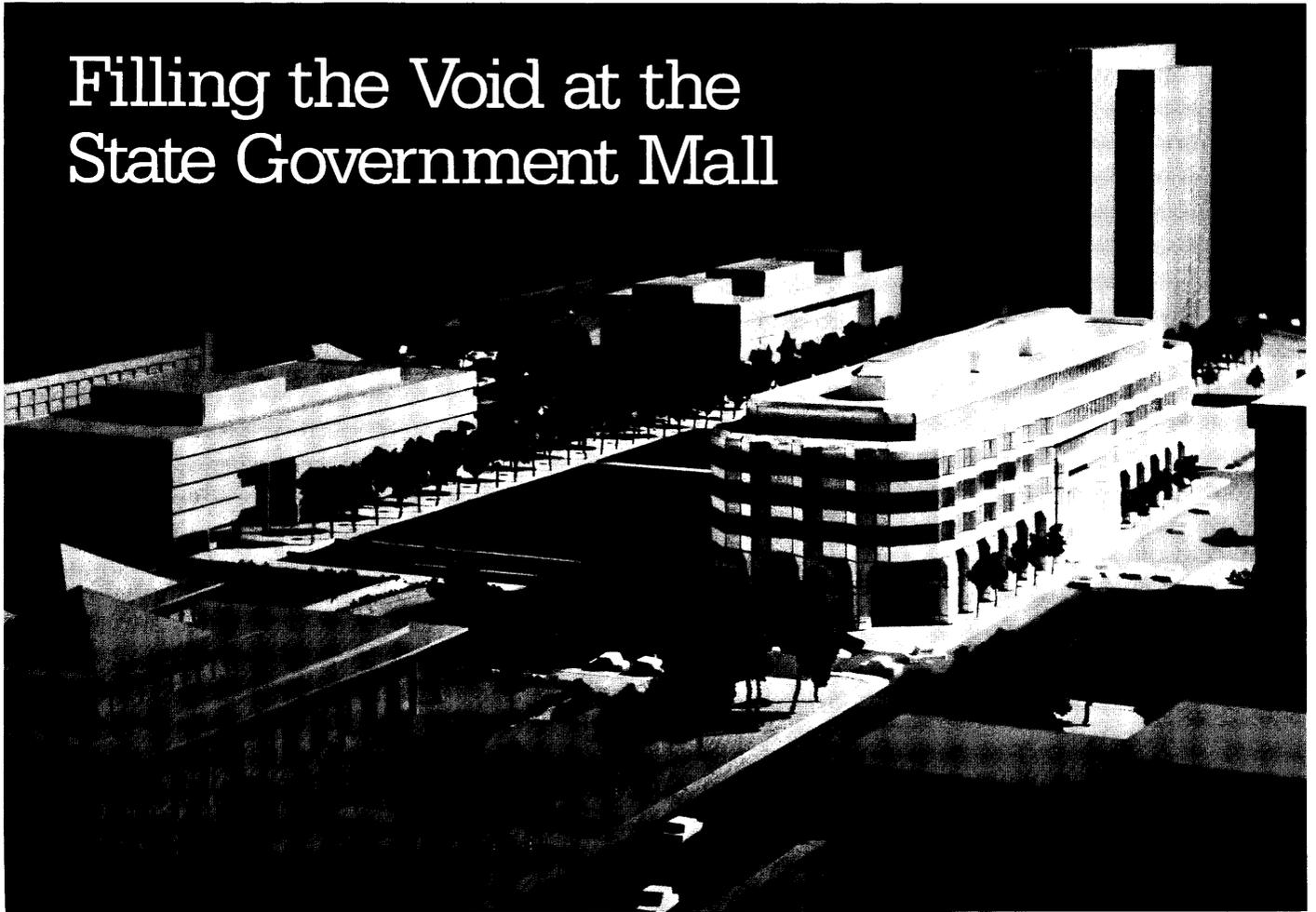
didn't respond to one building more than the other," Smith said.

The mall will have large shade trees, such as red maple, with beds of azaleas and blooming flowers. The garden trellis at the Museum of History will be covered with wisteria. A series of steps and planter ledges will serve as an informal amphitheater, for introductory lectures relating to museum exhibits.

All this will be engineered to top a three-level underground parking deck and a 1 million-gallon water tank that stores chilled or heated water for circulation to state government buildings.

The mall's pavers will be in a family of colors and textures that relate to all the surrounding buildings. At the plaza entrance to each of the museums, the seal of the museum will be laid out in terrazzo or mosaic.

# Filling the Void at the State Government Mall



*Model shows new Education Building in relation to the Legislative Building on the south end and the Archdale Building on the north. The faceted exterior and arcade are designed to soften the building's image without betraying its governmental nature. Photo by Dennis Kale, Impact Photographic Group, Winston-Salem.*

When the people who work for the N.C. Department of Revenue were asked what they wanted in their new building, some started by complaining about the assigned location.

It's "like being sent to Cleveland," one said.

The site is the state government mall, a tract that stretches between the Legislative Building to the obelisk-like Archdale Building, the north pole of the governmental complex. On the west side of the mall are the Legislative Office Building and the Dobbs Building, with space for a third building in between.

The mall, which has never been given an official name, has been dubbed a graveyard where buildings rise up like tombstones. It is far away from downtown activities—restaurants, banks, shops, people.

Employees scheduled to move into a new N.C. Department of Education

building on the mall told their architects they didn't want a building that looks like the others. Don't build a box, they said.

Within the next few years, a new Revenue Building, designed by J.N. Pease and Associates of Charlotte, and a new Education Building, designed by Walter Robbs Callahan & Pierce Architects, PA of Winston-Salem (formerly Hammill-Walter Associates) will enliven the mall and change the image of that part of the state government complex.

Construction should begin on the \$30 million Education Building early in 1989 and be completed in 1991. The \$32 million Revenue Building has been funded through design and construction documents. Once the General Assembly has approved construction money, it will take two years to build.

Each building has welcoming pub-

lic areas, including grand entrances, ground-level cafeterias and arcades along the mall. Each will bring in an influx of workers. Because they frame in the east side of the mall, they offer a strong incentive to turn that lonely space into a lively outdoor area for workers and visitors.

The new buildings will sit on boxy sites: narrow rectangles side-by-side that had to be stretched to their limits to meet square-footage requirements within a reasonably low profile. (In the interest, apparently, of making the most of the new space, the General Assembly gave both buildings an additional floor this summer, making both six stories high with a floor below ground.)

The designers—in responding to the needs of the buildings' occupants, the site and the public—have aimed to deliver buildings of distinction and compatibility that work.

**N.C. Department of Education Building**

**Architect**

Walter Robbs Callahan & Pierce  
Architects, PA  
Winston-Salem

**Contractors/Consultants**

Structural Engineers: Sutton-Kennerly &  
Associates, Greensboro  
HVAC/Plumbing/Electrical Engineers:  
McKnight-Smith Engineers, Inc.,  
Charlotte  
Acoustical Engineers: Shen Milson &  
Associates, Inc.  
Landscape Architect: Bell/Glazener  
Design Group, Raleigh



**The Education Building**

The Education Building will do more than give the N.C. Department of Education a new home. It will multiply the reasons employees and visitors might spend time on the government mall.

On the ground floor are small meeting rooms and a divisible, 400-person conference room that will be home for the N.C. Board of Education. These spaces are separated from the building's work spaces and can be used by other agencies, at night and on weekends.

The ground level also will house a 150-seat cafeteria, which will be operated by the N.C. Services for the Blind. In nice weather, diners may eat under cover of a pedestrian arcade that runs the length of the building on the mall side.

Half of the first floor area is devoted to public space. The rest is taken up with teacher-certification activities, chosen because they generate the

*The Wilmington Street face of the Education Building features a dramatic two-story cut-away entrance. Columns along the front echo the arcade columns on the side of the building that faces the mall. Photo by Dennis Kale, Impact Photographic Group, Winston-Salem.*

most traffic in and out of the building.

"We located functions on the ground floor that would animate the mall," said C. Lawrence Robbs of Walter Robbs Callahan & Pierce.

The exterior of the 330,000-square-foot building is faceted to avoid the boxy look employees found objectionable. Ribbons of rose-colored granite alternate with bands of blue glass. The front of the building facing Wilmington Street repeats the shape of the arcade on the mall by using the same vertical columns.

The building has two faces, the dominant one facing Wilmington Street. A two-story cut-away opens into a large central lobby that faces the large conference room and channels people to two banks of elevators, each one serving one end of the building. On the mall side, two "pedes-

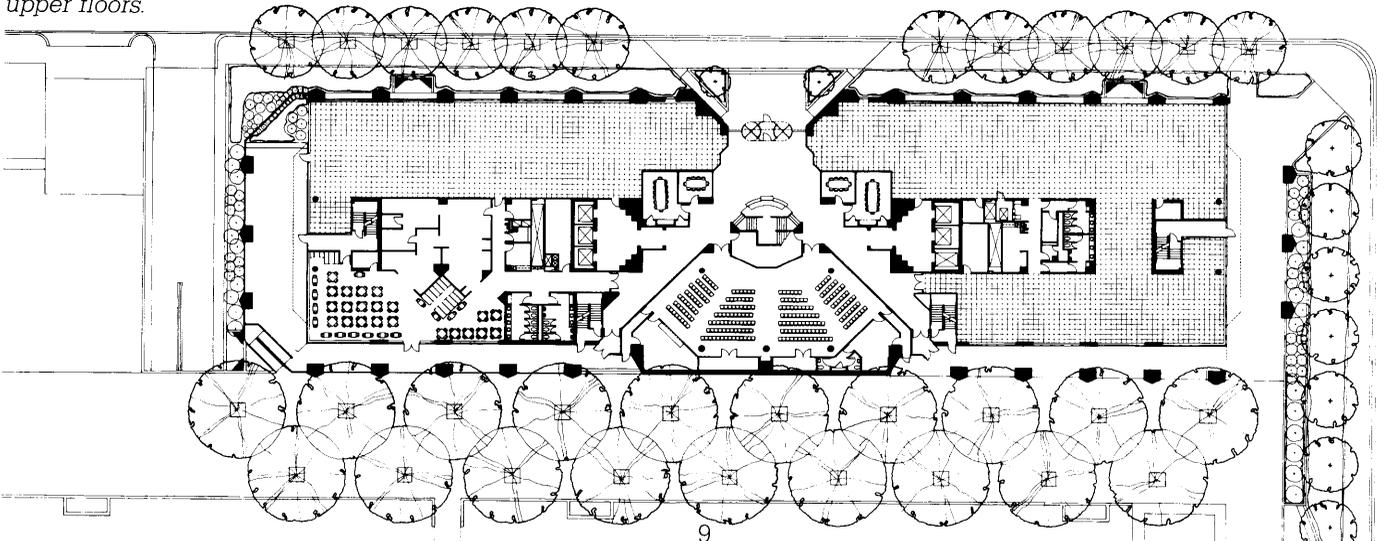
trian-scale" entrances flank the conference room.

