

INSUL/CRETE

THE MOST TECHNICALLY ADVANCED EXTERIOR INSULATION SYSTEM AVAILABLE

CATTLE COMPANY

Project: Bishop's Cattle Company Restaurant Architect: Danie A. Johnson • AIA Owner: Bishop's Cattle Company Interiors: Space Plan-Architecture, Design, Planning General Contractor: John W. Abbott Construction Co., Inc. Plastering Contractor: W. N. C. Professional Associates



STYRO SYSTEMS, INC. 1320 Starbrook Dr., Charlotte, N.C. 28210 704-552-0829

KNOW THE DIFFERENCE IN EXTERIOR SYSTEMS!

- □ INSUL/CRETE hard finish coat is cementitious. It's damage resistant and virtually maintenance free.
- Dechanical anchors lock STYROFOAM Brand Insulation to the wall. These permanent attachments can be installed on practically any building exterior. They're used on masonry and concrete, metal and wood frames.

Whether it's new construction or retrofit, in roofing or interior and exterior wall applications, Dow has the products and systems along with extensive research and development capabilities designed to meet your every need.

Dow and Insul/Crete. Working together to help meet your design needs.



WE BUILD CONFIDENCE 'Trademark of The Dow Chemical Company



APatternOfQuality

It begins with Christina Marble Company, fabricators and suppliers of the world's choicest marble and granite.

It continues with David Allen Company, expert contractors and parent company of Christina Marble.

Together, they turn design dreams into living stone. Each building is unique. Each fits an exacting pattern of quality. For information and technical assistance, contact:

Christina Marble Company

P.O. Box 27685, Raleigh, NC 27611 919/828-8001 A subsidiary of





ELECTRONIC DATA SYSTEMS: COMPUTER OPERATIONS CENTER UNIVERSITY RESEARCH PARK CHARLOTTE, NORTH CAROLINA

ARCHITECT: JENKINS-PEER ARCHITECTS DEVELOPER: PIZZAGALLI'INVESTMENT COMPANY GENERAL CONTRACTOR: McDEVITT & STREET COMPANY MASONRY CONTRACTOR: GLENN W. SIPE & SONS, INC.



Brick Association of North Carolina

Photography by Dennis Nodine

NorthCarolina ARCHITECT

Volume 34, No. 5 September-October 1986

CONTENTS

COVER STORY

4 A REGAL NEW HOME

By Luann Nelson

When Royal Insurance Co. decided to leave Manhattan after 135 years, officials turned to Odell Associates to create a stately new headquarters with a suburban feeling.

FEATURES

21 A LIVELY RENDERING

By Ellen Grissett

Thanks to innovative computer programs and modern video techniques, Raleigh-based Land Development Laboratory Inc. offers a new concept in architectural renderings.

25 STARTING OUT A WINNER

By Jim Duff

Gunn-Hardaway Architects of Charlotte is a new firm, but partner Bob Gunn's victory in the national design competition for the North Carolina Vietnam Veterans Highway Memorial means the firm has an important first job.

DEPARTMENT

17 DRAWING BOARD

COVER: Odell Associates created a dramatic entrance to Royal Insurance Co.'s new headquarters in suburban Charlotte with glass from the floor to the top of the vaulted ceiling. Photography by Richard Ivey

PUBLISHER/EDITOR Whitney Shaw

MANAGING EDITOR James Duff

SENIOR EDITOR Luann Nelson

ART DIRECTOR R. Kimble Walker ADVERTISING DIRECTOR Sam Rogers

ACCOUNT EXECUTIVES Jill Walker

OFFICE MANAGER Marla Micallef

PRINTING: Greensboro Printing Company

North Carolina Architect is published six times a year by Shaw Communications Inc., Charlotte, N.C., for the North Carolina Chapter of the American Institute of Architects. Advertising and editorial offices are located at 212 S. Tryon St., Charlotte, N.C. 28281. NCAIA offices are located at 115 W. Morgan St., Raleigh, N.C. 27601. Address editorial, advertising and circulation correspondence to *North Carolina Architect*, 212 S. Tryon St., Charlotte, N.C. 28281. Telephone (704) 372-9794. Subscription rate: \$12 a year for non-NCAIA members. Third class postage (permit number 2180) paid at Charlotte, N.C. Copyright © 1986 NCAIA and Shaw Communications Inc. POSTMASTER; Send Form 3579 to *North Carolina Architect*, 212 S. Tryon St., Charlotte, N.C. 28281.









A Regal New Home

Royal Insurance moves into a new headquarters in Charlotte.

By Luann Nelson Photo by Larry Harwell–AAC Photographers, Charlotte

ure, you can take the company out of the city. But can you take the city out of the company?

Royal Insurance Co. handed Odell Associates Inc. Design Principal William L. Kourakos that task when the company decided to move to Charlotte. Royal had been based in the same location—Manhattan—for the past 135 years.

"One of the first things (Royal chairman) George Ansbro said to me the first time I met him," Kourakos says, "was that he wanted the building to be warm and friendly. 'We don't want an urban building,' he said. 'We want a building that fits the site and is right for the area.'"

The headquarters building Kourakos designed for the company—a \$30 million, 340,000-square-foot structure in the 240-acre Arrowpoint Office Campus in southwest Charlotte seems to meet both requirements. It is sited to take advantage of the landscape surrounding it, and its design is strongly symmetrical.

Odell was involved with Royal Insurance even before the company made its decision in July 1984 to come to

The arched front entrance offers a view into the lobby of the small portion of the building that connects the two wings where Royal's 1,200 employees work.

