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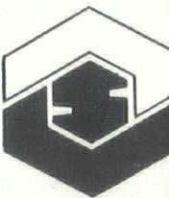
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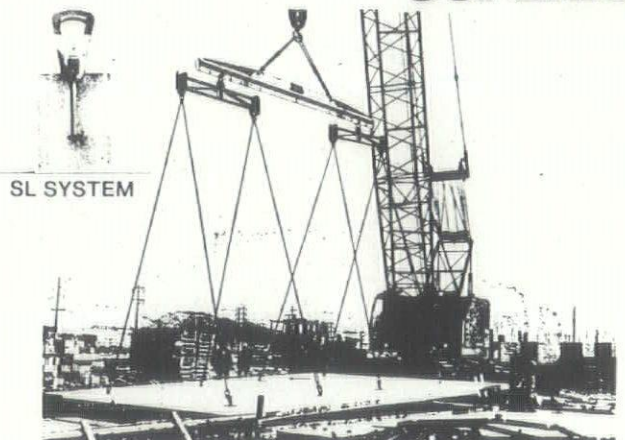
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ON OUR COVER: Buford S. (Bud) Lindsay (right) retired as Executive Director, Virginia Society, AIA on February 29, after almost 10 years in that position. With him is Thomas L. Osborne, his successor. For more on Mr. Osborne, see page 7 of this issue. (Cover photo by Paul Huffman)

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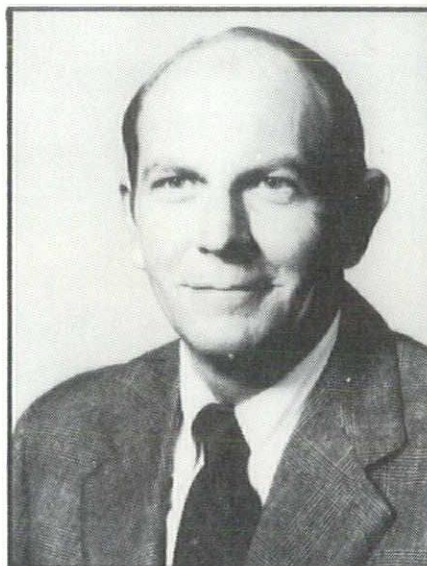
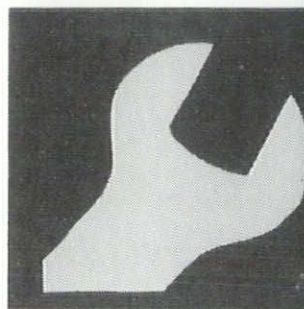
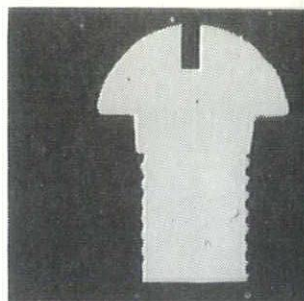
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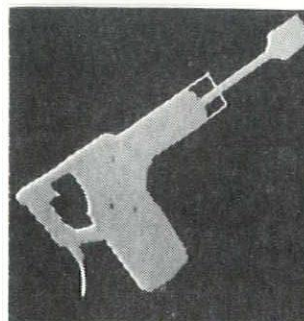
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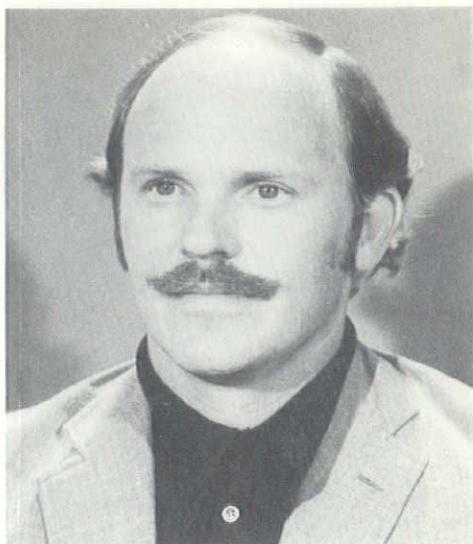
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James A. Morrison



Building Energy Performance Standards



By
Frederick E. Baukhages, IV, AIA

It may well be said that energy was the most controversial subject of the '70s. The conservation of precious fuel has become a major concern of people across the country, and has been, on many occasions, the subject of this report. With the end of the decade of the '70s and the 1980s upon us, the depletion of energy resources is a very real threat facing all Americans.

To ease consumption of our non-replaceable fuel resources, the Department of Energy (DOE) was authorized to prepare guidelines for attaining maximum practical improvements in energy efficiency in our built environment. These guidelines, to be known as the Building Energy Performance Standards, were to be finalized by February of 1980. Unless the usual delays traditionally associated with federally developed regulations is reversed, this deadline will not have been met as the text of the proposed rulemaking of BEPS was released to the public late in 1979, approximately six months behind schedule.

The Department of Energy is forecasting that application of the BEPS may save as much as 52 percent more energy than current practices do. Not everyone is in agreement with this prediction. Critics claim that BEPS implementation costs are too high and the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) recommends use of their own Standard 90 in place of BEPS. State and local governments will be encouraged to adopt and implement BEPS through their existing codes and other mechanisms or through an alternate approval process. As of this writing, DOE anticipated the final rule for the standards to be out in March of 1980 (you will know whether they made it or not when you read this as this will be published after their deadline) and revised periodically to reflect changes in conservation and technology, energy prices and supplies, and experience gained through use of the standards.

To comprehend the potential impact of BEPS, it is important to remember that about one-third of the energy used in this country is consumed in buildings. The majority of residential and commercial buildings in this country were constructed when energy was not a major consideration, and owners and designers were more concerned with initial construction costs than with energy consumption or costs over the life of the building. During the '70s, however, energy conservation did become a concern. With a few notable exceptions, most state and local building energy programs now in existence are an outgrowth of the Energy Policy and Conservation Act of 1975. This Act provided financial assistance in implementation of conservation plans, plans that mostly evolved from component based prescriptive standards contained in ASHRAE 90-75.

With the passage, in 1976, of the Energy Conservation and Production Act, the Federal Government embarked on a program representing a substantial departure from current practices. This 1976 legislation ordered the formulation and publishing of building energy standards, with the implementation of these standards, or their equivalent, mandatory throughout the nation. Initially, responsibility for all aspects of the BEPS was placed with the Department of Housing and Urban Development (HUD). Subsequently, however, Congress transferred authority for preparation and publication to DOE, leaving HUD responsible to implement and monitor the standards. Since that step was taken, many organizations have agreed that DOE should be in charge of standards enforcement as well. The proposed standards are comprised of three fundamental elements: An energy goal for each of several different classifications of buildings in a variety of climates; a method for determining which energy goal applies to a specific building design; and a method for determining if a building design meets its applicable energy goal. Because of the magnitude of variables in occupancy, usage, climate, type and amount of fuel consumed in different regions, and because of the flexibility in evaluating energy use believed to produce the most efficient method of eliminating waste, development of performance based standards was specified. DOE took such a performance approach. Specifically, the proposed standards encompass two basic elements: design energy budgets, and a method to determine energy usage of a building design.

Designers have flexibility to make tradeoffs and introduce new ideas in the design of energy efficient buildings. The design energy budget gives the maximum allowable energy estimated to be needed for an entire building and varies by building type, climate and kind of fuel used. Design energy consumption is the calculated energy used based on building design and location, and the criteria, procedures, and calculation methods used is called the Standard Evaluation Technique. In plain terms, the design energy consumption of a new

(Continued on page 38)



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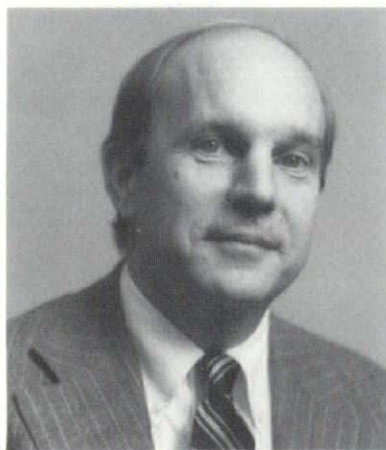
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NEWS

VIRGINIA SOCIETY
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MURRAY HEADS VIRGINIA SOCIETY OF AIA



Charles P. (Duke) Murray, Principal in Charge of the VVKR Incorporated architectural, engineering, and planning office in Norfolk, recently took office as President of the Virginia Society of the American Institute of Architects. The Society is comprised of chapters for the entire state and totals over 800 members.

Mr. Murray, who graduated from the University of Virginia with a degree in architecture, has been with VVKR for fifteen years. He is a member of the Norfolk, Virginia YMCA. He is also a member of the Construction Specifications Institute, the Society of College and University Planners, and the Virginia Association of Professions. A Certified Value Analyst, Mr. Murray has served as Chairman of the Energy Conservation Task Force of the Virginia Society of the AIA. He resides with his family in Virginia Beach.

New Executive Director For Virginia Society, AIA

Thomas L. Osborne of Richmond has been named Executive Director of the Virginia Society, American Institute of Architects. He succeeds Buford S. Lindsay, who retired on February 29 following 9½ years in the position.

A native of Elk County, Kansas, Tom spent his childhood there and in Chowchilla, California. After graduating as valedictorian of his high school class, he attended The George Washington University in Washington, D.C., on an academic scholarship. He received his BA in Political Science from George Washington in June 1970.

Tom was first employed in the field of association management prior to graduation from college, working part-time for the Institute of Traffic Engineers. He was later Director of Membership Services for that organization and supervised the conversion of their records to an ADP system.

For 3½ years he was employed by Junior Achievement organizations in Georgia, the last two years as Executive Director of the program in Dalton. During his time there the program

nearly doubled in size, and he was winner of JA's 1975 Southern Region Expansion Leadership Award.

Returning to Virginia in 1976, he built a successful record as Director of Communications with the Virginia Restaurant Association. In that position he edited and published a monthly magazine and a bi-weekly newsletter, served as a registered lobbyist with the Virginia General Assembly, organized a Political Action Committee, conducted trade shows and conventions, and had been responsible for recruiting 33% of the organization's membership prior to leaving for his present position.