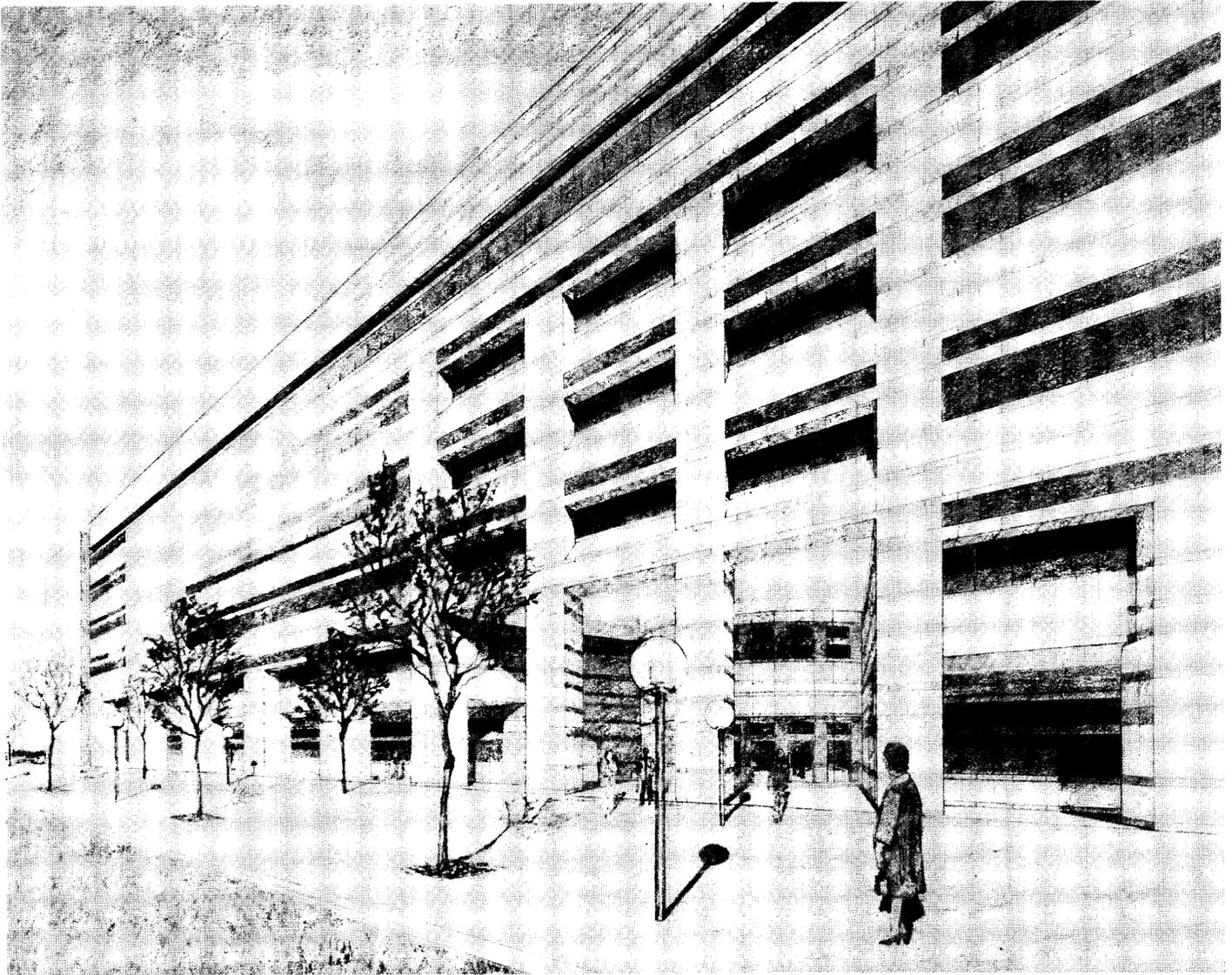
The concerns of employees, who now work in the unusual, doughnut-shaped building at Edenton and Salisbury Streets, ranged from establishing a distinct public image to ensuring adequate "pigeon control" (to that end, the design avoids ledges). The employees also asked for a cornerstone, complete with time capsule.

"When 780 people think about what ought to happen, little things like that tend to fall by the way," Robbs said. "It's nice to have that."

The clients opted for the greater flexibility of an open floor plan, a decision that netted 30,000 usable square feet over a private office plan with permanent partitions. The office space comes off a central spine, where conference centers are located.

*The entry level of the Education Building includes a 400-seat conference room at center and a 150-seat cafeteria at left. Two elevators direct traffic to the upper floors.*





*A drawing of the Revenue Building by J.N. Pease Associates shows a major focus on the cut-away entrance to a glass-enclosed circular lobby, where taxpayers may pick up forms and ask questions.*

## **The Revenue Building**

In the Charlotte office of J.N. Pease Associates is a stack of volumes that grew out of the analysis of four cartons of questionnaires returned by employees of the N.C. Department of Revenue.

For nearly a year, before design was even a consideration, the team of architects working on a new Revenue Building studied the department's needs. With revenue workers, they traveled to other states to visit revenue operations in new buildings. For a month, they met with department employees in a conference room in the old building, listening to ideas and hearing complaints.

They took pictures of more than 120 pieces of specialized equipment and learned how and when it was used. They followed the paper trail through

the building—from the mail room to the outcome—to find out who needed to be sitting next to whom and who needed access to computers or specialized spaces.

And then they went to work to make the building do what its users wanted it to do.

'A project obviously is not going to be specific to the owner unless you understand the needs,' said Adi Mistri, director of design for the project. 'We didn't do anything that's arbitrary. You can make a building wonderful and beautiful because it needs to be that way.'

In the end, the department wanted a building with limited public access, a high degree of security and an open floor plan. The department's work is linear, like an assembly line, proceeding in a step-by-step process from one

desk to the next. And it's highly specialized. On April 15, eight 18-wheelers haul in tax returns. Now, the department must lease the Raleigh Civic Center to take in and process that volume of mail.

To accommodate the linear process, work spaces were located in a central spine, 400 feet long, on each floor. Corridors follow the building's perimeters.

Security was established with two core areas of elevators and bathrooms, one to serve the public and the other for employees. On each floor, conference rooms are located in the public core area. Visitors meet with employees in those rooms and never enter the office space, which has secured doors.

A large loading and staging area for sending, receiving and processing

**N.C. Department of Revenue Building**

**Architect**

J.N. Pease Associates  
Charlotte

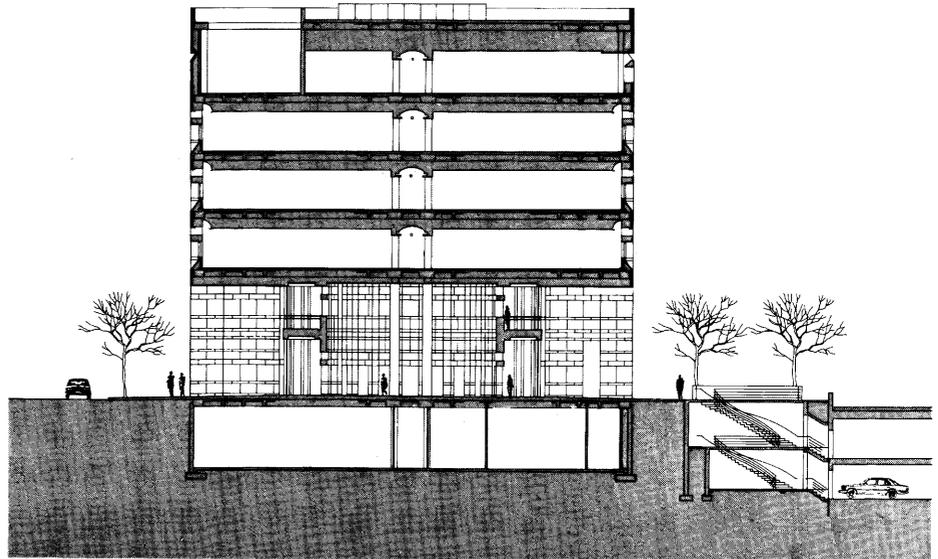
**Contractors/Consultants**

Landscape Architect: Arnold Associates,  
Princeton, N.J.  
Cost Consultant: Harris and Associates,  
Greenville, S.C.  
Curtain Wall Consultant: Dermacon Inc.,  
Houston, Texas  
Acoustical Consultant: BBN,  
Boston, Mass.  
Traffic Consultants: Travers and  
Associates, Clifton, N.J.

mail was put underground with access on the north end of the building.

The six-story Revenue Building gives equal emphasis to entrances on the mall and on Wilmington Street. The building is cut away on both sides to reveal a two-story, 54-foot-diameter, glass-enclosed rotunda. An outer circle channels workers and visitors to their appropriate elevators or to a 50-seat cafe. A domed, inner circle serves as the lobby and reception area.