Charlotte. "We were selected to work with Royal as a space planner before we received the architectural contract," says Odell Marketing Vice President Moe Ward. "I made contact with them and made a proposal that we work with them to determine what functional relationships and what size space they required, whether they went to Nashville or Charlotte or wherever."

Odell space planners went to New York in April 1984, interviewing key corporate officers and other employees about their needs for conference space, data processing and support personnel. "So we knew ahead of time what many of their space requirements were," Ward says.

The relationship was successful: Royal never even interviewed any other architect for the job once Charlotte was chosen as the company's new home. "There was no bid process," Ward says. "They simply asked us to go ahead and continue and do the architecture." Throughout the design process, Odell worked with contractor Carlson Southeast. As various types of buildings or materials were proposed, Carlson could tell Odell very quickly what the differences in cost would be.

Royal's early decision to move to a suburban location gave Kourakos'

Reid Saunders Eastern NC

John LeNoir Western NC

la Commercia

Commercial tolerances can be tricky, even Ask us. for experts like yourselves, and mistakes are costly. Pella Window and Door's North Carolina Commercial

Division is represented by professionals John LeNoir and Reid Saunders. John in the western part of the state, and Reid from Raleigh eastward. These two men are Pella experts who are trained in every aspect of commercial window and door application and design. As you know, Pella is constantly adding products to

PELLA



updated information on all Pella products. Available to help you early with your plan-Don't hesitate.



WESTERN NC PELLA DISTRIBUTION CENTER: 1325 S. Eugene Street, Greensboro, NC 27406 EASTERN NC PELLA DISTRIBUTION CENTER: 2640-A Yonkers Road, Raleigh, NC 27610

design its direction. "Their executive committee decision was intended to offer their employees the advantages of living in a rural setting," he says. This was the flip side of the company's reasons for leaving New York: the high cost of doing business in Manhattan and the lengthy commuting times there.

By the time Bill Kourakos was brought into the project in July 1984. Odell had completed its focus study of Royal's operations. But his first interest was in finding out what kind of people Royal's executives were. "I knew I would be meeting them and finding out what they are like," Kourakos says. "Naturally I wanted to design a building that has a fitness to function and to materials and also has a fitness to the technology that would be used to build it," he says. "But there's another thing that you have to have. A building has to be expressive, and it has to be right for the corporation."

"If a building is going to have some importance, it ought to sit up. It's always nice to go up to a building."

Too, says Moe Ward, Kourakos was able to guide Royal's three-member relocation committee, which was chaired by Vice President Gary Dykhouse. The company was very new to the building process. "Bill was able to educate them about what a spectacular building they could have," Ward says.

But at the beginning of the design process in mid-1984, Kourakos was a long way from the final unified, symmetrical facade. The initial plan called for four or five buildings.

Through several months of meetings with Royal's relocation committee, the project was refined and the number of buildings reduced. "When you start seeing drawings, you begin to think and you begin to evaluate and then you can make critical judgments," Kourakos says. "As we devel-

⁶⁶ I have the simplest of tastes ... I only want the best. ⁹⁹/_{- Wilde}



commercial design center

315 Spring Garden St. Greensboro, NC 27435 Phone 274-2404

Colonial Elegance In Handmade Brick

The classic beauty of Old Carolina Brick is created by hand. Each brick is hand moulded in the colonial tradition of over 200 years ago. The rough distinctive texture and warm earthy tones produce a traditional elegance for the most prestigious projects.

From our in-stock selections to our custom matched colors and shapes, Old Carolina Brick Company is a reliable and versatile source for unique brick.





An artist's rendering shows how the employees' cafeteria is built out from one of the building's two wings to overlook a man-made lake that helps give the building a suburban feel.

oped some of these buildings and site plans they began to look deeper into their operation and they decided they didn't want so many buildings, that they would function much better if they were in larger spaces." By October 1984, "we finally ended up with really one building," he says.

The design grew from the architect's perception of what kind of company Royal is. The form of the building, for example, reflects George Ansbro's desire for the building to be friendly and accessible; with its tall central vault and outward curving sides it welcomes the visitor.

Too, the building is positioned to draw people toward it. "We had available to us the most central and most beautiful part of the property, right off the entrance road that comes off Arrowood," Kourakos says. "This gave us an opportunity we seldom have, to end the view with the building." To capitalize on this, Odell worked with developer Henry Faison, who sold Royal its 40-acre site, to slightly change the slope of the approach road and subtly elevate the building. "If a building is going to

SPEC OUT CONCRETE CRACKS

Fibermesh works — automatically

Enlist the many benefits of Fibermesh for your projects. Let this engineered synthetic fiber **automatically** enhance your concrete work and reputation by:

- inhibiting shrinkage cracking
- increasing impact capacity
- reducing permeability
- · adding shatter resistance
- cutting construction time
- proven alternative to welded wire fabric

Mixed throughout the concrete, **millions** of Fibermesh fibers work to prevent plastic and drying shrinkage cracks from forming during the vulnerable first hours when concrete has not yet developed its full integrity. Fibermesh provides dimensional stability by relieving early shrinkage stresses.

Spec in Fibermesh and you're specing out many of concrete's shortcomings! You don't have to go back to the drawing board; no design changes are required.

New color brochure and test reports:



Fully illustrated technical brochure gives all the facts on Fibermesh. Also Engineering Data Reports 5 and 6 covering tests that show how Fibermesh can replace use of welded wire fabric and increase concrete shatter resistance.