Tom's professional affiliations include membership in the American Society of Association Executives, Virginia Society of Association Executives, Richmond Public Relations Association and Council of Architectural Component Executives. He is a former member of the International Society of Restaurant Association Executives.

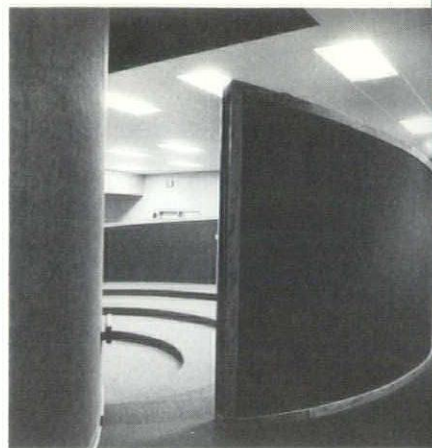
At age 31, the new AIA executive is a bachelor who owns a home in the Church Hill Historic

District in Richmond — an 1885 townhouse which he is living in while completing restoration work. He is Treasurer of the Mann-Netherwood Block Homeowners' Association and a member of the Church Hill Association. A member of historic Second Presbyterian Church, he currently serves on the Membership Committee. He is also a Deacon and an Usher. He is or has been active in a number of other area civic, political and charitable organizations.

Although his house now occupies most of his free time, he reports that he does have other personal interests and hobbies, including bridge, gardening, swimming, theatre and reading.

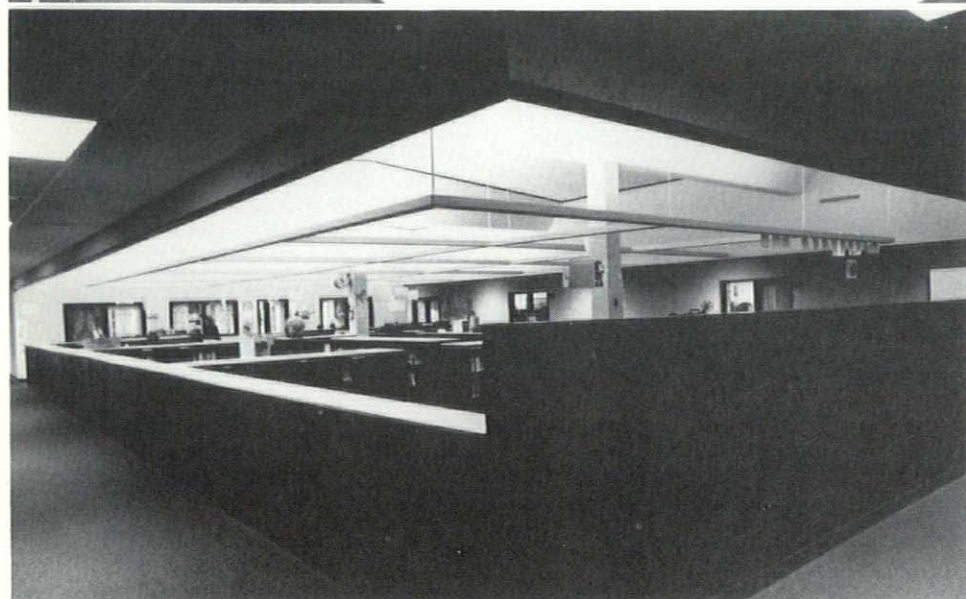
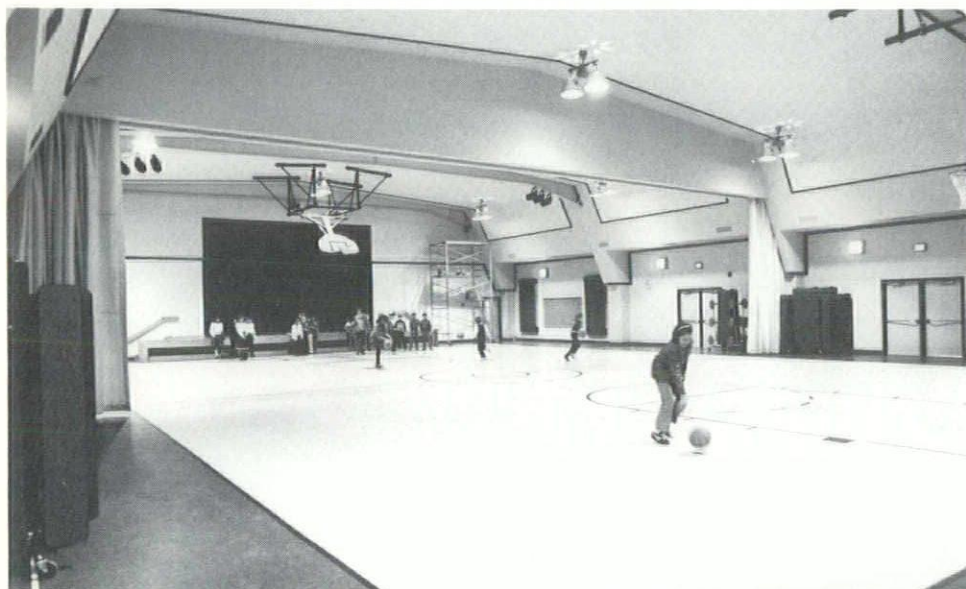
"I look forward to serving the members of the Virginia Society of the AIA," Osborne told the Board at its January meeting. "I view the job of the executive director as that of a manager, directing the society's affairs so as to provide the services the membership wants."

Members of the Virginia Society AIA will miss Bud Lindsay, but will no doubt look forward as well to working with their new Executive Director, Tom Osborne.



Richard C. Haydon Elementary School **Manassas**

Brown/Ryon Associates, Ltd. - Architect



Mechanical Engineer, John F. Lawrence & Associate
 • Electrical Engineer, John F. Lawrence & Associate
 • Structural Engineer, Fortune-Downey-Elliott Ltd.
 Civil Engineer, Ross & France • General Contractor, L. F. Jennings, Inc.

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The City of Manassas needed an 850-student school in sixteen months. The utilization of pre-engineered, off-the-shelf components offered the opportunity to save valuable time. At Richard C. Haydon Elementary School, the structural steel frame and the roof and gutter systems are all standard products, tailored to this project.

To enclose the exterior, a steel stud system sheathed with gypsum board, was selected for its speed of erection and insulating potential. A rugged stone aggregate finish forms the exterior surface. Brick is used selectively inside and out. The planning of the building reflects state-of-the-art energy thinking—well-insulated exterior envelope, double glazed operable windows, "air lock" lobbies at the major entrances. The innovative mechanical system is an energy saving water loop heat pump with the potential for the future addition of solar collectors.

Interior planning called for the use of individual classrooms. In the upper grade section these closed classrooms surround a carpeted open library. A floating construction of light beams provides soft, indirect up-lighting.

In the lower grade area, classrooms are placed about a circular, sunken area. Used for storytelling and audio-visual presentations, it has become a focus for the entire school. The enclosing free-standing wall spirals up and around and is lined with carpet to control sound.

(Continued on page 35)

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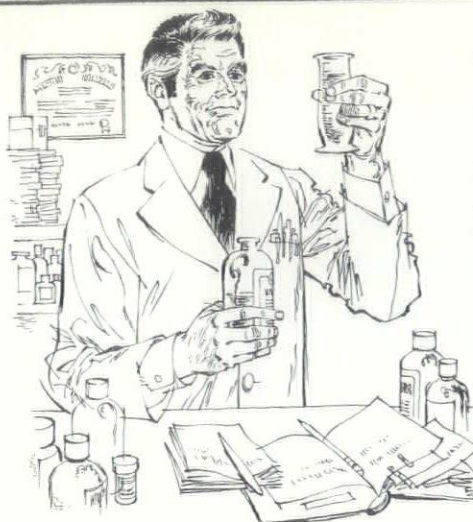
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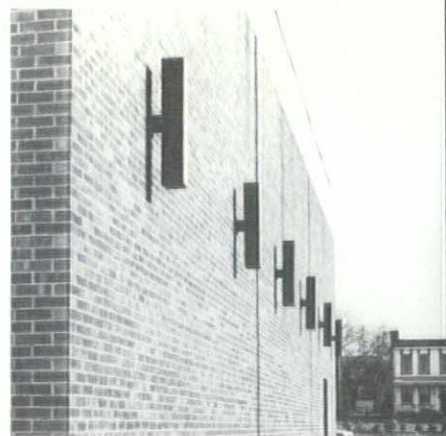
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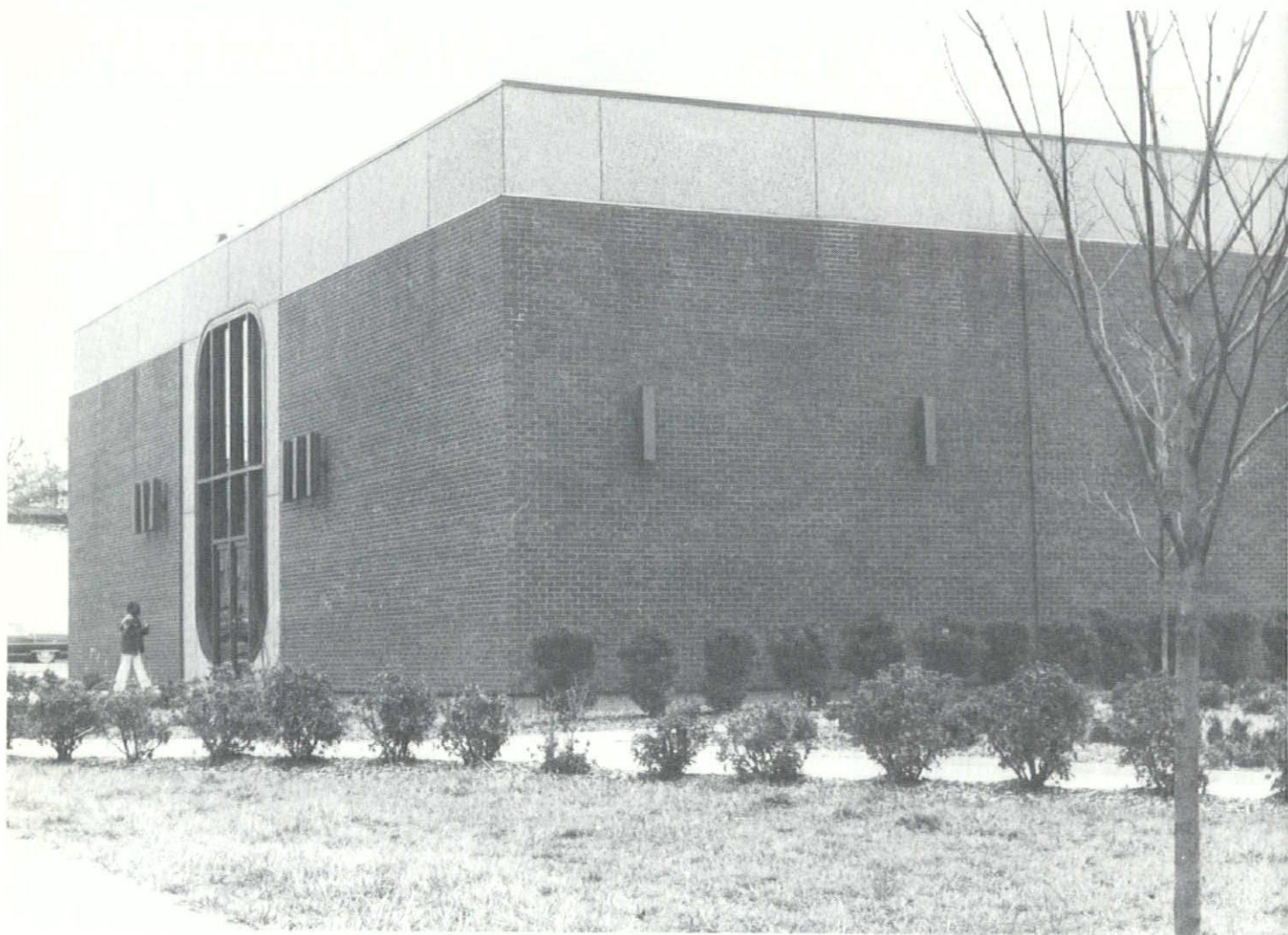