The designers found they could solve several design problems by skewing the building into a parallelogram. Slanting the north end to face

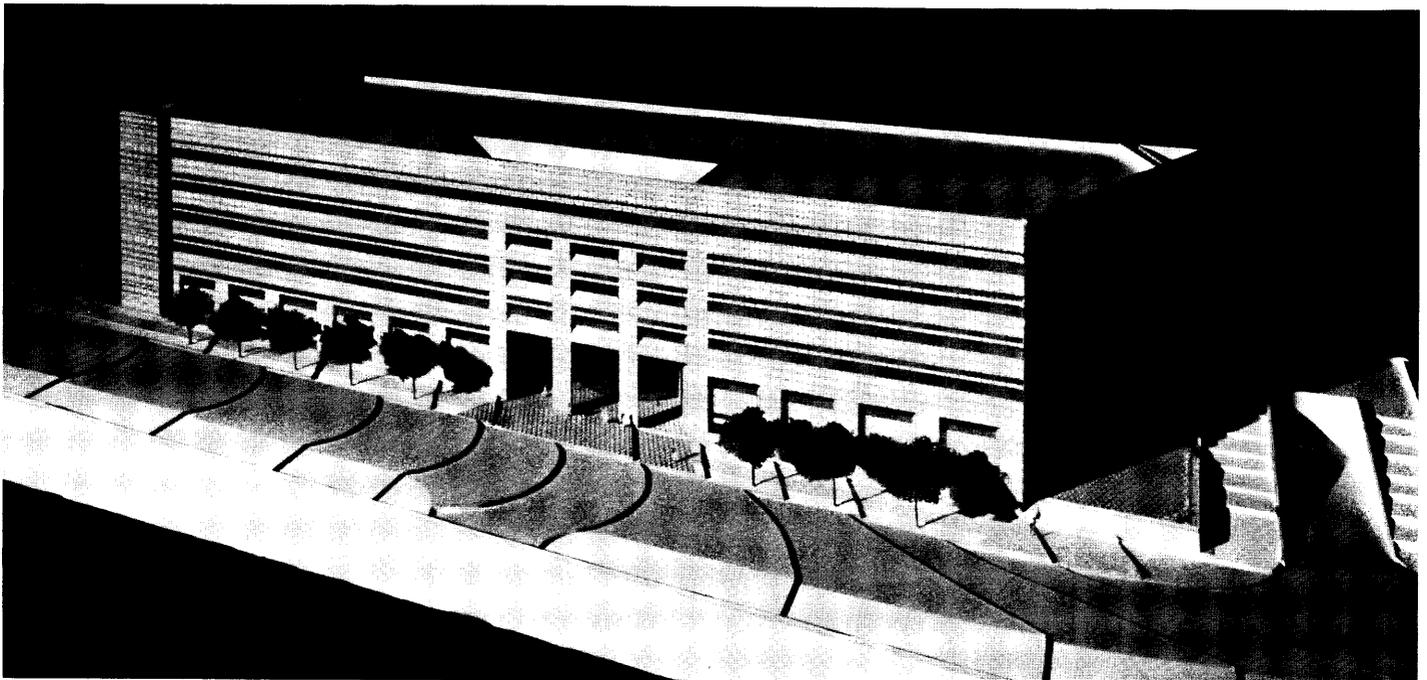


*Elevation of the Revenue Building shows how security is maintained through the use of two core areas. Visitors are confined to conference rooms and public spaces near one bank of elevators and restrooms, while employees have exclusive use of a second.*

northeast, for instance, directs the view toward the wooded Peace College campus and away from strip development to the west. The slanted face symbolically suggests the curve of the north end of Wilmington Street. Finally, the slant on the south end makes room for a small landscaped plaza between the Revenue and Education buildings.

The 280,000-square-foot building, like the Education Building, is to be wrapped in rose granite and bands of glass. But the glass is of a similar rather than a contrasting hue. A wide band of glass on each floor allows people in the corridors a view out, and a small band near the top of the floor brings light deep into the work area.

*The Revenue Building features two bands of glass, one that allows a view out from the corridors that surround the building and a second that brings light deep into the interior open work space. Cantilevered panels articulate the entrance.*



---

**Multi-Level Parking Deck**  
State of North Carolina

**Engineer**

Wilbur Smith Associates  
Raleigh

**Contractors/Consultants**

Architect: Walter Robbs Callahan & Pierce  
Architects, PA, Winston-Salem  
Landscape Architect: Bell/Glazener  
Design Group, Raleigh  
Mechanical/Electrical Engineers:  
Olsen Associates, Inc., Raleigh

---

**Unfinished Business**

The designers of these buildings faced and responded to common problems and situations. They also share some concerns.

One is the mall. Pavers are broken, little has been done to make it a responsive outdoor space, and there are no plans now for a new design.

"Traditionally, we approach design as though the building and the site

are one," said Mistri of J.N. Pease. "You don't build buildings and put some landscaping around it. But here, the mall was not part of the project."

"The mall now has the potential of being a real mall, with defined edges," Lloyd Walter of Walter Robbs Callahan and Pierce said. "Now is an opportunity to have the mall designed to relate to the buildings. The state really needs to upgrade the quality."

Visitor parking is another critical issue. Existing parking under the mall is used by employees only. The two new buildings will add a total of 622,000 square feet of office space, more than doubling the 617,338 square feet now there in the Archdale, Dobbs and Legislative Office buildings.

A new 1,500-space parking deck by engineer Wilbur Smith Associates, with Walter Robbs Callahan and Pierce

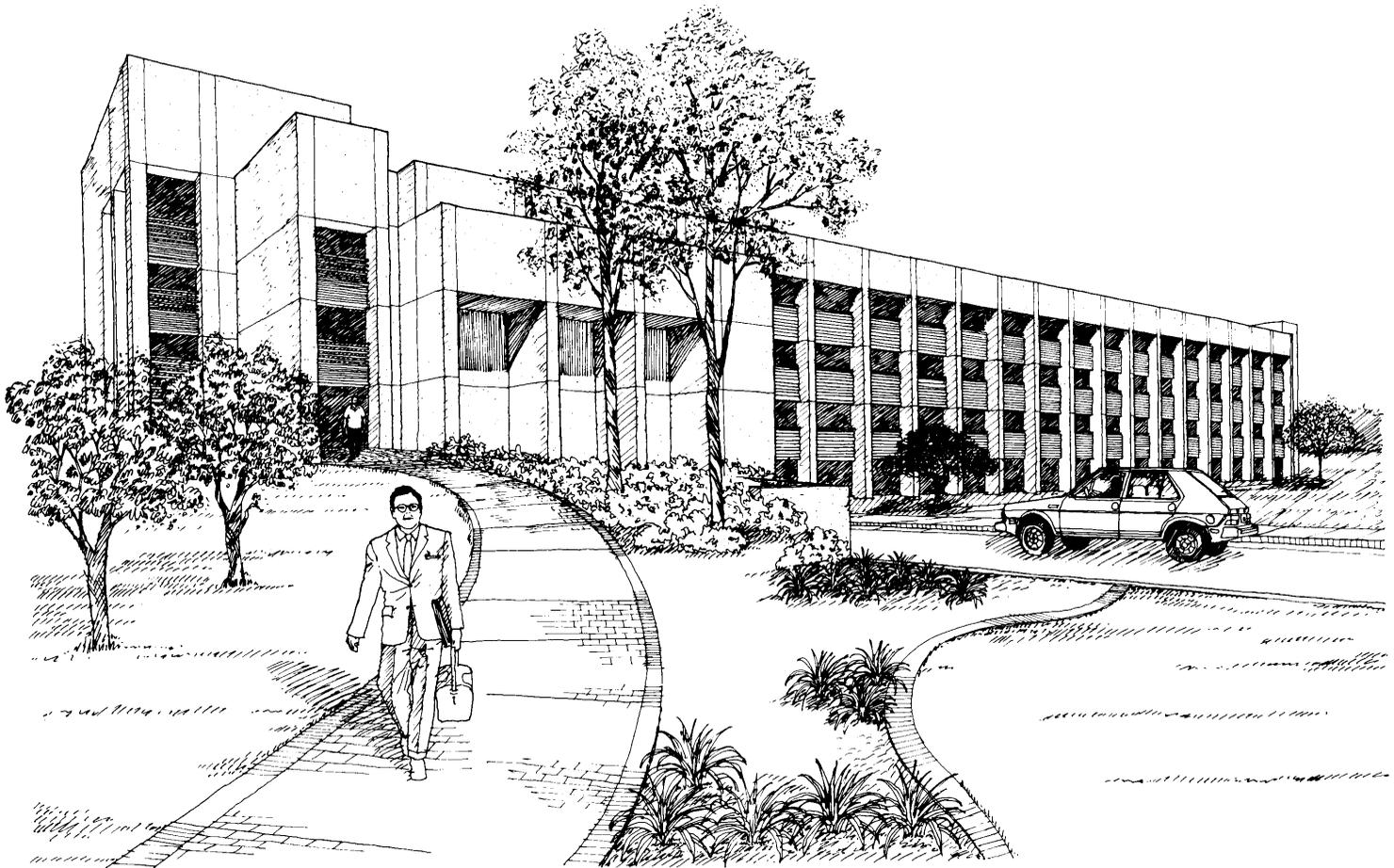
as design consultants, is under construction behind the Seaboard Coast Line Railroad Building on Salisbury Street. But only 300 of its spaces will go to visitors. The \$9 million deck is expected to be completed by January 1990.

The master plan for the state government complex includes a proposed parking deck across Wilmington Street from the new Revenue and Education Buildings. But John Emerson, director of the State Construction Office, said that deck may not be built if a study of the deck under construction shows that more spaces may be added to it.

"If the commitment is not made to do a visitor parking lot, there will be serious problems," Walter said.

"Those are the two things that need to be dealt with, visitor parking and the pedestrian character of the mall."

*This state government parking deck, set far back from Salisbury Street and behind the historic Seaboard Coast Line Building, was designed to be an unobtrusive backdrop for surrounding buildings. It features a landscaped pedestrian mall. Rendering by Walter Robbs Callahan & Pierce Architects, PA.*



# Ground Rules For A Grand Old Lady

A brochure aimed at persuading state legislators to part with money to spruce up the grounds of the Capitol makes an impassioned plea:

"The condition of the State Capitol Ground is atrocious. This singular place, which should be the jewel in the crown of the state governmental complex and the City of Raleigh, looks like a bedraggled old street lady. . . We implore you . . . to find in your hearts the love and respect needed to support the necessary funding for the clothing of this grand old lady."

The new wardrobe was developed by Bell/Glazener Design Group which was commissioned in 1986 to develop a master plan for the Capitol Square. The estimated cost of the improvements is \$1.2 million.