Spectacular River City, near downtown Chicago, has 2,500 residences, offices, conference center, marina, theater and more. Fibermesh is used on upper decks and in lobby to inhibit and control concrete cracking and reduce permeability. Architect: Bertrand Goldberg Associates, Inc., Owner/Developer: River City Developers, Contractor: McColl Construction Company.

The 60 story steel framed Allied Bank Tower, Dallas. Fibermesh was used as an alternate to wire mesh in its composite floor system, helping reduce construction time and costs. Architect: I.M. Pei and Partners, Owner/ Developer: Criswell Development Company, Contractor: HCB Contractors.



DISCOVER the GYP-CRETE

The Standard in Floor Underlayment for Residential, Office and Light Commercial Spaces

For local applicator contact:

Ivester Distributors

11615 Reames Road

Charlotte, NC 28213

704/596-6816

·· / /

Floor Plan

Control

Fire

Sound Control

High
Strength

Lightweight Economy

Sets in 90 Minutes

• No Shrinkage Cracks

for:

IDEAL

New Construction or Renovation



GYP-CRETE CORPORATION

ENTER THE NEW WORLD OF ARCHITECTURE

With Autographics. We make architecture more proarchitectural applications for



108 South Blount Street•Raleigh, North Carolina 27601•(919)828-3858 (Post Office Box 25336, Raleigh, North Carolina 27611)

have some importance, it ought to sit up," Kourakos says. "It's always nice to go up to a building.'

And, he says, an architect's responsibility doesn't end with satisfying the customer. "The client owns the building, but the general public owns the view," he says.

Landscaping also was used to draw visitors toward the building. A 350foot main drive lined with trees leads to a wide area planted with flowers and trees in front of the building. "You have sort of a rhythm of trees that carries you up to the building," Kourakos says. This rhythm is repeated in a flight of stairs up to the building and in rows of bollard lights that angle toward the entrance itself.

Inside, the coffered ceiling vault and the repetition of square columns from the building's front continue to draw

"Their executive committee decision was intended to offer their employees the advantages of living in a rural area."

the eye through the length of the central section. This leads to a large terrace at the building's rear and a 11/2acre artificial lake.

The cafeteria, which seats 440, overlooks the water. Kourakos calls this room a good example of Royal's concern for its 1,200 employees. "They allowed us to design a cafeteria that is really a separate building," he says. The dark-green carpeted room has 28foot-high ceilings. Floor-to-ceiling windows look onto the terrace, which is lined with tables and umbrellas.

On the opposite side of the building there are exercise facilities, tennis and basketball courts and a softball diamond. Jogging and walking paths run throughout Arrowpoint Office Campus. "This is truly a personneloriented client," says Moe Ward.

Even the best laid plans Your designs change with the times and vary according to the needs of each client. One of our Technical Service Engineers, Keith Newcomer, also realizes the importance of not

only keeping up with the times, but keeping ahead of them. He stays up-to-date on all the latest technology in the field of energy efficiency. He can be a big help to you in your planning—at no cost to you.

Just say the word and provide the necessary facts. Keith, or one of our other Technical Service Engineers, will proceed with energy cost comparisons and a comprehensive feasibility analysis. This will help you make the best energy system decision.

> Piedmont Natural Gas Company

Since energy is such a major concern, take advantage of this opportunity to use this beneficial service. Just call our Technical Services Department, toll-free. From North Carolina: 1-800-532-0462. From South Carolina: 1-800-438-8410. Within Charlotte: 364-3120.

Advertisement not paid for by our customers.



The new headquarters that Odell Associates of Charlotte designed for Royal Insurance Co. when the business moved to a suburban site.

So far in 1986, The Sharpe Company has returned more than \$31,443.00 to some of their reprographic customers.

If this is news to you, it might be wise to read further.

The Sharpe Company thrives on the idea of a satisfied customer. Supplying those customers with superior work on time has kept them one of the largest reprographics firms in North Carolina for years.

They know that satisfying an architect means drafting supplies too. This year they are building on their reputation of quality tools, furniture and drafting media with innovative supply programs like "FREE AT LAST". So far this year the "FREE AT LAST" programs have returned more than \$31,443.00 to SHARPE CO. customers.

Call 1-800-642-0629 and ask Burke Wilson for information about "FREE AT LAST". It will be a satisfying experience.



"This building is a response to that."

The larger south section has four floors and houses the cafeteria. Its lower level is below-grade and houses data processing and a mail room. Data processing occupies the bulk of the other three floors as well. A bridge section connects the building's two side portions.

The three-story north portion of the building houses numerous functions, such as claim and loss, the personnel department, executive offices and the health and fitness center. The central bridge also contains the lobby, additional executive offices and boardroom.

Precast concrete and bronze reflective glass make up the building's exterior. "The technology in precast materials is very advanced here, and we could control color, texture and pattern," Kourakos says.

With Royal's desire for a "friendly" building in mind, Odell designers worked with a local contractor to find a range of warm color tones. They had several one-foot sections of precast made as color samples and got on a plane for Royal's New York office. "They're quite heavy," Kourakos

says. "We didn't bring them back." Schokbeton of Lavonia, Ga. ultimately



Textures by TINDALL CAST^M

11

New dimensions in esthetically-pleasing textures for multi-level, precast concrete parking or other structures ... enhancing their harmonious, natural appearance, whether in a high density metropolitan area or in a park-like setting. Wyoming white stone exposed aggregate with white matrix was chosen for this major Atlanta parking deck. Discover TindallCast textures for yourself. Call today.



TINDALL CONCRETE PRODUCTS, INC. Box 1778, Spartanburg SC 29304 (803) 576-3230

Duke Power's New Owners.