Vernon J. Harris Public Health Center

Richmond

Jones & Strange-Boston - Architect

Consultant - Radiological Physics, Dr. Alfred M. Strash • Landscape Architects, Wilson-Moreth Partnership • General Contractor, A. L. Howard, Inc. • Photography, Bruce M. Justice, AIA



Conceived to reduce the caseload of the General Health Service facilities at the City Health Department and to provide greater accessibility to an entire community segment, the Vernon J. Morris Health Center was located as part of the Community Service "centerpiece" in the Richmond Model Neighborhood Area on Church Hill. It shares a full block site — reclaimed from old, deteriorating residential and abandoned commercial development — with the special services delivery building. The central Church Hill site is directly accessible to the city government complex via the new Martin Luther King Memorial Bridge and is within walking distance for the clients it is intended to serve.

The Center, while a project of the City of Richmond, was partially funded by a grant from the U. S. Department of Health, Education and Welfare. Funding for the parking lot and site development was augmented by both HEW and the Department of Housing and Urban Development. Additional federal participation in the project included a Minority Neighborhood Employment and Training plan in conjunction with the Model Neighborhood program already underway in the area.

In any residential area in a state of change, vandalism can be a serious problem. Foreseeing vandalism and providing security for medical supplies to be housed in the building were important considerations in developing an exterior design with glass only at the front entrance, on a brightly lighted main street.

The site presented two specific problems: debris from previous demolition, covered up when the site was cleared; and a deep layer of marine clay ("Blue Marl") overlying the entire

hilltop (common to many areas of old Richmond). Excavation produced multiple evidence of miscellaneous masonry debris; and even a pair of high-button shoes was excavated from 12 feet down! Although anticipated as a construction problem, compaction of this material was fortunately found adequate for the parking lot; and this feature of the site caused little actual difficulty, since the building basement penetrated the irregular strata involved. The Blue Marl was handled differently, however, as the movement of equipment on it caused remodeling and great loss of strength. Soil specialists and the contractor, working together, developed excavation and concreting techniques to overcome this phenomenon. The building structural design selected by the architect-engineer to be appropriate over this sensitive material included a light bar joist system with concrete fill floors, supported by a rigid two-way raft to spread the load uniformly over the largest area possible.

The Center serves as a comprehensive outpatient clinic, providing a full range of services from family, medical and nutritional counseling to diagnostic X-rays. The full basement houses an extensive pharmacy and mental health unit. The first floor contains 12 examination rooms, six interview rooms which are split to allow a separated social disease control unit, an X-ray suite and medical laboratory. Located on the second floor is a complete dental suite, together with Public Health Nurse suite, community meeting room and administrative offices.

Reflecting the need for environmental control of the many small rooms, the HVAC system chosen was one of variable air volume with

supplementary electric resistance baseboard heat. The system gives both comfort and efficiency; in fact, the energy billings during the coldest parts of the 1978/79 winter seldom exceeded 2¢/sf/month, in spite of the fact that the small glazed area is single glass.

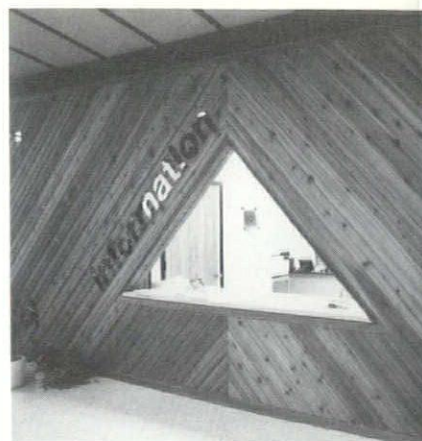
A. L. Howard, Inc., Richmond was general contractor for the project.

Subcontractors & Suppliers (Richmond firms unless noted)

E. G. Bowles Co., excavating; Lone Star Industries, Inc., concrete; J. Carrington Burgess Masonry Contractor, Inc., masonry; Holmes Steel Co., Inc., Ashland, steel; Bowker & Roden, Inc., reinforcing steel; Guille Steel Products Co., Inc., Va. Beach, steel joists; PPG Industries, Inc., stone work & glazing; and Hankins & Johann, Inc., window walls.

Also, Bar Ray Products, X-ray product; Glidewell Bros., Inc., painting & plastic wall finish; Western Waterproofing Co., Inc., waterproofing; Fendley Floor & Ceiling Co., acoustical & resilient tile; S & L Drywall Co., drywall; Miller Wire Works, wire partitions; Ruffin & Payne, Inc., millwork; J. S. Archer Co., Inc., steel doors & bucks; General Electric Supply Co., lighting fixtures; Advance Electric Co., electrical work; Catlett-Johnson Corp., plumbing/air conditioning/heating; Virginia Pipe & Supply Co., Inc., Ashland, sprinklers; Dover Elevator Co., Memphis, TN, elevator; Pleasants Hardware, hardware; and Froehling & Robertson, Inc., sprinklers testing.

Special equipment included: medical case-work by St. Charles; variable air volume system - Carrier Moduline; and medical disposal by Atomic Disposer Co.



Bow Creek Community Center

Virginia Beach

The Design Collaborative/Laszlo Aranyi, AIA - Architect

Golf Course Architect, Wilson-Moreth Partnership
 Mechanical Engineer, Bowman and Associates, P.
 Electrical Engineer, Bowman and Associates, Ltd.
 Structural Engineer, Stroud and Associates, Ltd.
 Site Engineer, Miller-Fox P. C. • General Contractor,
 Bayport Construction Corp.

When the residents of Princess Anne Plantation found out that the Bow Creek Country Club's 18-hole Golf Course was slated to be developed into an apartment project, heavy pressure was placed on the Virginia Beach City Council to buy it and use it as a community center.

The city eventually purchased the 18-hole, 3,000-acre golf course which contained a burned-down clubhouse. Only the snack bar remained usable after the fire. There was an old run-down swimming pool adjacent to the building.

The first problem was to decide what to do with the building; rebuild or start over?



After carefully evaluating several factors, it was decided to complete the existing building. Although many unexpected problems arose during construction, the same recommendation could be made today. The following is a list of considerations:

The building was built on piles and had a reinforced concrete basement. This would make demolition very expensive.

The site was rather small for an 18-hole golf course, and there was no room to construct a new building adjacent to the existing structure, thereby abandoning the basement and filling it in.

The existing basement would be ideal for storing golf carts. Even though, there was a chance there might be some moisture problems.

Golf Course

The golf course was redesigned to correct some of the original design and construction flaws. A new water distribution and sprinkler system was laid out.

Swimming Pool

The existing swimming pool was completely rebuilt. A new enlarged concrete deck was constructed around it which included a circular wading pool.

Site Improvements

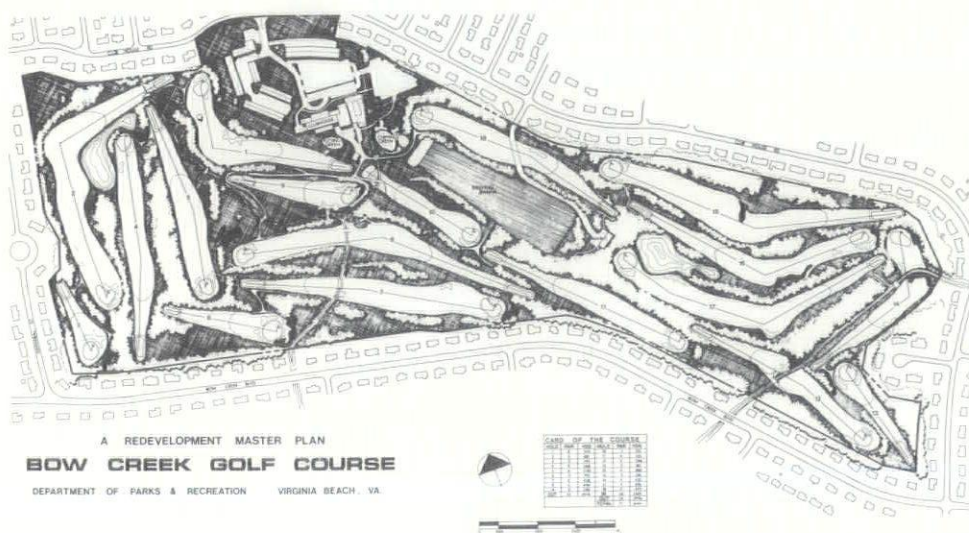
A new parking lot for 83 cars was added for the use of golfers. The existing parking lot was improved and completely resurfaced. A new starter shelter was built and a parking area for golf carts was added. A new maintenance building was built in a remote location for the servicing and storing of large machinery.