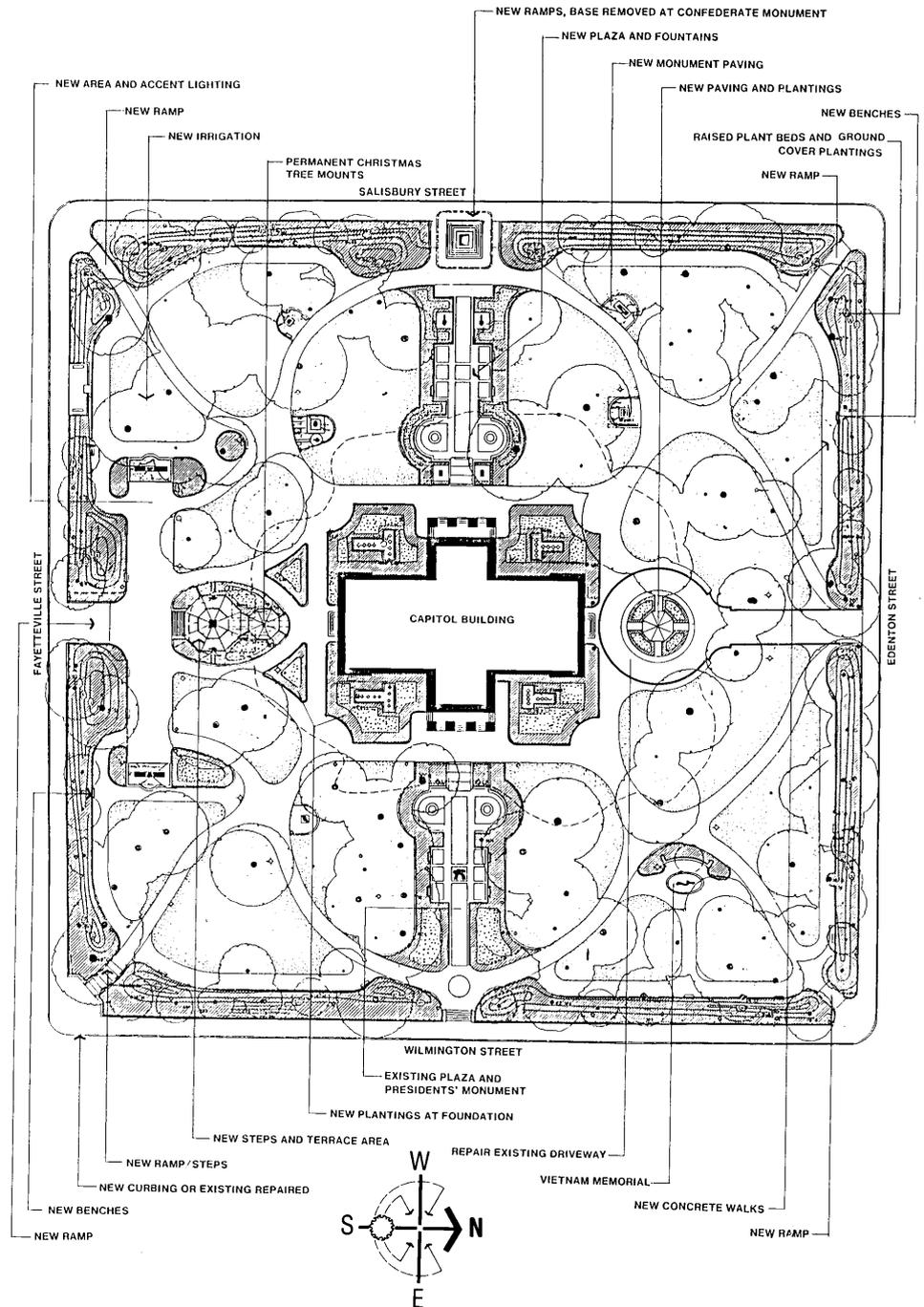
The plan approaches the neglected grounds from two directions: to bring it up to date with codes and standards, giving access to the handicapped and disabled, and to improve circulation and enhance the park-like atmosphere. It does not call for removing any of the existing ground or re-arranging monuments.

Raised mounds of two or three feet would be built around the square and covered in ivy. Without obstructing views or walling off the square, the mounds direct traffic to the walkways and insulate the square from street traffic.

Inside the mounds, a walkway would follow the inner perimeter, allowing strollers, joggers or people who just want to sit quietly on a bench to retreat from the main traffic patterns.

A plaza would be constructed for the George Washington monument facing the Fayetteville Street Mall to restore a turn-of-the-century design. Steps on the south side of the monument and a ramp on the north side would allow people to take a closer look.

The design calls for creating a plaza with fountains on the Capitol's west side that would mirror the plaza



*The master plan gives the Capitol grounds new secluded spaces, shielded from busy streets by low mounds that also help define the entrances. Drawing by Bell/Glazener Design Group.*

around the Three Presidents monument on the east side. Also on the west side, the outer base under the Confederate Monument would be removed because it cuts into the walkway.

The plan also calls for paving

around other monuments and adding lighting, signs and plantings.

The state has found the funds to dress up its lady. As a new museum and a new Bicentennial Mall take shape across the street, she will be putting on her new gown.



# DESIGN MATERIALS, INC.

SERVING THE ARCHITECTURAL PROFESSIONAL WITH QUALITY CONSTRUCTION PRODUCTS

PRESENTS

# MARGHESTONE®

BY  
**VME**  
verona marble  
company  
inc.

*...the natural beauty and appearance of granite  
in a most functional and practical building material.*

MARGHESTONE... a precast tile composed of selected marble chippings bonded together with special resins. Using the most technologically up-to-date machinery, MARGHESTONE provides uniform color, standard sizes, strict quality control and competitive pricing.

Manufactured to a fine dimensional tolerance, this product is easily installed with adhesive or cement and sand bedding.

For today's wall and floor stone needs, consider MARGHESTONE... a smart alternative.

---

For Marghestone's samples, brochure and specifications... call us.  
To see this beautiful natural stone product in use... visit our new showroom.  
2660G Yonkers Road, Raleigh — Call for an appointment.

---

Design Materials, Inc. also offers these quality products...

## sto®

**EXTERIOR INSULATION  
SYSTEMS AND FINISHES**

...used to insulate,  
protect and decorate.  
For an energy efficient  
and virtually maintenance-  
free exterior... **STO.**

## Gail

**Architectural Ceramics**

Elegance, distinction and  
continuity are found in  
GAIL's extensive line  
of both glazed and unglazed  
ceramic tiles. For  
dramatic tile design  
statements... **GAIL.**



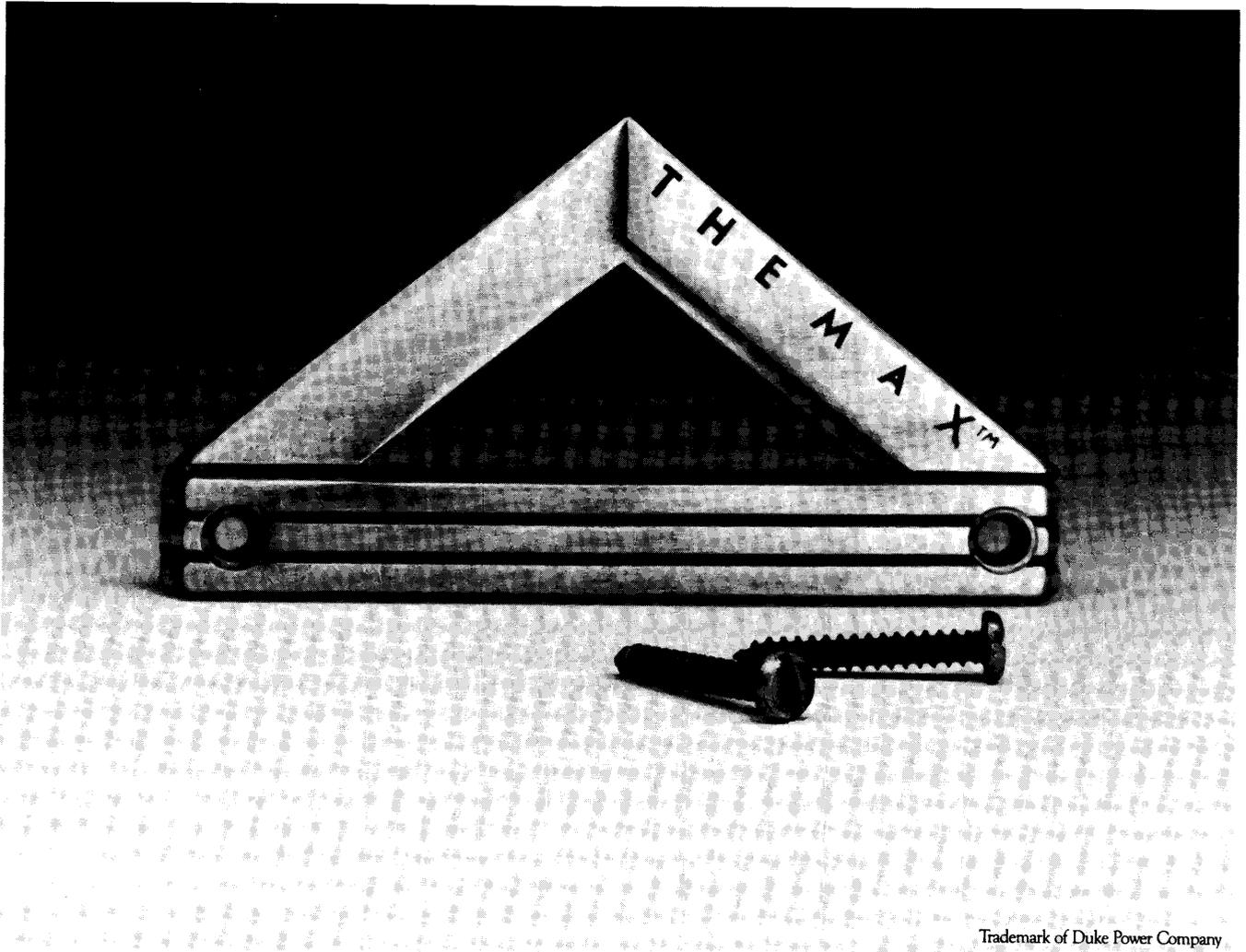
## FIANDRE

FIANDRE's state-of-the-art  
technology breathes the  
beauty and strength of  
natural granite into an  
exceptional porcelain tile.  
**ONLY FIANDRE!**

FOR MORE INFORMATION ON THESE AND OTHER QUALITY BUILDING MATERIALS CONTACT  
**DESIGN MATERIALS, INC.**

P.O. BOX 27685 • RALEIGH, NORTH CAROLINA 27611 • PHONE (919) 821-5200

# It's Amazing What One Piece Of Hardware Can Do For The Value Of A House.



Trademark of Duke Power Company

It's just a little thing. About one inch by two. But to prospective home buyers, the Maximum Value Home emblem can be a major selling point.