These people own stock in Duke Power. They also happen to be Duke Power customers. They believe, as we do, that people who use electric power should have an interest in how their power company operates.

In fact, we believe so strongly in that concept, we've developed a plan that lets residential customers buy Duke Power common stock without paying brokerage fees. Or any other fees, for that matter. And you can buy the stock at your convenience. You can invest as little as \$25 a month. Or any amount you like up to \$3,000 a quarter. This particular plan is available only to Duke Power residential customers.

So if you're a customer send us the coupon, and we'll send you complete details on how to own a piece of your power company. Note: This announcement shall not constitute an offer to sell or the solicitation of an offer to buy, as any sale or offer to sell must only be by means of the prospectus.

You Can Buy Duke Power, Too. Send information about Duke Power's Customer Stock Purchase Plan.	
Name	Duke Power Account No. (From your electric bill)
Address	
City	StateZip
Mail to: Shareholder Services, Duke Power, Post Office Box 33189, Charlotte, North Carolina 28202	



The front of the building features a strong symmetry.

got the contract to supply the precast concrete. For added texture, the spandrels are alternately fluted and sandblasted. Bronze glass is used throughout the building, except in its tall central section. Here, the glass is clear, so that visitors can see from the front arch to the rear of the building.

Royal executives say they are pleased with their new Charlotte headquarters. "We think the building is both very attractive and has proved to be very functional," Gary Dykhouse says. "Odell did a spectacular job of converting the plan to a physical facility."

PROJECT CREDITS Royal Insurance Co. Headquarters Arrowpoint Office Campus, Charlotte, N.C.

Master Planning/Architecture/Landscape Architecture/Structural Engineering: Odell Associates Inc., Charlotte.

Construction Manager/Electrical Engineering: Carlson Southeast Corp., Charlotte.

Mechanical Engineering: Aldrich Co. Inc., Cochituate, Mass.

Interior Design: Griswold, Heckel & Kelly Associates Inc., New York, N.Y.

П



SERVING RALEIGH and EASTERN NORTH CAROLINA VISIT OUR SHOWROOM COMPLETE DISPLAY OF SAMPLES

PRODUCTS

FACE BRICK HAND-MADE BRICK GLAZED BRICK GLAZED TILE PAVERS

SUPPLIERS

Nash Brick Company Borden Brick and Tile Company Hanley Company Taylor Clay Products Company Lee Brick and Tile Company Boren Clay Products Company Old Virginia Brick Company

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

MIRAFI PRESENTS MIRADRAIN PREFABRICATED DRAINAGE STRUCTURES



Original Miradrain 4000 2-sided drainage NEW Miradrain 6000 1-sided drainage

The proven alternatives to aggregate drains

Miradrain prefabricated drainage structures consist of a waffle-like plastic drainage core covered on one or both sides with Mirafi filter fabric.

MIRADRAIN 4000

The original Miradrain 4000 is ideally suited for 2-sided drainage applications such as bench cut or trench cut drains and pavement edge drains.

MIRADRAIN 6000

New Miradrain 6000 is specifically designed for applications where drainage is needed only on one side. This prefabricated drainage structure has higher compressive strength and flow rates than most competitive systems. Plus, its single-sided configuration is ideally suited for waterproofing applications such as foundation and retaining walls.

Cowley Construction Materials Corporation P. O. Box 2133 Charlotte, NC 28211

(704) 542-5537





Lasting beauty plus lowest cost alternative.





100% <u>pure</u> Solite concrete masonry units.

Requiring over 1.8 million 8^{''} equivalent units, the R.J. Reynolds Tobacco Company plant in Tobaccoville, North Carolina was the largest concrete masonry project in the southeastern United States.

Reynolds demanded high quality block and to meet that demand, fine textured <u>pure</u> lightweight aggregate block was specified.

Working closely with Solite, the block manufacturer produced units to R.J. Reynolds specifications. <u>Pure</u> Solite lightweight aggregate block met every quality check for size, texture and color.

Throughout the project, the block was inspected to insure uniformity. The result was a new standard in the block industry...a beautiful masonry project.

Johnny Johnson, the project manager for the masonry contractor said, "...these <u>pure</u> Solite blocks were the best...if architects and owners could see their projects go up like this, they would use more and more masonry."

With all its beauty, <u>pure</u> Solite was the most cost effective.

For several decades, Solite lightweight aggregate block has been used in buildings for its durability, strength and light weight. <u>Pure</u> Solite block offers excellent insulation values, high fire resistance, superior acoustical properties, architectural design flexibility, thermal inertia and consistent quality of texture and color.

It pays off in reduced energy and insurance costs year after year.

For more proof of the beauty and savings of Solite, take a look at the R.J. Reynolds Tobaccoville plant. Or better yet, take a look in 10, 50 or 100 years.



Johnny Johnson, Snow, Jr. & King

Offices: Mt. Marion, NY1-914-246-9571, Richmond, VA 1-804-329-8135, Albemarle, NC 1-704-474-3165, Green Cove Springs, FL 1-904-264-6121, Brooks, KY1-502-957-2105

Owner – R.J. Reynolds Tobacco Co., Winston-Salem, North Carolina Construction Manager – Morrison-Knudsen Co., Inc., Boise, Idaho Architect-Engineer – Rust International Corporation, Birmingham, Alabama Masonry Contractor – Snow Jr. & King, Inc., Norfolk, Virginia Masonry Producer – Lightweight Block-Eden Corp., Eden, North Carolina Landscaping and finishing touches still underway.