Building Improvements

Since there was no room to expand the building, it was decided to limit its use to an adult-oriented recreation center. The original ballroom was converted into four classrooms divided by folding partitions. This way the entire space can be combined for an audience of up to 400 people. The kitchen was converted to a teaching type kitchen. Separate locker-toilet-shower rooms were added for the golfers. The pro-shop was also relocated into larger quarters.

Access for the Handicapped

New toilets and showers were added which are accessible to the handicapped. The steps at the front entrance were replaced



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with a ramp. Several other ramps were added as well to make every part of the building accessible.

Construction Details

The original steel roof structure was re-used; however, it turned out that the fire did more damage than it was anticipated. Many of the structural members had to be reinforced or straightened.

All the original glass curtain walls were missing; therefore, new exterior walls had to be built. Most of these non-structural walls were constructed of steel studs with cedar siding exterior finish.

The mechanical and electrical systems had to be completely redone. Even the chiller which was originally scheduled to be reused had to be replaced.

Color Coordination

A simple color scheme of orange, light blue and white was adopted and is used in the supergraphics or as accent walls. All the built in cabinetry and the spike-proof carpeting is in blue while the accent walls in the lobby are orange.

Bayport Construction Corp. of Virginia Beach was general contractor for the project.

Subcontractors & Suppliers

From Virginia Beach were: Bozarth & Lane, Inc., acoustical & toilet partitions; ARC Electric, Inc., electrical; Seaboard Building Supply Co., molding partitions, toilet accessories & partitions; Contractors Paving Co., Inc., paving; Varner Moore & Co., Inc., Norfolk/Va. Beach, cementitious roof deck; Forrest Exterminating Service, Inc., soil treatment; and National Construction Co., Inc., Alexandria/Va. Beach, swimming pools.

Norfolk firms were: Binswanger Glass Co., aluminum work; Sherwin-Williams Co., carpet & vinyl tile; Ajax Co., Inc., ceramic tile & slate; Door Engineering Corp., hollow metal doors & frames, finish hardware & overhead doors; A. C. Gordon & Co., Inc., drywall & metal studs; Hercules Fence Division, Aluminum Specialties Co., Inc., fencing; E. K. Wilson & Sons Plumbing & Heating, Inc., HVAC & plumbing; Commonwealth Masonry, masonry; Campostella Builders & Supply Corp.; E. Caligari & Son, Inc., painting; Stevens Roofing Corp., roofing; Hall-Hodges Co., Inc., reinforcing; Shoffner Industries of Virginia, wood trusses; and Architectural Graphics, Inc., signs.

Others were: K & P Caulking, Portsmouth, caulking; Brownson Equipment Co., Richmond, ceiling hung mirror; Barnum-Bruns Iron Works, Inc., Chesapeake, steel work; and Williams Fire Sprinkler Co., Williamston, NC, sprinkler.

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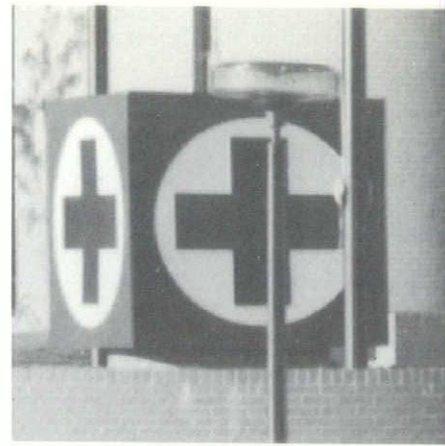
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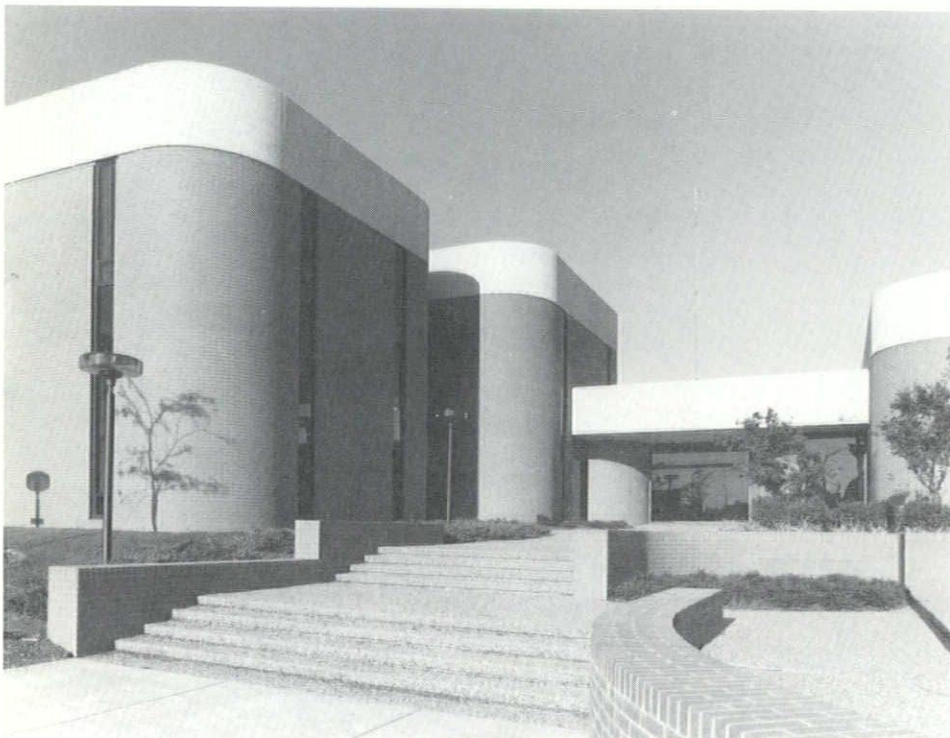


Tidewater Chapter and Regional Blood Center

American Red Cross — Norfolk

Shriver and Holland Associates - Architect

Landscape Architect, Edward G. Carson, A.S.L.A. and Associates • Mechanical Engineer, Vansant and Guler, Inc. • Electrical Engineer, Vansant and Guler, Inc. • Structural Engineer, Fraioli-Blum-Yesselman Associates, Inc. • Civil Engineer, Baldwin and Greg Ltd. • General Contractor, W. B. Meredith II, Inc. Photography, Tamte-Wilson Photography, Inc. and Fred Habit.



To meet the expanding needs of the Tidewater Community, the American Red Cross made planning a reality in the construction of the new Roy Charles Red Cross Center. In an urban redevelopment area of Norfolk, the 35,000 square foot facility houses the Division Headquarters as well as the Tidewater Chapter of the American Red Cross. The Tidewater Region of the American Red Cross "Blood Services," a processing and distribution system, provides the capacity to prepare over 175,000 units of blood and blood components annually.

The development program combined the three major building functions with a central entrance and reception area. Also desirable was an isolated yet accessible service/distribution area for blood and blood components, that was located in close proximity to a major city roadway. The program expressed a general concern for future expansion of the center to accommodate Tidewater's rapid growth rate. The building location, on a six (6) acre tract, allows for the separation of service and distribution functions from user activities. Public parking and primary entrances are located on the opposite side of the building from the blood distribution area, maintaining visual quality from the neighboring Ghent restoration project. Other site developments included, illuminated walkways and parking areas, extensive landscaping, the entrance plaza, and the Red Cross sign.

The Headquarters building has a facade of brick and precast stone. Special curved brick were used to round the corners of the building form. Tinted windows, with bronze aluminum frames, run the height of the two levels adding vertical form to the building elevation.

The reception lobby has an exposed interior brick wall with quarry tile floor covering. Photo-

murals and super graphics of past Red Cross work along with interior furnishings create a relaxing environment for the visitor.

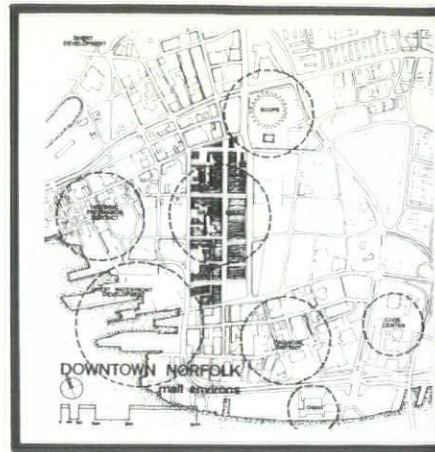
The technical laboratories separate and analyze blood samples for storage and distribution. Some of the most current modular laboratory equipment, freeze storage facilities and loading systems are a part of the blood services center. As a methodology for future expansion the blood laboratory was built over a three-foot crawl space to readily permit future changes to occur within the laboratory area. Attached to the roof is a 75-foot radio tower for civil defense and disaster relief communication for the eastern region.

In the Administration area is the Division Headquarters for 28 chapters within this region. The Tidewater Chapter provides programs for military families and veterans, disaster and relief victims, nursing and health services, and blood donor recruitment.

The Roy Charles Red Cross Center stands as a major component of the National Red Cross organization. The Center is made possible through the efforts of the Tidewater Chapter of

(Continued on page 36)





Granby Mall

Norfolk

Shriver and Holland Associates - Architect

Landscape Architect, Edward G. Carson, A.S.L.A. & Associates • Mechanical Engineer, Chandler and Gibson, Consulting Engineers • Electrical Engineer, Chandler and Gibson, Consulting Engineers • Structural Engineer, Fraioli-Blum-Yesselman Associates, Inc. • Civil Engineer, Baldwin and Gregg, Ltd. • Lighting Consultant, Claude R. Engle • General Contractor, Conrad Bros., Inc. • Photography, Tamte-Wilson Photography, Inc.