Because it tells buyers a house has been approved by Duke Power as an excellent energy value. It means they'll get the biggest discounts possible on their power bill. It says they'll have The Comfort Machine™ High Efficiency Heat Pump plus safe, electric water heating. And it says you're offering the most energy-efficient construction they're ever likely to find. Which is why, more and more, buyers are seeking out The Max™, and why we believe it's where the next generation will live.

So before you put up any more houses, make sure you can put our emblem on them. Ask your Duke Power representative for details. **DUKE POWER**

# The Costs of Construction Management

*The May-June issue of NCA focused on public school building and the issues facing architects, school boards and school systems as they planned for new schools. Since then, questions have been raised across the state about the use of construction managers in public school building. This is a look at what happened when one school system put a project out for bids twice: once with a construction manager and once without.*

An infusion of \$3.2 billion in state monies to build public schools over the next 10 years has made North Carolina fertile territory for construction management companies, whose role is to coordinate among contractors and architects to bring projects in on time and on budget.

The recent experience of the Winston-Salem/Forsyth County School System indicates that a construction manager may, in the end, be a costly addition to the project.

The Winston-Salem/Forsyth County system hired CMA Construction Management Inc. of South Carolina to supervise two school-building projects, both of which had tight time and budgetary constraints. Both schools were to have been completed for use in the 1989-90 school year and for a budget, excluding site work, of about \$55 per square foot, or \$9.2 million.

Newman & Jones P.A., the architects on the project, worked with CMA to set the design, bidding and construction schedule. CMA put the project up for bids under 12 separate contracts in July and was forced to

repeat the bidding when too few bids were received in several categories.

The second set of bids came in at \$10.4 million, or \$62.31 per square foot. At the same time, bids on another school in the system that was not being handled by a construction manager came in at less than \$50 a square foot, although the school was similar in size and design. That school was bid the conventional way, with four prime contracts.

Instead of accepting the high bids and cutting out design features to make the projects fit the budget, the school board decided to rebid the work using the traditional owner-architect-contractor arrangement.

When the project was bid again in October, the bids came in nearly \$1 million lower, bringing construction costs on the two projects down to \$56.32 per square foot.

Halbert M. Jones, Jr., AIA, of Newman & Jones said the bidding in October generated much more interest by local contractors. The increased local competition brought the bids within the school system's allowance.

CMA claims that it saves money by eliminating the general contractor and taking more separate bids. "But if it eliminates local competition, that isn't the case," Jones said.

Because of the bid delays, the schools cannot be built in time to open next year. In addition, the school system ended up paying CMA \$215,719 in fees and expenses. If CMA had completed the project, the fee, which is based on a percentage of the cost, would have been about \$660,000.

Gary Strickland, of Hugh G. Strickland Inc., a Winston-Salem general contracting company, said many subcontractors won't bid on construction management projects because they either cannot meet or do not know how to meet licensing and bonding requirements involved when bidding directly with the owner.

"The point is," Strickland said, "all these people were left out."

Strickland said contractors also are reluctant to work with construction managers because they are the only agent on the contract who has no

## BID SUMMARIES

### Piney Grove and Walkertown Elementary Schools Winston-Salem/Forsyth County Schools

Bid Date	Contractual Form	General* Contract	Electrical Contract	HVAC Contract	Plumbing Contract	Kitchen Equipment Contract	Combined Contracts	Construction Cost** Per Square Foot
July 26, 1988	Construction Management	\$7,690,968	\$850,000	\$1,108,229	\$572,990	\$202,920	\$10,425,107	\$62.31
October 12, 1988	Traditional	\$6,835,280	\$767,700	\$1,053,500	\$557,800	\$208,680	\$ 9,422,960	\$56.32

\*Includes Site Development Costs

\*\*167,320 Square Feet for Both Schools  
(83,660 Square Feet Each)

financial responsibility.

"They are out there calling the shots and making decisions about scheduling," he said, "and they are the only ones on the whole team that has no financial risk."

Strickland's company was not involved in the Forsyth County projects, but he spoke against using a construction manager at school board meetings because "I am a taxpayer."

Construction management traditionally has been used on large and complicated industrial jobs.

Donald J. Altman, the president of CMA, said construction management also works with schools because of the importance of completing a project on time. "The system works," he said. "It just didn't work in Forsyth."

Altman said contractors in Winston-Salem did not bid because they were opposed to construction management.

Kenneth A. Kirby Jr., the director of the North Carolina building section of the Carolinas Branch of the Associated General Contractors, said school boards are receptive to hiring construction managers because of problems they have had in the past.

Those problems might be better addressed, he said, by changing state law to eliminate the requirement that all government projects be divided into four separate prime contracts for general, plumbing, electrical and heating and air conditioning. That makes all four contractors equal, leaving the general contractor with little leverage to bring the work of the others in on time, he said.

At any rate, many contractors and architects share the opinion that schools can be built efficiently with a general contractor working with an architect. The Winston-Salem experience suggests that bringing on a construction manager, who adds an additional layer of expense and authority, may not pay off.



## IF YOUR PRESENTATIONS GO FLAT, IT'S TIME TO GO 3-D

If your project has to communicate, then it's time to go three dimensional. You're talking to a tough audience: developers, financiers, municipalities, prospective buyers and tenants. You need every advantage you can get.

Scale Model & Design will give you that advantage. Our distinctive, realistic style of modelmaking will get your project noticed. We make it easy for you, too. Our craftsmen, trained in architecture and design, speak your language. And, we can work with your most demanding schedules.

Let Scale Model & Design give you the advantage of that third dimension. Give us a call to discuss your project, or ask for our brochure.

SCALE  
MODEL  
AND  
DESIGN

100 S. Harrington St. Raleigh, NC 27603  
919/832-4304

# HOW SOME SOUTH CAROLINA DOCTORS FOUND A NEW WAY TO FIGHT THE COMMON COLD.



Keeping patients from feeling too hot or too cold is an everyday concern at the new Spartanburg Surgical Clinic. And so is keeping heating and cooling costs down. So the doctors were glad to find a cure for both problems: a high efficiency heat pump used in conjunction with a programmable thermostat.

With the heat pump, plenty of warm or cool air is evenly distributed in every room. And with the thermostat, monthly demand charges are kept down since unauthorized people can't tamper with the setting. Duke Power showed the clinic's administrators how to use the thermostat to get the most comfort from the

system while keeping costs to a minimum. And today, they're so pleased that they say they'd readily choose the same combination for future buildings.

Chances are we can help with your operations, too, no matter what profession, business or industry you're in. Because we constantly keep up with innovations being made with electric technology. And we pass on what we know free of charge. So call your local Duke Power office and talk with a marketing representative. Because there are probably ways you could reduce costs. And that's **DUKE POWER** *Generating Energy Alternatives* healthy for anyone's business.

## Who Said Chivalry Is Dead?

*Two new museums and a redesigned Bicentennial Mall have displaced Sir Walter Raleigh, an 11-foot statue that was bought with the collected pennies of school children.*

*Despite the sentimental origins, Sir Walter has never found complete acceptance in the capital community. Dennis Rogers, columnist for The News and Observer of Raleigh, ponders the monument's prospects.*

*Rogers, the author of several collections of home-spun wit and wisdom, recently gave birth to another, It's Bad News When the Bartender Cries. This column is reprinted by permission of The News and Observer.*



By Dennis Rogers

**W**anted: good home for 11-foot statue of a man who was beheaded by his queen.

You folks in Eastern North Carolina think you've got problems with the summer heat wave and tourists from Ohio who cannot find the Atlantic Ocean? We here in Your Capital City are faced with a problem of such magnitude that before it is over, someone surely is going to appoint a committee to study it. That's the way we do things here. We've got more committees than Carter has pills.

Here's the deal: We've got a statue of Sir Walter Raleigh that is being displaced by construction of the new Museum of History. We've got to do something with Sir Walter before some guy in a hard hat French kisses him with a bulldozer.

So far, there are only two options being discussed.

Option One is to lock the old boy up in a musty warehouse until the museum is finished and then park him back in front of it and listen to the arts crowd mutter that he destroys the integrity of the new building. That's what they always say: Whatever they don't like destroys the integrity of whatever they do like.

Option Two is to give Sir Walter to the City of Raleigh, which would then put it in some out-of-the-way place like in front of the Civic Center, which would be pretty much out of the way because practically no one ever goes there. Mayor Avery Upchurch says that would be fine

with him, but he doesn't want somebody coming along in a few years asking for the thing back again. Like they would.

So far we've managed to keep Sir Walter well-hidden in downtown Raleigh. We have him behind some bushes near the Bicentennial Mall, and I'll bet you that not 10 percent of the people of Raleigh can tell you exactly where the Bicentennial Mall, or Sir Walter, is.

We have him there, I suspect, because he scares little children.

Our Sir Walter in person is a really big dude, and he sneers. Most statues have a normal-size person on top of a big slab of something. We've got a whole lot of bronze Sir Walter standing on a little bitty slab of something. You stand there, admiring the man who was beheaded by his queen for being a lout, and he seems so . . . close. It is like being in a small elevator with Conan the Barbarian. And he's in a bad mood. And the elevator is stuck.

We've got to do something with him. It wouldn't be polite to let some careless worker goose him with a backhoe. This thing needs a home.

We can't give him to Manteo, which already has a humongous Sir Walter Raleigh statue of their own that not everyone there likes all that much. And if we stick him in a warehouse, Sir Walter has seen his last pigeon because it will take an infinite number of committees holding an infinite number of meetings to find him a new home after his sabbatical. And if we stick him in front of the Civic Center, people are going to laugh at him, and that would not be seemly.