Off The Drawing Board

Raleigh Firm Secures Two Virginia Projects

The Alan Kay Co. of Bethesda, Md., has retained HunterReynoldsJewell, a Raleigh landscape architectural firm, to design the master plan for Fair Oaks at Centennial Gateway, a three-building office complex in Fairfax, Va.

The firm also will provide landscape design services for Commerce Executive Park, an office complex in Reston, Va., being developed by Centennial Development Co. of Vienna, Va.

Another of the firm's Virginia projects, Crystal Park Plaza in Arlington, won the 1986 Grand Award of the Landscape Con tractors of Metropolitan Washington.

New Welcome Center Touts High-Tech, Arts

The state's newest welcome center, just north of Westinghouse Boulevard on Interstate 77 near Charlotte, is designed to attract visitors with its geometric landscaping and emphasis on high technology and the arts, two activities that the state wants to promote.

J. N. Pease Associates, a Charlottebased architectural, engineering and planning firm with offices in Research Triangle Park, collaborated with four North Carolina artists to integrate work in wood, metal, raku, textiles and ceramic tile into the building's interior. Products from a number of the state's industries, such as brick, tile, textiles and electronics, were also incorporated. Because it is the state's only urban welcome center, emphasis was placed on the architectural design to ensure it reflects Charlotte's progressive and innovative atmosphere. The new welcome center near Charlotte designed by J. N. Pease Associates, has a contemporary look with its geometric landscaping and emphasis on high technology and the arts.





HunterReynoldsJewell won the 1986 Grand Award of the Landscape Contractors of Metropolitan Washington for its work on Crystal Park Plaza in Arlington, Va.



Harris & Associates

Estimating & Scheduling Route 9, Box 233 Easley, South Carolina 29640

(803) 269-7205

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



Estimates are available on computerized format upon request.

Hickory Company Wins 2 Environmental Awards

Holland Glass Co., Inc. won two of the Amarlite Environmental Awards in the program's 11th annual competition.

It won the installation craftsmanship award for the Carolina Corporate Center in Raleigh and the innovative slope glazing award for the Regional Activity Center at Western Carolina University in Cullowhee.

The awards, sponsored by Amarlite Architectural Products, recognizes innovative and efficient use of glazing systems in eight categories of commercial construction.

Construction Begins On Business Park

Forsyth Partners has started construction on West Point Business Park, a 145acre multiuse business park in Winston-Salem designed by architects William Freeman and Associates of Greensboro.

The first major industrial park developed in Winston-Salem's west side industrial corridor in more than 12 years, its 30 buildings will include 1.2 million square feet of speculative warehouse, distribution, light manufacturing and office space, plus land for sale and build-to-suit options. Build-out cost will be about \$25 million.

A 240,000-square-foot warehouse/distribution building will be ready for occupancy in December. A 95,000-square-foot building will be completed by February.

Carley Capital Watches Out For Birds

The Residential Division of Carley Capital Group has announced plans for the first phase of a residential community at University Place, north of Charlotte, designed and landscaped to save many of the trees and the bird habitat on the 5.8acre site.

Designed by David Furman Architects with land planning by Land Design, both Charlotte firms, Audubon Parc's initial phase will have six buildings with 25 units. When completed, it will have 13 buildings with 52 units. Ground was broken in October, with occupancy scheduled for April.

Certified Fabricators Of Du Pont

Metric Will Construct Hilton Head Condos

Centurian Developers Inc./NRS has selected Metric Constructors Inc. of Charlotte to build Phase II of Villamare condominiums on Hilton Head Island, S.C. Phase II will include a five-story, 100,000-square-foot building with 40 luxury condominiums.

Designed by architects David Jensen Associates Inc. of Denver, Colo., the project is on $8\frac{1}{2}$ acres in the Palmetto Dunes section of the resort.

Middleton, McMillan Picked For Project

Middleton, McMillan Architects Inc. has been selected as architect for the \$5.5 million renovation of Spirit Square Arts Center in downtown Charlotte.

The project includes refurbishing the education building, renovating the lobby area and construction of a new theater, in addition to improvements to classrooms, office space, restaurant and mechanical equipment.

Names And Changes In N.C. Architecture

The board of directors of O'Brien/ Atkins Associates, near Research Triangle Park, has named **James W. Mason** a principal and **Thomas H. Phoenix** an associate.

Mason joined the firm in 1982. He is president of the Durham section of the American Institute of Architects. As senior designer, his projects have included the Glaxo Inc. headquarters expansion in RTP, the Research Triangle Institute's research/office building and the Durham Technical Community College Educational Resources Center. He earned his bachelor of architecture degree from Carnegie-Mellon University and a master's with distinction from University of California at Berkeley.

Phoenix joined O'Brien/Atkins in 1984 as chief engineer with the Mechanical Engineering Group. He earned a B.S. in engineering from N.C. State and is vice president of the Triangle chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers.

O'Brien/Atkins also has formed a Landscape Architecture/Planning Group headed by Vice President John M. Fish. A member of the American Society of



SEND FOR IT ... IT'S FREE



Lamar WillisJohn StanleyBill KerrWestern & Central N.C.Mgr.-Commercial SalesEastern N.C.(704) 866-8501(704) 864-6731(919) 682-5661

Send for it, it's free. . . A System Design Manual featuring the latest in high technological gas equipment. Also available are free heating costs analysis for your planned or existing structures. Just contact our energy specialist in your area.







Landscape Architects, Fish earned his B.A. from the University of Richmond and a master's degree in landscape architecture from the University of Virginia.