Jazz concerts in the summer, choral singing in the spring, and caroling at Christmas time are a few seasonal events featured in Granby Mall located in Downtown Norfolk.

The Mall, completed in 1976, unifies approximately twenty-eight acres of Norfolk's downtown retail properties. Attractive brick and granite pavers, landscaping, pedestrian scale street lighting, children's play structures, pavilions, sitting areas, open spaces to accommodate spontaneous functions, organized street graphics and fountains for viewing and touching are a few of the amenities that have dramatically improved the quality of the downtown area, making it a current and viable outdoor shopping area that competes more readily with the newer and enclosed shopping malls.

Prior to reclaiming this shopping district for the pedestrian, it was an area of deteriorating streets and sidewalks, unsightly telephone and power lines, unorganized street graphics and chaotic, uncontrolled automobile and service traffic. This total physical revitalization was the first breath of new life for the waning downtown retail shopping district of Norfolk.

Centrally located in the downtown area, it bordered to the west by the historical Freeman Street District and the fashionable Freeman Harbour Development, to the south-south-east by the new financial district, and to the east by a 17-acre undeveloped parcel of land owned by the Norfolk Redevelopment and Housing Authority. This strategic location enables Granby Mall to continue to serve as the primary retail

aulking, painting contractor & paint supplier; DG, Incorporated, Richmond, glass, glazing contractor, windows, window wall, storefront & overhead doors; Lynchburg Overhead Door & Hardware Co., Lynchburg, metal doors & frames and wood doors; Pleasants Hardware, Richmond, hardware supplier; H. E. Satterwhite, Inc., Richmond, ceramic tile & special flooring; The Floor Shop, Inc., Farmville, acoustical treatment & resilient tile; and Lees Carpets, King of Prussia, PA, carpet.

Others were: M. A. Bruder & Sons, Inc., Brookhall, PA, paint manufacturer; Potomac Wallcoverings, Inc., Beltsville, MD, wall covering; Roland Co., Inc., Lynchburg, plumbing fixture supplier; C. C. Powell & Son, Inc., Victoria, plumbing contractor; Daniel Brothers, Lawrenceville, heating/ventilating/air conditioning contractor; Jones Electric Contractors, Inc., Broadax, lighting fixtures supplier & electrical contractor; Westinghouse Electric Supply Co., Petersburg, electrical equipment supplier; Baartol Co., Inc., Kenton, OH, flag poles; Burke-Hoggard, Inc., Richmond, unit kitchen; Flowers School Equipment, Co., Inc., Miller & Rhoads, Thalhimer's Business Interiors, all Richmond, and Sallie & Sonny Florists, Lawrenceville, interior furnishings; and Sauder Manufacturing Co., Archbold, OH, council chamber benches.

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The First National Bank of Galax

Expansion and Remodeling — Galax

Byron R. Dickson, Architect

Project Coordinator, The Design/Build Team • Interior Design, American Furniture & Fixture Co. • General Contractor, Days Construction Co., Inc. • Photography, Byron R. Dickson, Architect.

The First National Bank of Galax held an open house on August 23, 1979, to acquaint their customers with their newly expanded and remodeled facilities.

Located in the City of Galax, The First National Bank of Galax was chartered on July 11, 1907, and has served as an independent local bank for better than 71 years. A unique feature



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this bank is that from its charter, it has had only three presidents, with the most recent, Mr. W. Parsons, taking office in 1977. The banking operation is conducted by Mr. T. Ralph Jennings, Executive Vice President.

The bank moved from its original location to its present facility in 1924, and has enjoyed continued growth and expansion through the years. The first expansion occurred in 1964 with the construction of a drive-in branch located in the same block as the main building. The main office was remodeled in 1966 and again in 1969. This facility was soon outgrown and the bank purchased the building adjacent to its present office. Since the bank is closing out the year 1979 with assets exceeding fifty-million dollars and a total of 40 employees, there was a definite need for this additional operating space for their expanded services.

The interior and facade of the existing adjacent building was remodeled after its purchase from a retail furniture business. The first floor was completely redone by adding a new 22 foot vault, a vault clerk station and three coupon booths. Four note tellers are accessible through the existing bank lobby and entrance.

The loan officers' platform and two private offices are combined to the note teller's area. A waiting area for customers is near the vault clerk and tellers. A new conference, auditor and board rooms are located near the secretary and business offices in the existing building. Staff filets and mechanical room and exit make up the remainder of the first floor expansion.

A new stairway to the second floor is relocated behind the waiting area and will be used for future expansion.

One split-system attic heat pump provides heating and cooling for the expansion area. Ceiling diffusers are provided with side mounted diffusers at the raised portion of the new tellers' lobby. The ceiling space is used as a return plenum. Fluorescent lighting is provided throughout the expansion area with double switching for energy conservation.

The interior finishes are: vinyl asbestos tile lobby; slate at tellers customer area; and carpet at officers area, tellers and offices. The walls



are drywall painted with wall covering applied at waiting and tellers. A wood rail divides the vault clerk and lobby.

The exterior facade is coated with a special coating to match the existing bank building with four windows recessed into the brick corbel at head and sill matching the existing building.

Days Construction Co., Inc. of Salem was general contractor and handled masonry work, carpentry, millwork, waterproofing, caulking and foundation insulation.

Subcontractors & Suppliers
From Salem were: Valley Steel Corp., reinforcing;

Bolling Steel Co., steel supplier; and Acoustical Services, Inc., gypsum board contractor, acoustical treatment & resilient tile.

Roanoke firms were: South Roanoke Lumber Co., paneling; PPG Industries, Inc., glass & windows; Skyline Paint & Hardware, Inc., metal doors & frames & hardware supplier; Feather Tile Co., Inc., special flooring; and Newcomb Electric Co., Inc., electrical contractor.

Also, Danny Blankenship, Narrows, concrete contractor; and, from Galax, Thomas W. Martin, painting contractor; and E. L. Diamond Electric, Cooling & Heating Co., plumbing/heating/ventilating/air conditioning contractor.



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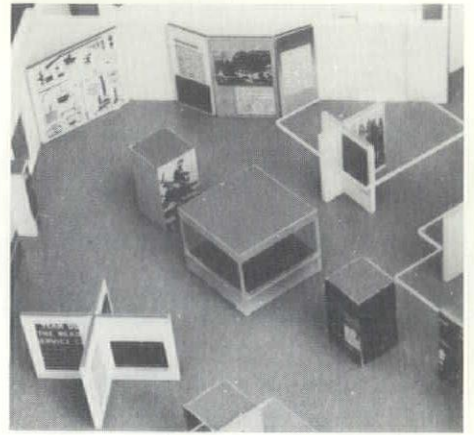
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Museum Building

Historic Crab Orchard Museum & Pioneer Park, Inc. — Tazewell County

Stiles L. Bartley, Architect

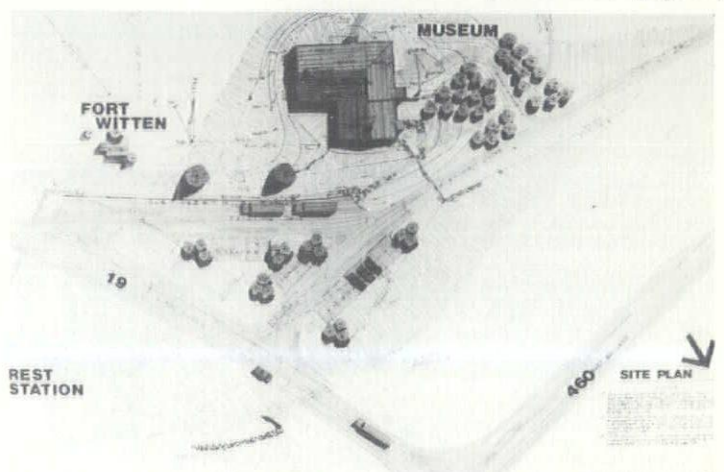
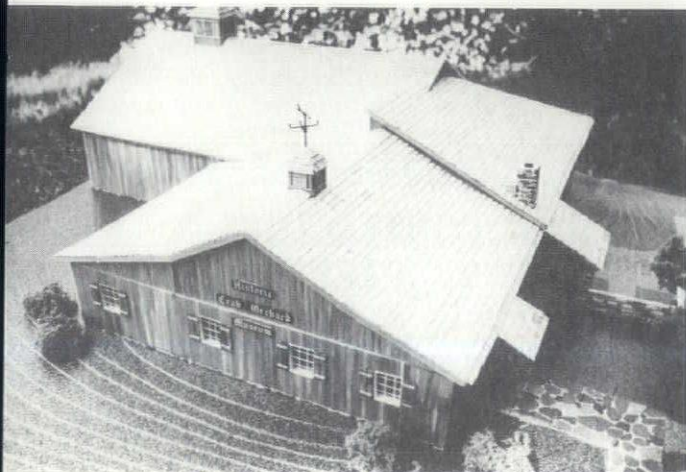
Structural Engineer, McKinney & Walker • Museum Coordinator, Robert Mayo • General Contractor, Trion Construction Company • Photography, Lee Brauer.



Located in the Pisgah Community in central Tazewell County, lies the future site of Historic Crab Orchard Museum destined to become one of Virginia's significant historic landmarks. The Museum, serving as the main entrance to the Pioneer Park, will contain approximately 6,000 square feet; to be utilized for exhibit and audio-visual space along with storage, offices, and a small research library containing original manuscripts and documents from the late 18th Century to the present. It is to serve as a community activity center, learning center and tourist attraction to expand and diversify the economy of the area. Working with the Virginia Museum, space has been allotted in the parking area for the Virginia Museum Mobile Exhibit Center thus periodically complementing the Museum's exhibits and artifacts.

The first permanent white settlement in Tazewell County nestled within the 110 acre site is

(Continued on page 37)





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Burnley Station

Don A. Swofford, Architect



General Contractor, Ace Contracting, Inc. • Photography, Don A. Swofford, Architect.