We could stick him on top of the next skyscraper that goes up in downtown Raleigh, sort of like that woman on top of the U.S. Capitol. That way Sir Walter Raleigh would become a trivia question.

Q. What the heck is that on top of that building.

A. Sir Walter Raleigh.

We could, I suppose, stick him in Nash Square, which is where he was supposed to be when the whole idea first came up in 1901. Or we could stick him on the Fayetteville Street Mall and give the winos something new to lean against.

Or we could be magnanimous. We could be good neighbors. We could reach out our hands to those less fortunate than ourselves. We could give our beloved Sir Walter Raleigh to some culturally deprived community. You know, a place where people lead lives of quiet desperation, a place where truck stops are cultural icons and a place where scoreboards fall from the sky.

Let's give Sir Walter Raleigh to Charlotte.

---

*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.*

---

# SHELTERING AMERICA FOR OVER TWO CENTURIES.



In the eyes of the world, Buckingham-Virginia Slate is the most highly regarded natural roofing material in America. Non-fading, this blue-black, grade A slate was specified by Thomas Jefferson, and is still selected by eminent architects of our time for its permanence and natural beauty.

Because it blends with either contemporary or traditional architecture, and helps to blend

both, it's a natural, superlative choice for residential work, churches, schools, commercial and municipal jobs.

If you want to create shelter that will be around for generations to come, above all, use a permanent roof of Buckingham Virginia Slate.

 **Buckingham-Virginia  
Slate Corporation**

4110 Fitzhugh Avenue • P.O. Box 11002  
Richmond, Virginia 23230 (804) 355-4351

*Robert E. Payne, Architect, Richmond, Virginia  
Generations will appreciate the distinctive, handmade quality, natural cleft and texture of Buckingham-Virginia Slate roofing products that make any roof enduringly beautiful. Call or write for our free catalog and specifications catalog today.*

## Harris & Associates

*Estimating & Scheduling*

1601 Cedar Lane Road  
Centre West, Suite 15  
Greenville, SC 29611

(803) 246-8040

We specialize in CACES  
estimating for Corps of  
Engineers and CES for Naval  
Facilities Engineering Command.



Estimates are available  
on computerized format  
upon request.

## **C**USTOM BRICK CO.

"SERVING RALEIGH, THE TRIANGLE  
and EASTERN NORTH CAROLINA"

VISIT OUR SHOWROOM  
COMPLETE DISPLAY  
OF SAMPLES

### **PRODUCTS**

FACE BRICK  
HAND-MADE BRICK  
GLAZED BRICK  
PAVERS

### **SUPPLIERS**

*Borden • Taylor Clay • Boren  
Lee • Old Virginia • Nash  
Isenhour • Hanley • Merry  
Palmetto • Lynchburg • Waccamaw  
Ashe • Delta Macon • Southern  
Bickerstaff • Pine Hall  
Baltimore • Glen Gery*

1613 Old Louisburg Rd. Raleigh, N.C. Ph. 832-2804

# BRADY TRANE

## COMMERCIAL AIR CONDITIONING

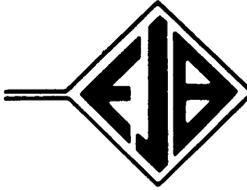
New Equipment  
Service • Parts

Building Automation

*OUR FIRST CONCERN IS  
YOUR SATISFACTION!*

1915 Church Street, Greensboro 378-0670  
5314 Western Boulevard, Raleigh 851-4131  
3512 Vest Mill Road, Winston-Salem 765-0791

Parts 1-800-532-4629



**E.J. BROWN & ASSOCIATES**  
Quality Surveyors/Cost Estimators/Construction Managers

Specializing in Feasibility Studies,  
Preliminary Budgets, Conceptual Cost Estimates,  
Quantity Surveys, Detailed Cost Estimates,  
Value Analysis and Construction Management.  
Also offering CACES and CES Formats.

American Society of Profes. Estimators  
Construction Spec Institute  
American Assoc. Cost Engineers  
Professional Const. Est. Assoc.  
Society of American Value Engineers

Eddie J. Brown, C.P.E.  
815 Old Winston Rd.  
P.O. Box 746  
Kernersville, NC 27285  
Tel. (919) 996-3791

**OFF THE  
DRAWING  
BOARD**

**Building on 50 Years  
of Experience**

J.N. Pease Associates, the Charlotte-based architectural, engineering and planning firm, capped off 50 years of achievement in October with a trip to the past.

More than 700 people accepted the firm's invitation to view the Ramesses exhibit at the Charlotte Mint Museum and gather afterwards for an elegant reception.

"We have a proud past, a past to be acknowledged but not to be dwelled upon," said J.N. Pease Jr., chairman of the board and chief executive officer. "Insight gained from 50 years of experience is meshed with new ideas and new technology to create functional, efficient and attractive design."

J.N. Pease Associates got its start one brisk fall morning in 1938 when J. Norman Pease Sr. ran into his old friend James A. Stenhouse in uptown Charlotte.

Stenhouse, who had once worked as an office boy for Pease, had been studying architecture at Georgia Tech. And Pease, an engineer, had come home at age 53 from New York, where he had been working for one of the country's largest engineering firms.

"When Mr. Pease asked me if I would join him in setting up an office, I accepted immediately," recalled the 78-year-old Stenhouse. With a handshake, the agreement that grew into J.N. Pease Associates was sealed.

Colonel Pease, who was called by his army title, retired at the age of 93, but he showed up at the office almost daily until his death July, 1987, at the age of 101.

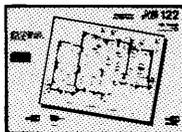
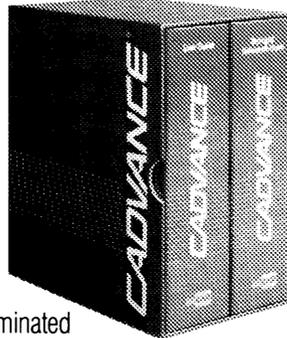
**CADVANCE**

**RNL Design meets  
an architectural  
challenge on time  
and under budget**

When a large aerospace manufacturing facility presented an architectural challenge for RNL Design, the firm relied on CADVANCE PC-CAD software from ISICAD. CADVANCE helped RNL respond quickly and with ease to drawing changes. Its flexibility made it possible to explore numerous options and its precision eliminated problems at the construction site.

CADVANCE also enabled RNL to log detail sheets as office standards, saving time on subsequent projects. Every challenge had a solution...in one easy to learn, easy to use system.

Find out how RNL Design faced its challenge with CADVANCE. Call or write for your free copy of Case Study #122.



**FREE CASE STUDY**

**Cad Resources**  
768 Tyvola Rd.  
Charlotte, NC 28217  
(704) 523-6445

**Piedmont Reprographics, Inc.**  
6A Oak Branch Dr.  
Greensboro, NC 27407  
(919) 299-2703



The firm's first job was a \$150,000 renovation to Ivey's Department Store. Since then, it has grown into one of the largest architectural/engineering planning firms in the Southeast, with more than 110 employees. It has changed the face of Charlotte and stamped its impression throughout the state and beyond.

Among the firm's extensive credits in Charlotte are the Charlotte-Mecklenburg Government Center, plaza and parking structure; Two First Union Center; Central Piedmont Community College; Duke Power Electric Company.

In 1981, Pease opened an office in the Research Triangle Park to serve a growing clientele in the Triangle area and eastern North Carolina. Projects include law enforcement centers for Craven and Onslow counties; a number of medical school facilities at UNC-Chapel Hill and East Carolina University; Central Prison and a new N.C. Department of Revenue Building in Raleigh.

"The firm takes a very precise, methodical approach to solving specific design problems for a whole range of clients," Pease said.

That consistent approach to architectural design was one of the qualities that earned J.N. Pease the first Kamphoefner Prize awarded by the NCAIA earlier this year.



J.N. Pease Jr.



**"PASSAGES"**  
Carrara Marble  
8'10" H x 4' W x 4' W

**CLIENT**  
Lees McRae College, Banner Elk, NC  
New Cannon Student Center

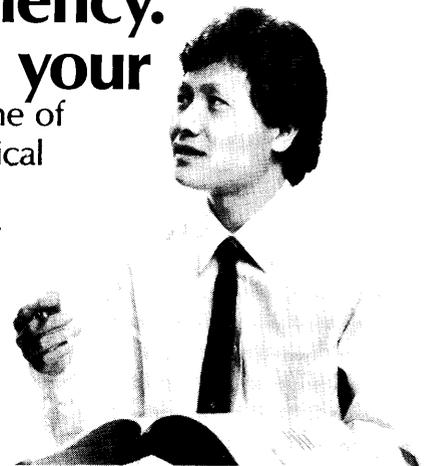
**SCULPTOR**  
Wayne Trapp, 704-297-4722

1988

**CLIENTS INCLUDE:** Hyatt Hotels ■ Northern Telecom ■ Apple Computer Corporation  
Georgia Pacific ■ New York Times ■ Steel Case Corporation ■ Allenton & Associates  
NC Central University ■ Lees McRae College ■ Tennessee Valley Authority ■ AT&T  
Sheraton Hotels ■ Battelle Memorial Institute ■ USX Corporation ■ City of Columbus Ohio  
Watauga Savings & Loan ■ The Mint Museum ■ Midrex Corporation ■ Central Carolina Bank  
Mayfield School District ■ Armco Steel ■ R.J. Reynolds International ■ The Hunter Museum  
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 Corporation

**You're an expert at design.  
Minh Tran is an expert  
in energy efficiency.  
Include him in your  
plans.**

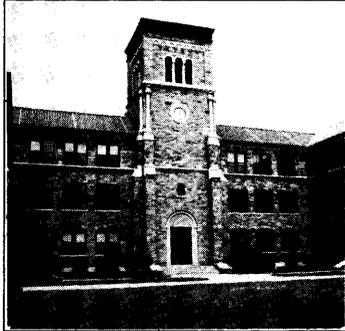
Minh Tran, or one of our other Technical Services Engineers, will conduct a comprehensive Energy Systems Analysis of your project. At no charge to you. Call toll free. From: NC, 1-800-532-0462; SC, 1-800-438-8410; Charlotte 364-3120.