Linda Jewell, a principal of the Raleigh landscape architectural firm of HunterReynoldsJewell, has been appointed adjunct professor of landscape architecture at the Harvard University Graduate School of Design. She will also hold the administrative position of program director of the master in landscape architecture degree programs.

A graduate of the bachelor of architecture program at N.C. State University, she has a master's in landscape architecture from the University of Pennsylvania. Jewell has been an associate professor at the School of Design at N.C. State and also taught at the University of North Carolina at Chapel Hill and the University of Pennsylvania. She was a visiting associate professor at Harvard in 1985-86 and is construction editor of *Landscape Architecture*.

Sheila B. Taynton has joined the Taynton Architectural Practice of Raleigh as a project manager and architectural designer. She and Steve Taynton are one of the few husband-wife architectural teams in the nation.

She was department head of architectural technology at Wake Technical College and is a 1976 graduate of N.C. State University School of Design.

Joseph M. Harris, a principal of Clark Tribble Harris & Li Architects of Charlotte, has been accepted for membership in the Presidents Association, the chief executive officers division of the American Management Association.

Ferebee, Walters & Associates has named four new senior associates. They are **Bryant A. Baker** and **Jeffrey M. Lane** in the Charlotte office, **James Terry Keane** in the Hilton Head Island office and **William D. Bilger** in the Research Triangle Park office.

Bradley W. Young has joined the architectural/engineering firm of CHR Associates of Chapel Hill as director of landscape architecture and planning. A former partner and managing director of planning and landscape architecture for Charlan, Brock, Young and Associates of Orlando, Fla., he is a graduate of Ohio State University.

McClure-NBBJ, an architectural and planning firm, has made several staff additions to its Raleigh office. They are **David M. Hite**, health-care and technical facilities director; **David L. Francis**, architectural designer; and **Alison L. Sipes**, marketing coordinator.

Computer Images Bring Blueprints to Life

Raleigh firm puts site planning at developers' fingertips

By Ellen Grissett Photo by Maury R. Faggart

om Welsh huddles over the controls of his computer graphic equipment. "See this street?" he asks, pointing to the monitor screen. "And those trees lining the street? Well, those trees aren't really there. I drew them in."

Welsh, executive vice president of Raleigh-based Land Development Laboratory Inc., pushes some buttons and another scene flashes on the screen. This time, there is a wharf in the foreground; in the background is a row of trees, behind which are visible the units of a resort complex. A young woman walks across the boardwalk, smiles at the camera and disappears. Welsh pushes a button, and the trees and the resort complex disappear, too.

"All that really exists in this scene, which I shot with a video camera, is the boardwalk," he explains. "And, of course, the girl. But no trees, no condos — they haven't been built yet."

Welsh's equipment isn't the next generation of video game. LDL's founders instead believe they have created an important new tool in the real estate development business. They think the

LDL President Ken Pittman, right, Executive Vice President Tom Welsh, standing, and Design Applications Coordinator Glenn Simmons hope their simulations will help developers attract buyers and win over zoning officials. equipment can help convince investors to back potential projects, persuade governing bodies to allow construction variances and even attract buyers of new developments.

The idea behind LDL, which was formed last November, is to use videobased computer graphic simulations to translate proposed developments into readily understandable images.

LDL President Ken Pittman says the process provides a common visual ground for participants. "There are experts in land development who are used to reading blueprints or looking at architectural renderings, and then there are those people who aren't used to looking at something one-dimensional and translating it into something three-dimensional in their minds," he explains. "We are able



Heartwood Pine Flooring

ready to install wide boards

200 years old very beautiful

Larry Green (919) 542-4394 PO. Box 187 Pittsboro, NC 27312

HOURS MON - FRI 8:00

We have it all right here ...

Equipment, Price, Technical Support & Training



(919) 362-7000

to show buildings within their context so there are no surprises."

Even more important, Pittman says, LDL's technology can be applied in the early stages of the design process, not just in the final stages. "The greatest thing is to be able to sit in front of the monitor with architects, landscapers and developers and solve problems on the screen ahead of time. We can add buildings, subtract trees, build a building from the ground up, and that can really speed up the design process."

Though LDL opened its doors for business in the fall of 1985, the company was actually born several years ago. Pittman was head of the computer center at N.C. State University's School of Design; Welsh and Glenn Simmons, now the design applications coordinator, were landscape architecture students there. The three, with the backing of investor Dick Wilkinson, now chairman of the board, began to talk about applying computer technology to land planning and development.

"We realized that the software out on the market didn't have to be used just for research, as we had been using it, but could be applied to specific design problems," Welsh says.

The LDL group began working on the software system last May, taking programs already on the market and adding to them. The system used by the firm today is made up partly of commercially available equipment and partly, Welsh says, of "proprietary software things we designed that no other company in the Southeast or maybe the U.S. now uses. It's a pretty complex system of bits from there, bits from here, all put together to do what we need to do."

And, he adds, it's a system that is constantly undergoing refinement. "The exciting thing is that there are functions we can do this month that we couldn't do last month—the software just didn't exist. And there are new modifications coming along all the time."

Tim McKay, who is marketing LDL's services to landscape architects, city planners, architects and others, both in North Carolina and elsewhere, says the cost of the service is a strong selling point. The average LDL presentation, which runs five to 10 minutes, "costs less than the average architectural rendering," he says.

President Pittman agrees. "The average silent presentation we do runs anywhere between \$300 to \$700, though, of course, more intricate ones can be higher," he says. "Most renderings run about \$800 to \$1,500."