The owner's challenge to the architect was to design a structure which would minimize construction cost while incorporating progressive ideas in solar heating to reduce the yearly life cycle cost. Ease of construction was achieved by historically alluding to the traditional Piedmont "salt box" form. The long sloping roof of the salt box was oriented to the north to buffer prevailing northern winter winds. Solar absorption and radiation was maximized on the southern high wall with large windows and glass. Solar heating is achieved by incorporating a twelve-inch-thick masonry "Trombe" wall in the south facade. The Trombe wall is simply linked into the return air side of the conventional forced air gas heating system (solar radiation captured in the Trombe wall provides for more than 60% of the present heating requirements for the house). Summer ventilation is accommodated passively with a system of manually operated dampers which release hot air from the Trombe wall system creating a thermal syphon effect and a resulting negative pressure inside the structure thus drawing air through open windows.

Overall construction costs were minimized by the non-complex structural form and the use of locally available materials. The structural form also lends itself very readily to future additions to accommodate a growing family's space needs.

Ace Contracting, Inc. of Barboursville was general contractor for the project.

Subcontractors & Suppliers

(Charlottesville firms unless noted)

Allied Concrete Co., concrete supplier & masonry supplier; Burnley Station Woodwork, Burnley Station, millwork & cabinets; Davenport Insulation, Inc., wall insulation; Better Living, Inc., wood doors & windows; Martin Hardware Co., hardware supplier; H. Robinson, gypsum board contractor; Floor Fashions of Virginia, Inc., resilient tile; Paint Plus, Inc., paint supplier; Pittsburgh Paints, Pittsburgh, PA, paint manufacturer; DHI Energy Systems, Co., solar hot water & heating contractor; Noland Co., plumbing fixture supplier; Jim Beck, Inc., plumbing contractor; and Piedmont Electric Supply Corp., lighting fixtures supplier.

Heindl-Evans Designs and Builds 'Recession-Proof Booth'

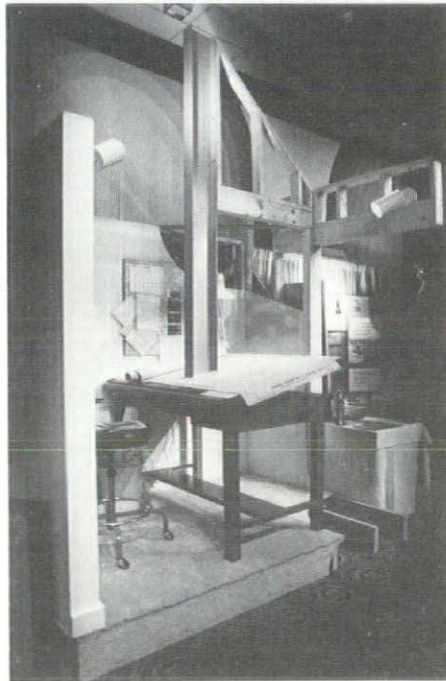
Visitors attending the Construction Specifications Institute's First Annual Construction Products Show at the Richmond Hyatt House were treated to a rare item in today's economy — a "recession-proof booth."

The booth, one of 62 exhibits at the show, was designed and built by Heindl-Evans, Inc. to demonstrate what they consider to be the future of the commercial construction business — the concept and practice of design-build itself. Typically the architect designs a building and releases plans for construction bids. But with skyrocketing prices, often the proposed plan surpasses the budget and has to go back to the drawing board for revisions. But in a design-build project the architect and contractor work together as a team from the start in order to save the owner time and money — a savings that could be as high as 20 percent according to Heindl-Evans, President, W. S. Heindl.

"With a registered on-staff architect we've demonstrated time and time again that contractor involvement at the onset of a project can save the owner a lot of problems later," said Heindl. "It enables us to work faster while we're saving the owner money in the form of professional fees, and cost-saving construction specifications. He knows exactly what it will cost up front, because we design-out hard to get and expensive construction materials, and we design-in speed and savings. That's an inflation-fighter even Mr. Carter would approve of."

The booth says it all. Staff designer Wally Dawson described it as an "architectural sculpture that literally demonstrates how design-build comes to life." The rather bizarre looking booth consist of a structural "I"-beam which seems to erupt from an architect's drawing board and blend into its own functional setting — the architect's office.

Heindl-Evans, Inc. is one of Virginia's largest construction firms with 250+ employees and



current construction projects totalling \$26 million. As an active member of the Construction Specifications Institute, a non-profit organization dedicated to the betterment of construction products and specifications, Heindl-Evans has demonstrated its support by being the only general contractor to participate in this year's show.

For further information contact W. S. Heindl at (804) 746-7851.

Kidd Joins Department of Highways and Transportation

Michael D. Kidd, public transportation coordinator for the City of Charlotte, N.C., will assume a similar position in the Virginia Department of Highways and Transportation April 14 according to Harold C. Kig.

Kidd, a 33-year-old Roanoke native, will succeed Edward W. Pigman, who resigned to join Chicago-based consulting firm.

King said Kidd's "enthusiasm and experience will be of enormous benefit to Virginia as we continue to seek improved levels of public transit service."

In his new position, Kidd will direct the department's public transportation division which was established by the 1978 General Assembly. The division is responsible for planning and implementing programs aimed at developing and improving transit and for administering state and federal transit financial aid to localities.

In Charlotte, he has been responsible to the municipal administration and City Council for management, operation, planning, and marketing services for the city's transit system.

He administered the negotiations and purchase by Charlotte of the local bus system, prepared the city's first transit development and improvement program, initiated an extensive marketing program to encourage increased transit use, and instituted such new services as express bus routes, park-and-ride facilities, and a free-fare zone in the city's downtown business district.

Before joining the Charlotte municipal government, Kidd was employed by the consulting firm of Wilber Smith and Associates of Columbia, S.C. In that capacity, he was resident project manager for a transit technical study in the Southeastern Virginia region and project director for a similar study in Roanoke. He also directed a study of the transit needs of elderly citizens in Roanoke.

Kidd was graduated from Emory and Henry College in 1969 with a bachelor of arts degree in economics and business administration, and has done graduate study in transportation economics and geography at the University of South Carolina.

He is a member of the American Public Transportation Association, the U.S. Urban Mass Transportation Administration's off-peak ridership and revenue executive review committee and the North Carolina Public Transit Association. He also has served as a section chairman for the Charlotte United Way Campaign.

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ong-Way Driving ... Continued Hazard

ong-way driving on Virginia's major highways continues to be a serious problem, according to a report from the State Department of Highways and Transportation.

In the six months from June 1, 1979, through September 30, 1979, 47 incidents of wrong-way driving were reported on the state's interstate divided primary systems — 13 less than in a comparable period in 1978. Seventeen of the incidents resulted in accidents in which four persons were killed and 10 were injured.

While there is some indication that the number of reported incidents is dropping, the problem remains serious," said J. P. Mills, Jr., the department's traffic and safety engineer.

In the past nine years, 130 persons were killed in wrong-way driving accidents and 435 were injured, according to the report.

During the same period, 1,219 wrong-way driving incidents on the state's divided highways were reported by the state police, who are working in compiling the report.

During the June-November 1979, period, 36 percent of the reported incidents resulted in accidents. Twenty-five of the reported 47 incidents occurred during darkness, and 18 of the incidents were drunk or had been drinking, according to the report.

Eighteen of the accidents took place when vehicles entered the wrong-way at interstate interchanges or at intersections on the primary roads. U-turns on the interstate were involved in 10 of the accidents. Other accidents resulted in wrong-way driving at commercial entrances and crossovers.

The department has installed arrows, "Do Not Enter," and "Wrong Way" signs at numerous locations. Mills said that work will be continued in an effort to further reduce the incidence of wrong-way driving.

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American Bureaucracy Was Subject At NVBA Dinner Meeting

John A. Walker, Executive Vice President and Managing Director of Lowe's Companies, Inc., was the guest speaker at the February 14th dinner meeting of the Northern Virginia Builders Association.

A resident of North Wilkesboro, North Carolina, Mr. Walker is a nationally respected authority on the housing market and is, among other distinctions, a former director of the North Carolina Home Builders Association.

During his more than 30-year affiliation with the building industry, he has spoken to hundreds of groups throughout the nation on various industry matters, to include changes in housing styles demanded by a changing market, utility costs and their impact on construction techniques, and new financing approaches for single family dwellings. Mr. Walker's topic for February 14th was "American bureaucracy and how it affects the building industry."

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VIRGINIA INDUSTRIAL DEVELOPMENT NEWS

DeMauri Joins Division

Robert S. DeMauri has joined the Virginia Division of Industrial Development as an Industrial Development Representative. In his new post, DeMauri will be part of an eight-man staff with industrial marketing responsibilities throughout the United States.

DeMauri, 39, was formerly employed by BKL Associates in McLean as a consultant in transportation planning and community/economic development. He also worked with Conyers and Lybrand in Washington as a Director in the Government Housing Group. Prior to that he worked with the Virginia Division of State Planning agencies in Hartford, Connecticut and New Rochelle, New York.

DeMauri received a Bachelor of City Planning degree from the University of Virginia. He is married and has one son.

Stamping Company Chooses Petersburg

The Short Run Stamping Company, Inc., opened a manufacturing facility in Petersburg, according to the Virginia Division of Industrial Development. The New Jersey based company plans to produce custom metal stampings as well as tools and dies at its Virginia location.

The plant will be located in a leased 12,000 square foot building formerly known as Myers Building. It expected to be in operation by February 1980.

Initial employment will be about 20 and should eventually rise to between 40 and 50. The company will utilize the services of the Special Training Division of the Virginia Community College System to train its workers.

The Short Run Stamping company looked at several other Southeastern states before deciding to move to Virginia. Company President Robert Speir attributed the selection of the Petersburg location to its excellent transporta-

tion network, its proximity to Richmond and suppliers, Virginia's right-to-work law and state's labor supply and training program.

Short Run Stamping was assisted in its selection process by the Appomattox Bay Industrial Development Corporation, the Virginia State Chamber of Commerce and the Virginia Division of Industrial Development.

West German Subsidiary To Establish Fairfax Plant

Heckler & Koch, Inc. will establish a production and assembly facility on a recently purchased site in the Dulles Airport Industrial Park, Fairfax County according to the Fairfax County Economic Development Authority and company officials.