**Piedmont  
Natural Gas  
Company**

## SEASON • ALL

### Aluminum Retrofit Windows



*For energy efficient,  
custom-fit, replacement  
windows, call North  
Carolina's window expert...*

**800-472-7274**

### **Davidson Sash & Door, Inc.**

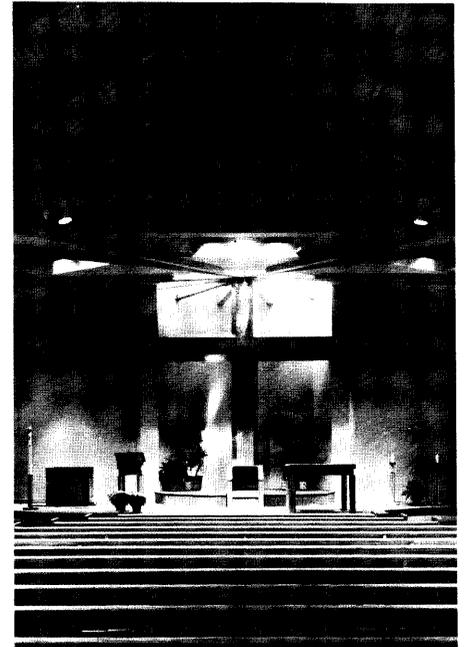
500 E. Center Street  
Lexington, NC 27293

## Landscape Firm Plans Campus and Gardens

HunterReynoldsJewell, PA, a Raleigh landscape architectural and planning firm, has been picked to develop a master plan for Wake Forest University's 300-acre campus. The firm also has been chosen by the North Carolina Botanical Garden in Chapel Hill to assist Jones & Jones of Seattle, Wash., in the preparation of a master plan for the garden, which will include a new visitor center, herbarium, habitat gardens, research station, greenhouse and nature trail.

## N.C. Firm Wins National Church Honors

Bohm-NBBJ of N.C., Inc., (formerly McClure-NBBJ) of Raleigh received design awards from the national Inter-faith Forum on Religion, Art & Architecture for the design of three North



*St. Andrew Catholic Church*

# What should I do when my custom printed drafting media runs out unexpectedly?

1. Call Duncan-Parnell toll-free.  
In N.C. 1-800-432-6022.  
In S.C. 1-800-438-4088.
2. Send in a camera-ready layout or  
a previously printed format to:  
P.O. Box 35649  
Charlotte, N.C. 28235
3. Sit back and relax.  
Our offset printing department does the rest.

 **Duncan-  
Parnell Inc.**

Carolina projects. The Diocesan Headquarters in Kinston, N.C. received an Honor Award; St. Andrew Catholic Church in Apex received a Merit Award; and the International/Islamic Studies Center at Shaw University received a Merit Award. Two Honor and eight Merit Awards were given. The firm also received an Honor Award from the South Atlantic Region of the AIA for the Headquarters of the Episcopal Diocese of East Carolina.

## Charlotte Merchandise Mart Expands

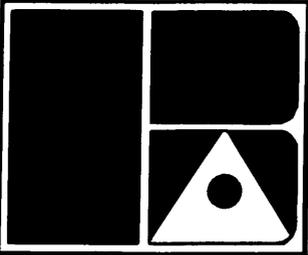
The new Charlotte Merchandise Mart, designed by Little & Associates Architects of Charlotte, is undergoing renovation and a 130,000 square-foot expansion to be completed in 1990. The new facility will have 220,000 square feet of open exhibit space on the ground floor, a three-story skylit lobby and exterior courtyards.

## Zoo Dedicates Veterinary Center

A new veterinary center designed by Dewberry & Davis of Raleigh was dedicated at the N.C. Zoological Park in October. The \$1.95 million center, the first of the facilities planned for a North America project, will serve all the zoo's animals now and through expansion. It has pools to accommodate aquatic animals; a nursery for mother-rejected and ill newborns; modern surgical, X-ray and laboratory facilities; a surgical recovery room with rubber padded walls for hooved animals; and special holding areas.

## Names and Changes in N.C. Architecture

Hammill-Walter Associates of Winston-Salem has a new name. The firm's name is now Walter Robbs Callahan & Pierce Architects, PA. The new name recognizes the four principals, all of whom have been with the firm for years. President **Lloyd G. Walter, Jr., AIA**, was a founding principal of the firm in 1965. Principals

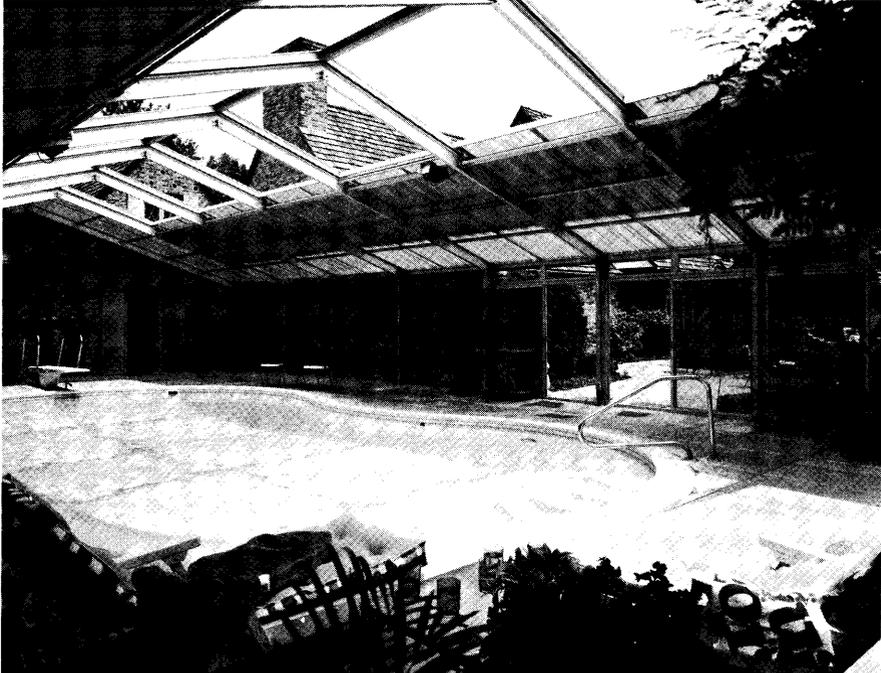


Civil and Structural Engineering,  
Planning, Surveying,  
CADD/CAE and  
Construction Supervision

**BALLENTINE ASSOCIATES**  
CONSULTING ENGINEERS

Residential Subdivisions and  
Commercial Site Planning

221 Providence Road □ Chapel Hill, NC 27514 □ (919) 929-0481



**THE MOST EXCLUSIVE CLUB IN THE WORLD —**  
YOUR OWN *Signature* CUSTOM LEISURE PAVILION

*Distributor for IBG Solar Structures*

**CAROLINA SOLAR STRUCTURES**  
A Division of Bob Thompson Builders, Inc. (704) 298-7171

Box 9325, Asheville, NC 28802 

and vice presidents are **C. Laurence Robbs, Jr., AIA**; **Rence Callahan, AIA**; and **Clark M. Pierce, AIA**.

Walter Robbs Callahan & Pierce Architects, PA, has three newcomers. **Pamela B. Aaron**, an interior designer, is an affiliate member of the Institute of Business Designers. She has a B.S. in Interior Design from Winthrop College and four years' experience in space planning and interior architecture.

**Joe Bircher**, an intern architect, has returned to this area from New York City, where he was with the firm of Kidmore Owings & Merrill. He has a Masters of Architecture from Columbia University.

**David Madigan**, CPA, comptroller, joins the firm from Sara Lee Knit Products, where he was manager of financial and administrative operations. He received a B.S. in accounting from UNC-Greensboro.



## This skylight took 58 years to build.

Super Sky built some of the first modern aluminum skylights ever, in 1930. Today, our designs reflect the experience and innovation that only a pioneer can offer. Take advantage of it. After all, we've been working on your next skylight for the past 58 years. Contact our local representative.



SCPI  
Post Office Box 45  
Apex, NC 27502  
(919) 362-8611

## Johnson & Higgins designs Professional Liability Coverages.

We know the field of professional liability protection as few other brokers do. That's why we've won the endorsement of the NCAIA, PENC, and SCAIA. And our worldwide network enables us to negotiate with underwriters everywhere. We'd like to talk with you about this. Call a J&H account executive at 1-800-433-2702 in North Carolina.

**JOHNSON & HIGGINS**

JOHNSON & HIGGINS CAROLINAS, INC.  
750 First Union Tower  
Charlotte, NC 28282-8265  
(704) 374-1845

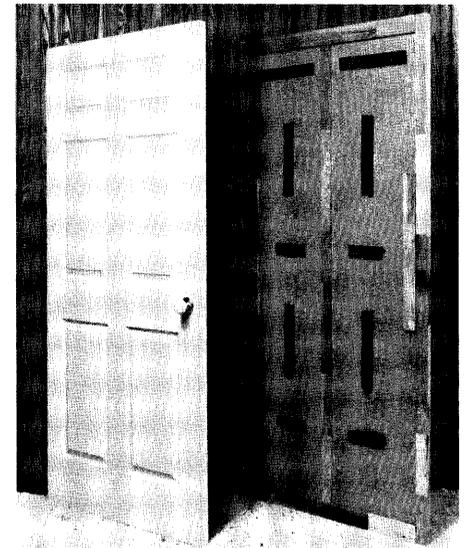
Risk and Insurance Management Services;  
Human Resources and Actuarial Consulting  
Throughout the World.

## NEW PRODUCTS

### Door Keeps Fire Out

Masonite Corp. now has an interior door that offers a barrier against flame for a minimum of 20 minutes. The new fire core system was developed to answer the need for a fire rated interior door in single-family detached housing at a reasonable cost. The FC-20 system is available in two popular four-panel styles, Colonist and Conventry.

For additional information, contact a Masonite representative or write: MarketCom, c/o Masonite Corporation, 69 Main St., Binghamton, N.Y. 13905.