Another selling point, Pittman says, is

HIGHWAY 64 APEX, NC 27

SHELTERING AMERICA FOR OVER TWO CENTURIES.

When housing was needed for Hampden-Sydney College, a fine school with a tradition that dates back to 1776, Buckingham-Virginia Slate was selected as a natural roofing material. This is the same nonfading, blue-black, grade A slate that was used on original buildings still integral to campus life.

With a proud heritage of its own, Buckingham-Virginia Slate was often specified by Thomas Jefferson; and is still selected by eminent architects of our time for

its permanence and natural beauty. Because

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.

it

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



4110 Fitzhugh Avenue • P.O. Box 11002 Richmond, VA 23230-9990 (804) 355-4351

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.

Philip M. Chu Associates, Architects and Planners, Chappaqua, NY

ARCHITECTS, ENGINEERS, DESIGNERS...

You can do the equivalent of hours of board work in minutes with COPYTRON's Xerox 2080[®] Printer. Enlarge or reduce your drawings onto bond, vellum or mylar.

Call us seven days a week for fast, trustworthy service. Pickup and delivery available.



The Trustworthy High Speed Copy Service

Raleigh 3008 Hillsborough St. 832-1196

Chapel Hill 105 N. Columbia St. 933-2679

NOW OPEN

Durham 705 Ninth St. 286-1809





that the simulation can be used again and again or, if necessary, modified, unlike an architectural rendering.

Pittman says most computer graphic simulations take 10 days to two weeks for his staff to complete. Involvement by the client in all phases of the production is welcomed. "We like clients to be involved," he says. "We've had clients who want a presentation concerning one simple sign variance, to clients who want the full production—sound, music—for marketing a property to prospective buyers."

While Pittman will not reveal the firm's earnings since it opened for business last November, he expects LDL to recoup at least most of its initial startup costs by the time it is a year old. "We probably invested in about \$70,000 worth of equipment to get started, not to mention office costs, payroll and so on. The equipment is expensive because meshing digital and video can be pretty tricky."

Pittman emphasizes that the computer graphics simulation equipment used—in some cases invented—by LDL is not available elsewhere. "This system, in complexity and cost, is not like CADD computer assisted drafting—which architects have picked up and adapted to their own firms," he says.

The company hopes that more and more clients will see the virtues of applying computer graphics simulation to their projects early on. "A hotel project was recently defeated in Raleigh," Pittman says, "for several reasons, the main one being politics. We worked on the project at the end I think if we could have worked on it earlier-actually been able to show the city and investors and the public what the project would have looked like in its setting, including landscaping, traffic, residential units around-the hotel would have gone through, not been blocked in zoning hearings. Especially in adversarial situations, we can give all parties involved a common image from which to work."

He adds, "The main challenge we face is educating a whole range of people in using such a new way to design. It's quick, easy, accurate and moderately priced, but it's so new that people are surprised that we can apply it this way."

Computer graphics expert Welsh agrees. "We're so used to being entertained by video," he points out, "that turning it around and solving design problems with it surprises a lot of people. We have to show them what computer graphics simulation can accomplish for them."

Gunn-Hardaway Architects Starts Out A Winner

New firm oversees building of veterans memorial.

By Jim Duff Photo by Donna Bise

b Gunn is almost embarrassed to say how little time he spent on his entry in the national design competition for the North Carolina Vietnam Veterans Highway Memorial.

Working alone, the Charlotte architect visited the site on Interstate 85 south of Lexington, noted its promise and problems and completed his design in less than 10 days.

The hard part, he says, was forcing himself to stick with his instincts and leave the project alone.

"I had to fight with myself to keep it simple, to keep it pure," he says. "You tend to want to do more as you go."

Sticking with his instincts paid off. On May 19, his proposal was selected from more than 130 entries from across the country, and on Nov. 11, Veterans Day, ground is scheduled to be broken for the project. Sponsors hope to complete work by Memorial Day next year.

Second prize in the design competition was awarded to Man Fu Ing, a student at the University of Michigan, and third went to Bennett Robert Neiman, a student at the University of Texas.

Three designs received honorable mentions. One went to the team of Kenneth Hobgood, Don Zachary and K.D. Zotter of Raleigh, and another went to Shannon Baird and Alcibiades Tsolekis of the University of Oregon. The third went to Roy Pender and Associates of Winston-Salem for a design by the team of Roy Pender, Doug Stimmel, Scott Miller, Tom



After winning the nationwide design competition for the North Carolina Vietnam Veterans Highway Memorial, Charlotte architect Bob Gunn joined Doug Hardaway to form a new firm, Gunn-Hardaway Architects.

NORTHCAROLINA'S PRE-EMINENT GALLERY FOR CONTEMPORARY AMERICAN ART

ERALD MELBERG GALLERY INC.

DIRECTLY ACROSS FROM SPIRIT SQUARE 11º EAST SEVENTH STREET, CHARLOTTE, NC 28202 704/333-8601 TUESDAY THROUGH SATURDAY 10:00-5:30





Bob Gunn's winning memorial design uses water cascading over a 12- to 14-foot tall brick wall to block out traffic noises and create a soothing atmosphere inside the 230-foot wide circle.

Cooper and Susan Clellan.

Gunn's statement of design philosophy stresses a simple concept. The aim is to "create an open space for large gatherings surrounded by an enclosure of bricks, trees and water to provide formal but soft intimate areas for approaching the names of North Carolinians" killed in the war.

Member manufacturers of the Brick Association of North Carolina are donating 58,000 bricks—one for each U.S. serviceman killed or missing in the war—for use in the memorial. Gunn's design calls for using 1,636 of them in a granite and brick monolith that will bear the names of the North Carolinians killed in the conflict.