Heckler & Koch, Inc. is the U. S. subsidiary of Heckler & Koch, GmbH of Oberndorf am Neckar, West Germany. The parent company manufactures precision machine tools, electronic controls and firearms for sporting, law enforcement and military use.

The new plant, to be constructed in the Chantilly area of Fairfax County, will assemble sporting guns for the American and overseas markets. The company anticipates 100 employees initially with a potential projection of approximately 500 employees at full production.

Heckler & Koch, Inc. currently maintains office space in Arlington and has purchased the Dulles Airport site to enable the expansion of its U. S. activity. The new facility is expected to be in operation in 1981.

Heckler & Koch, was assisted in its site selection activities by the Fairfax County Economic Development Authority.

Goldschmidt Announces Hopewell Start Up

Goldschmidt Chemical Corporation, a subsidiary of Th. Goldschmidt AG of Esen, West Germany, has formally announced the establishment of a warehouse and production facility in Hopewell, according to Virginia Division of Industrial Development.

Construction has begun on phase one of the Virginia operation, a 10,000 square foot warehouse on a nine acre tract on Route 10 in Hopewell. Goldschmidt will produce surfactants, especially for the cosmetic industry, including products to be used in shampoos and bath soaps.

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Goldschmidt currently employs 11 personnel; no significant increase in employment is contemplated in the short term. Goldschmidt anticipates major increases as markets established in the next few years. Financing for the new facility will be accomplished in part by industrial development revenue bonds issued to the city of Hopewell. Company President Dr. Heribert Seyffert indicated that Goldschmidt chose the Hopewell location because of its proximity to other companies in the chemical industry and the ability to service a variety of foreign and domestic markets from a central point. Goldschmidt was assisted in its site location procedures by the Appomattox Basin Industrial Development Corporation and by the Richmond Office of the Virginia Division of Industrial Development.

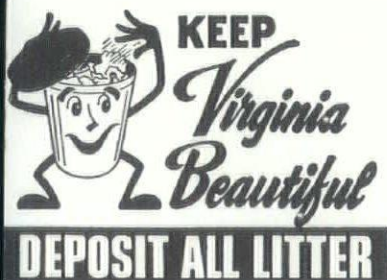
Energy Conservation Manufacturer Opens Plant In Lynchburg

The Thermolite Division of Allen-Morrison, Inc., has opened a manufacturing facility in Lynchburg, according to the Greater Lynchburg Chamber of Commerce. The company will produce energy conservation devices at its new location. It is a wholly-owned subsidiary of Allen-Morrison, Inc., which is headquartered in Lynchburg.

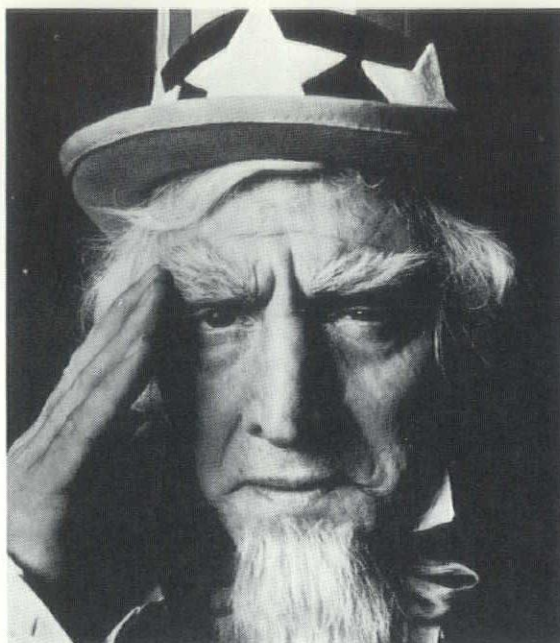
The new firm is located in a 22,000 square foot building it purchased on Orchard Street. It employs seven people and expects to have 15 workers by mid-1981.

The company produces Thermostone and Thermostone heat products. Thermostone is a cured soapstone product with properties similar to natural soapstone and takes advantage of a unique deposit of soapstone quarried in central Virginia.

Curtis E. Zimmer is operations manager of the new Thermolite Division. Thermo-Products, Inc. is its exclusive sales agent. Richard W. Brown is president of that marketing company.



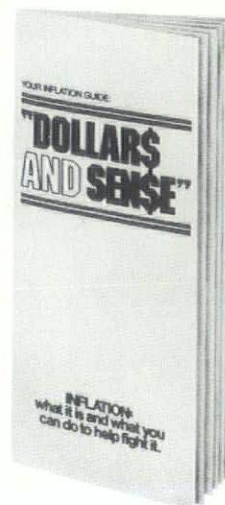
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ITT Brake Unit to Expand Its Culpeper Facilities

Alfred Teves, Inc., a manufacturer of brakes and boosters for the automobile industry, will expand its Culpeper plant this year according to the Virginia Division of Industrial Development.

Teves, a subsidiary of International Telephone and Telegraph Corporation, is the largest independent manufacturer of brake systems, with headquarters located in Frankfurt, West Germany. More than 13,000 people are employed in its 14 plants, located in Germany, Belgium, France, Italy, Great Britain, The United States, Brazil and South Africa. Teves manufactures its automotive brake systems for Ford and Chrysler in the United States and has been operating in Culpeper since 1976.

According to William Tyndale, general manager of the local Teves plant, the expansion will consist of a 60,000 square foot addition to the existing plant. The addition is expected to be in full production by June of this year.

About 180 jobs will be added to the local payroll, bringing to 460 the total employment at the plant. Teves in Virginia start with 150 employees and added 130 in 1977 when the company began producing Koni shock absorbers. Koni, a Dutch company, is also an ITT subsidiary. The planned expansion marks the third phase of production at the central Virginia facility.

The capital investment in the current expansion is over \$15 million. The products will be used in the new generation of cars developed by Ford and Chrysler.

Mr. Tyndale indicated that the majority of the additional employees will be highly skilled and that the total impact of the expansion on the payroll and tax base in Culpeper will be substantial.

Kinney Engineers Will Operate In Chesterfield County

S. P. Kinney Engineers, Inc., designers manufacturers of blast furnace and steel plant equipment, will establish a production facility in Chesterfield County according to the Virginia Division of Industrial Development.

Headquartered in Carnegie, Pennsylvania, P. Kinney will construct a new facility off Jefferson Davis Highway near Colonial Heights.

Corporation President R. F. Kinney indicated that the facility would employ about 25 people initially with employment reaching 50 at full production. The company expects to manufacture industrial strainers and blast furnace components at the Chesterfield County site.

The new plant will consist of a 20,000 square foot building and an office to be erected on a 16-acre tract formerly known as the Wilken property. The facility will be financed in part by industrial development revenue bonds to be issued by the Chesterfield County Industrial Development Authority. Kinney's Virginia activity is expected to be in operation by mid-1979.

Mr. Kinney reported that the company looked at a number of different sites before making the decision. "Our new Chesterfield County location gives us excellent proximity to major markets and is served by a sophisticated transportation network. We were also very favorably impressed with the business climate in the state of Virginia.

Kinney anticipates using the services of the Special Training Division of the Virginia Department of Community Colleges to train its employees.

The company was assisted in its site selection activities by the Appomattox Basin Industrial Development Corporation, the Chesterfield County Industrial Development Authority and the Virginia Division of Industrial Development.

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Haydon Elementary School

(From page 8)

The school's multi-purpose room is designed to allow simultaneous use as a cafeteria and as a physical education space. When the divider is opened, the room can serve as an auditorium or a full size basketball court. It can be isolated from the remainder of the building for night-club/community use.

A special feature is the use of vinyl wall covering throughout the building. Vinyl provides a finish more durable than paint and obviates the need for frequent re-finishing. It enhances the non-institutional atmosphere of the building and provides floor-to-ceiling, wall-to-wall tack space.

Haydon Elementary School was open for the first part of school in the fall of 1979. Through careful planning, it is a highly efficient use of space. Among the 12 elementary schools built in Virginia in 1978-1979, the floor area per student of Haydon was the lowest in the state. Couple this fact with a square footage cost below the prevailing state average and you have a truly economical building.

L. F. Jennings, Inc., of Falls Church was general contractor for the project.

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Big-A-Equipment, Inc., Sterling, excavating; Superior Paving Corp., Centreville, paving contractor; H & R Fabricators, Inc., Stevens City, steel supplier; G & H Steel Erectors, Middletown, MD, steel erection; Acme Iron Works, Inc., Bethesda, MD, miscellaneous metal; Miller Manufacturing Co., Inc., Richmond, millwork & windows; Wilmar Contractors, Inc., Vienna, caulking, painting contractor, special wall finish & wall covering; and Orndorff & Spaid, Inc., Beltsville, MD, built-up roof & sheet metal.

Also, Davenport Insulation, Inc., Springfield, VA, of wall/foundation insulation; A-1 Glass Co., Inc., Manassas, glass, glazing contractor & storefront; American Steel Products, Corp., Farmingdale, NY, metal doors and frames; Yeatman Architectural Hardware, Clinton, MD, hardware supplier; Dodd Bros., Inc., Falls Church, plaster contractor; United States Tile & Marble Co., Inc., Washington, DC, ceramic tile; Acoustical Ceilings, Inc., Merrifield, acoustical treatment; Fairfax Tile & Linoleum Co., Inc., Alexandria, resilient tile; Miller & Rhoads, Richmond, carpet; F. W. Harris, Inc., Annandale, plumbing/heating/ventilating/air conditioning contractor; J. D. Conti Electric Co., Inc., Weems, electrical contractor; and Varco-Pruden Steel Co., Winston-Salem, NC, pre-engineered building.



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Tidewater Chapter . . .

(From page 17)

the American Red Cross and the Eastern Virginia Medical Authority.

W. B. Meredith II, Inc. of Norfolk was general contractor and handled clearing, demolition, earthwork, site drainage and cast-in-place concrete.