### Wooden Bricks, A New Option

Solid wood bricks suitable for home, office or retail store decoration are now available from Outwater Plastic/Industries, Inc. Precision-machined

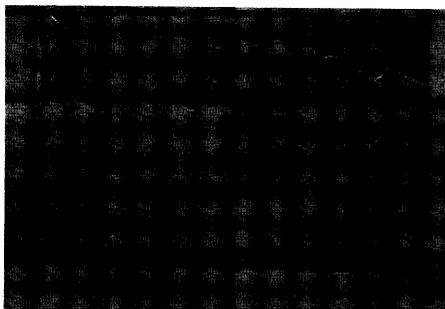


from juniper wood, the 12-inch by 4-inch bricks feature tongue-and-groove construction for fast, secure installation. All nails or staples are automatically concealed.

The wood bricks are suitable for walls, backsplashes, soffits, display units and similar applications. They can be painted, stained or plastic-coated. For more information, contact Plastic/Industries, Inc., 4 Passaic Street, Wood-Ridge, NJ 07075, 1-800-631-8375.

## New Roof Shingle Looks Like Slate

A new roof shingle from FibreChem Corp. of Charlotte simulates the textured finish and roughened edges of old slate shingles. Called Southern Slate, it is made from fiber-reinforced cement and carries a 50-year limited transferable warranty. The material is not subject to rotting and deterioration from chemicals, moisture (including salt water), impact damage and acids



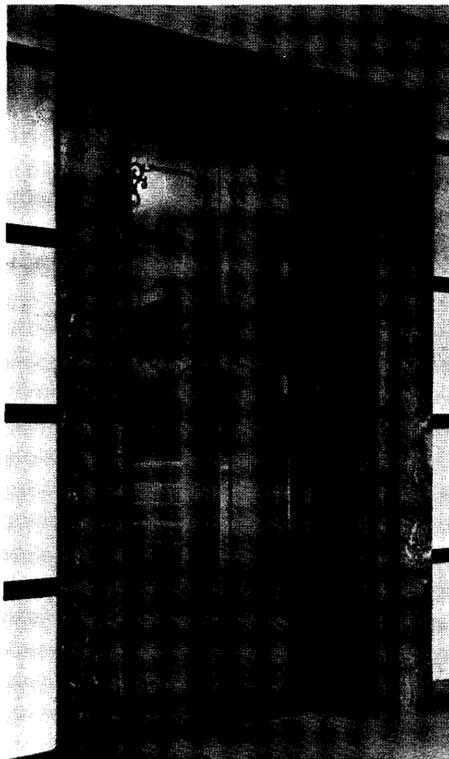
and is thus especially ideal for coastal areas with high humidity. The shingles come in standard slate color and are 12 by 18 inches in size. They are pre-drilled for easy installation.

For more information about Southern Slate, contact FibreChem Corp., Seven Woodlawn Green, Suite 212, Charlotte, N.C. 28217 or call (704) 527-2727 or telefax (704) 527-3786.

## Elevator Etchings

Dover Elevator Systems has introduced a photo-etching process called Artifax, which allows virtually any design to be created on the flat surfaces of elevator cab doors, swing returns, wall panels, entrances or signal fixture panels. Logos, art work or custom signage reproduced in elevator cabs can lend a distinguished appearance to commercial or residential buildings, reinforce owner/tenant identity and, in some cases, help meet building code requirements.

For more information about Artifax, contact your local Dover representative or write Dover Elevator Systems, Inc., P.O. Box 2177, Memphis, Tenn. 38101.



# MONIER ROOF TILE

*The World's Largest  
Manufacturer of  
Genuine Concrete  
Roof Tile.*



***MONIER Makes Rugged,  
Handsome Roof Tile . . .  
Perfect For The Entire  
Atlantic Coast Region.***

MONIER ROOF TILE has the roofing solution for the progressive builder/developer. Cost effective and durable concrete tile - without sacrificing style and looks. MONIER sets the highest standards for tile designs in a multitude of exciting colors by combining stringent quality control with state-of-the-art manufacturing and distribution facilities near you. MONIER CAN NOW RESPOND IMMEDIATELY TO YOUR ROOFING REQUIREMENTS FROM OUR NEW BALTIMORE, MD. FACILITY.

**CALL (TOLL FREE)**

**1-800-444-8453**

**MONIER ROOF TILE**

**Manufacturing & Distribution Facilities  
Throughout the USA**

# See What Happens And A Great Building

These are the winners from the 1988 Architectural Brick Design Awards. Each represents an idea brought to life by some of North Carolina's finest architects and architectural firms. A panel of independent judges reviewed work submitted from around the state — and were impressed by the brick in architecture that they saw. Congratulations to the winners, and we hope to see more of your work next year.

**BRICK**  
Smarter than you think

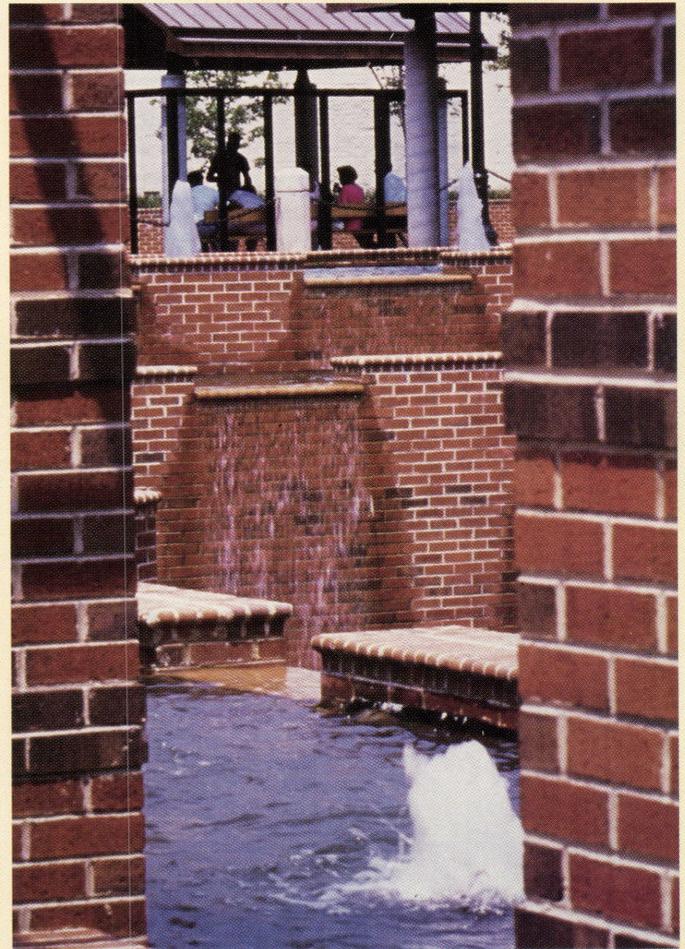


## AWARD OF HONOR

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.

# When Great Minds Product Get Together.

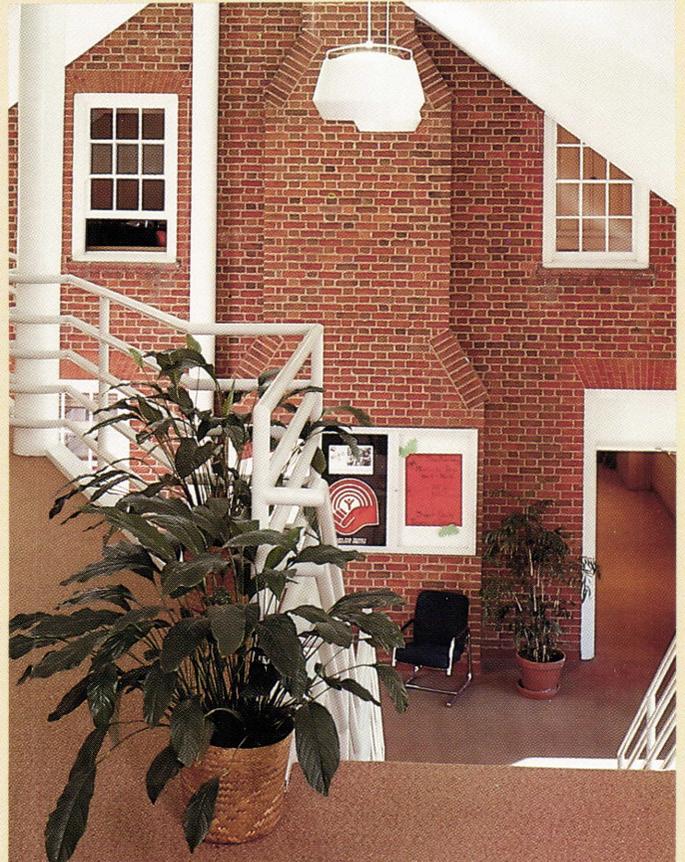


## AWARD OF HONOR

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.



## AWARD OF HONOR

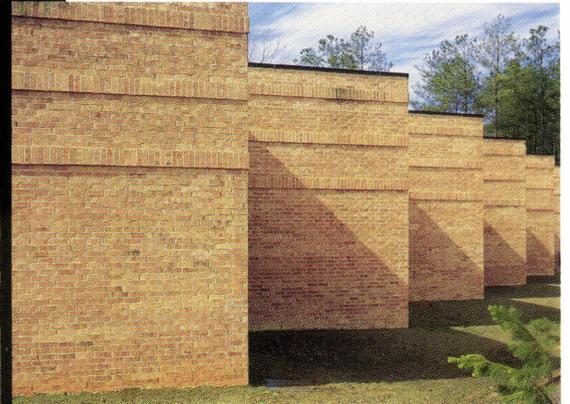
Front View

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

Architectural firm: Gantt Huberman Architects

# A Good Idea Makes Borden Look Good

As proud as we are of our brick, we know that it's the ideas and skills of the architects, contractors and craftsmen that make brick into buildings. But when it's an especially good idea — like the Lord Research & Development Building — an especially good brick — like Borden's Waynesboro — is shown at its best.



It's a utility brick that complements the architect's graceful design.

The people that specify Borden brick have thousands of ideas, some of them very demanding. That's why Borden manufactures thousands of bricks in different colors, textures and shapes. We meet those demands.

An idea like the Lord Building does make us look good. And we like to think we do our part to make the building as good as the idea.



Post Office Box 11558, Durham, NC 27703  
In NC, call 800/672-0081  
Outside NC, 919/596-8241