The monolith will stand at the northern end of a circular wall 12 to 14 feet tall that will be built of the remaining bricks. Water from nearby Hamby Creek will be diverted to cascade over the bricks and provide "white noise" to block out the rumble of trucks on the interstate and create a soothing sound.

Inside the perimeter of the 230-footwide circle, 100 trees—one for each of the state's 100 counties—will line a circular walkway of crushed greenstone.

Gunn says his concept fell into place when he visited the site. He knew right away that he wanted to use a circle. "It lent itself to that particular site," he says.

The drawback to the area was the din of traffic from the highway. "The noise of the trucks was a problem," Gunn says, but the presence of the creek allowed him to plan the waterfall to block it out. "Moving water also has a soothing effect," he adds.

Gunn says he had no problems with the requirement that the project incorporate the bricks. He points out that North Carolina is known as the home of brick. "It is as good a natural material as there is," he says.

Gunn's victory has meant a lot more than just a \$5,000 prize and the professional fees for overseeing the project's construction. "I've gotten a lot of good feedback," he says.

The victory also provided the impetus for Gunn to leave behind 14 years of working for others and to form his own partnership with a former colleague, Doug Hardaway Gunn-



free your imagination...



R

East Town Market, Charlotte, NC / Dalton, Morgan, Shook & Partners, Inc.





Seneca Place, Charlotte, NC / Boyte-Williams Architects

Push aside your preconceptions of skylights and walkway covers. The unique Corvoe[®] system opens so many new possibilities to stretch your imagination and creativity. Yet, you will have the beauty, durability, strength and virtually maintenance-free performance you expect. With sheer imagination, create new elegance, grace and clarity through crisp, intrinsically flawless lines with Corvoe's *seamless*, barrell-vault system.

Your concept is all that's needed! Corvoe unlocks new ideas and new beauty, meticulous *custom* fabrication and, above all, simplicity.

Now your imagination is free! Arc Industries, 3224 Benard Street Charlotte, NC 28206, 704/374-0866





1535 CRIPPLE CREEK RD., KANNAPOLIS, N.C. 28081

Hardaway Architects, PA, opened for the practice of architecture, planning and interior design this summer.

Gunn, 37, is a native of Lynchburg, Va. He moved to Charlotte in 1972 after graduating from Virginia Tech. He spent one year with Odell Associates, three with Wolf Associates, eight with Dellinger/Lee Associates and a year and a half with Jenkins-Peer Architects before forming his partnership.

Hardaway and Gunn had worked together at Dellinger/Lee, and Gunn believes their talents and interests are well suited for a partnership. While he enjoys the designing end of the business, Hardaway thrives on the production side.

While he has enjoyed working for his former employers, Gunn says the opportunity to strike out on his own was one that he couldn't pass up. "It gives us expressive design freedom," he says. "Not all people feel like this, but I just feel like I have to give it a shot."

The new firm plans to offer its services to a broad range of clients, including government, institutions, developers and corporations. By aiming for a broad practice instead of a specialized one, Gunn hopes to avoid the cyclical downturns that might hit any one of those areas. "Architecture is really not one of those projects that you want to put all your eggs into one basket," he says.

Away from the office, Gunn describes his family as his hobby. He and his wife, Sandra, who has been a counselor for the University of North Carolina at Charlotte and area public schools, have a daughter, Julia, 5. He is a past president of the Charlotte section of the North Carolina Chapter of the American Institute of Architects.

The North Carolina memorial is the second project to honor those killed in Vietnam that Gunn has worked on. He was part of an independent fivemember team that received one of about 40 honorable mentions in the competition to design the national Vietnam War Memorial in Washington, D.C.

Though he was not involved in the war, Gunn says his memorial is a way of saying thanks to those who served. "I really feel like the veterans got a raw deal," he says. "I feel like we owe them a lot."



Increase productivity as much as 40% or more when you use the powerful drafting and editing features in AutoCAD[™] Custom accessories tailor the program to specific needs of design professionals: architects, interior decorators, plant engineers, signmakers. And AutoCAD[™] matches with a wider variety of hardware than any other CAD program.

Computer Gallery is your source for the complete AutoCAD[™] system, from selection to installation, training and maintenance. Conveniently located showrooms provide fast service to customers throughout the state. And Computer Gallery operates two learning centers, each with fully equipped classrooms and full-time, professional instructors.

With over 50 AutoCAD^m installations, Computer Gallery has the expertise to implement the best system for your drafting needs. Enhance your design accuracy and productivity with an AutoCAD^m system.

Computer Gallery is an authorized and trained dealer for Hewlett-Packard Vectra, IBM AT/XT/PC-36, COMPAQ and Apple microcomputers. We are also Advanced Systems Program Dealers for Hewlett-Packard Drafting Plotters and Series 200 Computers, and for the IBM SYSTEM 36 minicomputer. Computer Gallery also offers Hi Res large screen Graphics Monitors, Digitizers, Houston Instrument Plotters and others.

Become a draft dodger by calling one of these Computer Gallery locations:

Raleigh 872-0010

Greensboro 854-2443

Winston-Salem 722-9385





Brick.Itspeaks a language all its own.



Certainly brick is structural.But it's more than that.It's character.Especially a brick like Yorktown Handtique,one of the many shapes, textures, and colors available from Borden.



IN NORTH CAROLINA CALL 1-800-672-0081; OUTSIDE NORTH CAROLINA CALL 1-919-596-8241

Scale & in to I foof