Subcontractors & Suppliers
(Norfolk firms unless noted)

E. B. Sams Co., Inc., site utilities & plumbing;
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Company, Inc., soil poisoning; Ames & Web Inc., pavements; Hall-Hodges Co., Inc., concrete reinforcing; Lone Star Industries, Inc., cast stone; Snow Jr., and King, Inc., masonry (including stone erection); Walker & Laberge Co., Inc., aluminum doors & frames, special doors & glazing; Howard Marquart & Co., Ware aluminum windows & entry mats; Door Engineering Corp., folding partitions, fire extinguishers, toilet accessories, flag poles & projection screen; Montgomery Doors, Inc., rolling metal doors; dock bumpers; Seaboard Building Supply Co., door hardware & toilet partitions; John Bros. lath & plastering; Jayen Tile Corp., tile, stone, resilient floor; Ferrell Linoleum and Tile Co., Inc., acoustical ceiling; E. Caligari & Son, Inc., painting & finishing; Taylor-Parker Co., Inc., lockers; Matthews Painting & Drywall Co., demountable partitions; Dover Elevator Co., elevators; and Continental Contracting, Inc., electrical.

Others were: Welch Pile Driving Corp., Va. Beach, pile foundations; Coleman-Deese Industries, Inc., Creedmore, NC, structural & miscellaneous metals; Guille Steel Products Co., Inc., Va. Beach, steel joist & metal deck; Weaver Brothers, Inc., Newport News, carpentry & millwork (including wood doors); Atlantic Roofing Service, Inc., Chesapeake, roofing & sheet metal; Herrin Brothers Erection Co., Portsmouth, caulking; Architectural Products of Virginia, Va. Beach, hollow metal; Cherry Rug Co., Portsmouth, carpet; Roanoke Engineering Sales Co., Inc., Roanoke, pegboards; and Sheet Metal Specialty Co., Va. Beach, HVAC.

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Museum Building

(From page 27)

ted on the Virginia Historic Landmarks Register. The original survey of 650 acres known as Crab Apple Orchard Tract was surveyed in 1750 by Thomas Lewis for John Shelton, father-in-law of Patrick Henry. Indian artifacts, found within the last decade, have given proof of the existence of Indians in this area as early as 900 to 1000 A.D. The Pioneer Park spreading over 5.3 acres contains restored log structures depicting the log architecture of the pioneers of Tazewell County. The exterior of the Museum has been designed to blend with the original structures and the double barn style contributes to the atmosphere of the rustic log buildings without overpowering them.

In designing the Museum, the architect considered conveniences for the handicapped as well as children of all ages. School classes and families are major groups attracted by the pioneer style and Indian villages; therefore, aspects of the Museum must be geared toward the younger audience. The Audio-visual facilities were designed to aid in the learning experience of visiting school children; however, the Audio-visual room is versatile in that the seating can be removed for conference meetings or for additional exhibit space as needed. The flexibility of the display room allows ease of mobility and alteration to the existing and future exhibits and displays. A raised wooden floor was designed for the display area to aid in the flexibility of this space by allowing changes and additions in the electrical supply when needed.

One of the main considerations in the basic design process was the energy conservation system utilized. Due to the 24-hour temperature and humidity control required for the preservation of the artifacts, a process of layering using exterior, interior, and insulation materials complements the energy conservation system. The requirement of minimum heat loss has necessitated the minimum usage of windows and an air lock at each entrance.

The Museum building has already stimulated community interest by involving area residents in a successful fund raising drive to enable future construction. Additional funding for exhibits and contributions of historical artifacts is still needed. Any individual wishing to contribute to the Museum may contact Historic Crab Apple Orchard Museum and Pioneer Park, Inc. in Tazewell, Virginia.

Trion Construction Company of Princeton, West Virginia is general contractor.

Subcontractors & Suppliers
Valley Steel Corp., Salem, reinforcing; Al-Steel Fabricators, Inc., Roanoke, steel supplier; City Lumber Co., Knoxville, TN, millwork; John H. Hampshire, Inc., Roanoke, acoustical treatment; Clendel White, Lerona, WV, plumbing contractor; Hooten Equipment Co., Princeton, WV, heating/ventilating/air conditioning contractor; Allied Refrigeration, Bluefield, WV, electrical contractor; and W. W. Nash & Sons, Inc., Richmond, fireproofing.

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Building Energy Performance Standards

(From page 5)

terms, the design energy consumption of a new building must not exceed the design energy budget.

The proposed standards also discuss a procedure for submitting another calculation method considered as an Alternate Evaluation Technique. Also, as stipulated in the Act, states will be required to develop, certify and submit a plan of compliance which may include one or more of several alternate compliance approaches. State and local officials will, no doubt, be particularly concerned with the manner in which equivalency is determined since many indications point toward the desirability of alternative compliance.

As might be expected, such a far-reaching and complicated (and incomplete according to some critics) proposal as BEPS has not come upon us without considerable controversy. One of the major criticisms deals with the timing of the whole program. Within six months of its final publication (this period may be extended six months), the states will be forced to comply or face cut-off of federal funding. In his comments, Hugh McMillan, Jr., ASHRAE President stated, "While we have not had time to make a detailed analysis of the proposed standards, we are disappointed with what we saw during a quick review. The same problems, which have persisted since this project began, remain; excessively complex procedures, great difficulty of enforcement, and perhaps most important, a doubtful research basis on which the whole structure apparently rests."

ASHRAE officials are convinced that if DOE properly applied ASHRAE Standard 90, an equal or greater amount of energy could be saved. They feel that four years experience with Standard 90 make it a more viable method than the new, untried, untested, and perhaps unworkable BEPS. Design professionals have criticized the economic analysis of BEPS for understating the standard's real economic impact. Officials of the National Association of Home Builders, although publicly and firmly committed to the goal of energy conservation, have indicated grave concerns that the energy saved by the new standards may not be justified by the added expense.

Many other questions remain unanswered: Will the BEPS provide optional prescriptive based compliance paths for designers, builders or owners?; will DOE provide a manual of accepted practice to aid those engaged in light construction?; how soon can DOE conduct training and orientation programs to aid state and local officials in implementation and can such training be accomplished in all of the states in time to meet the proposed implementation schedule?; and can DOE make financial assistance available in excess of the miniscule amounts originally authorized?

If, as mentioned earlier, the projected effective date of the Building Energy Performance Standards in early 1980 is met, that will mean all 50 states will have to be in compliance within six months or face sanctions. Since, at this point, it appears likely the process will go forward as scheduled or be only slightly altered by DOE (after all, this is an election year), the Development Industry appears headed toward the beginning of a new chapter in its history.

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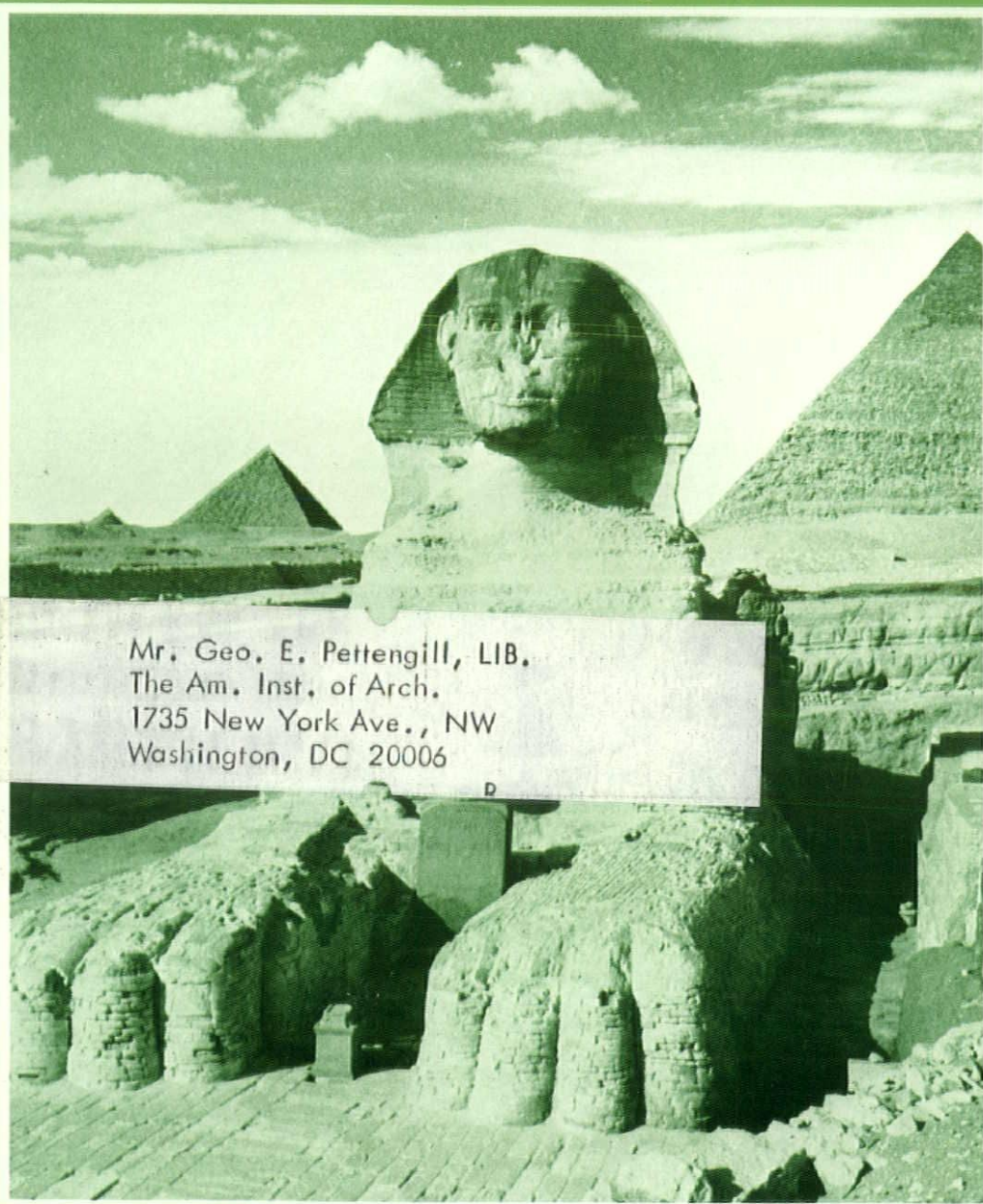
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