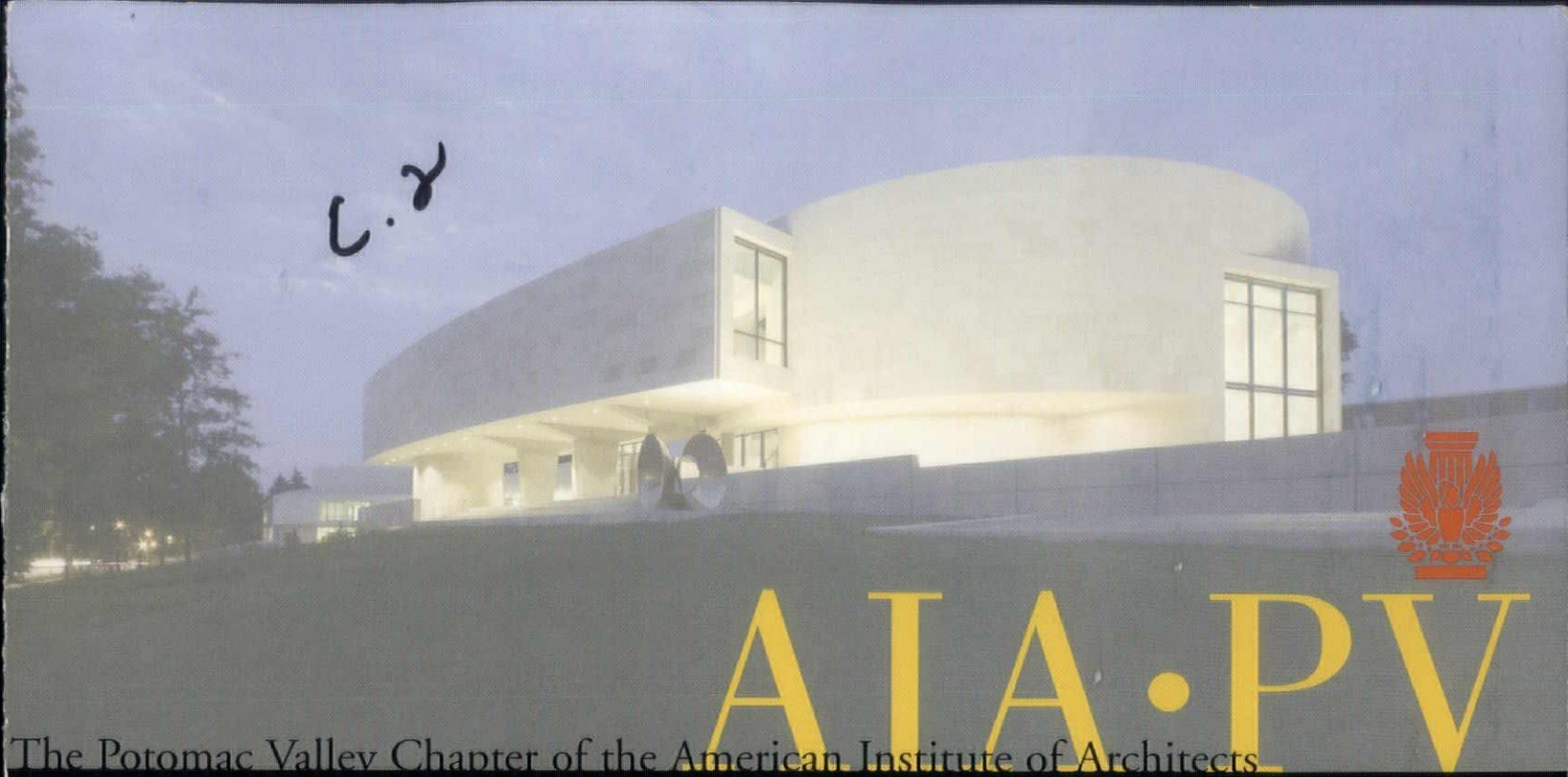
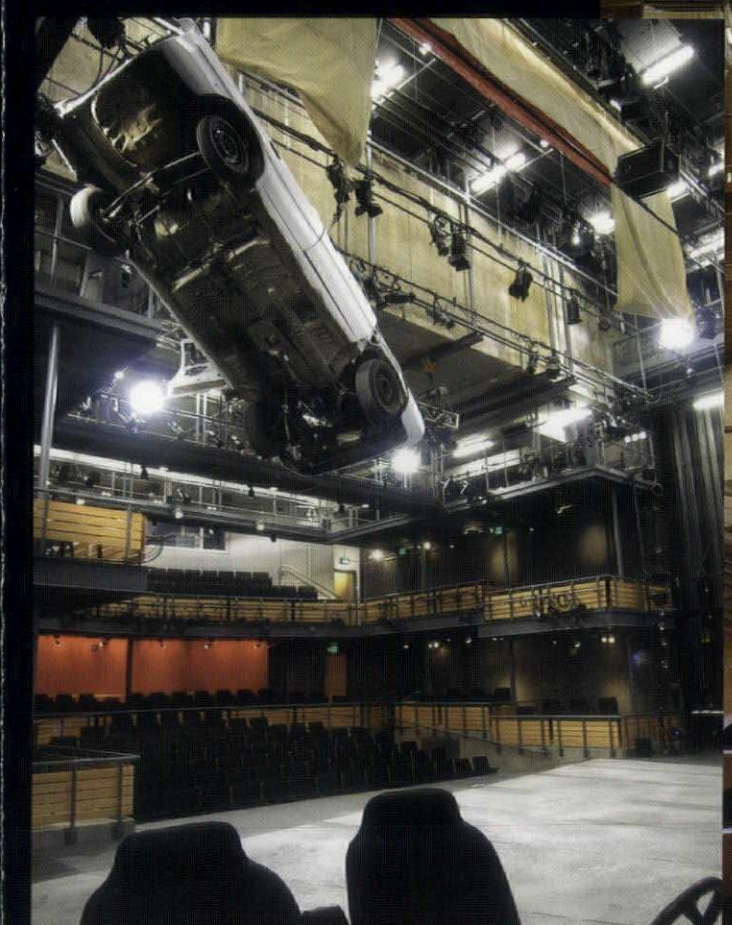
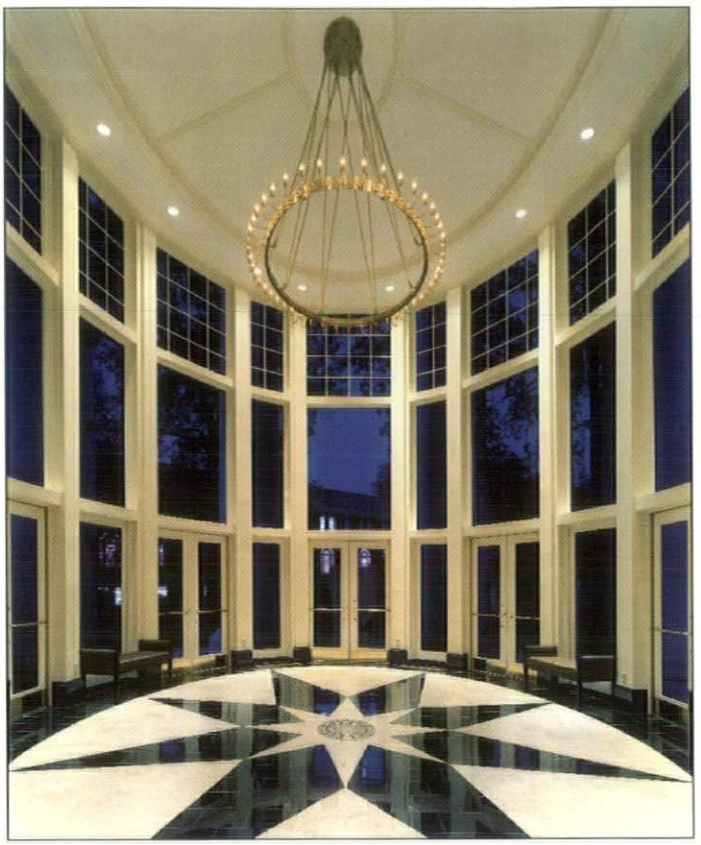


AIA·PV

The Potomac Valley Chapter of the American Institute of Architects

2006





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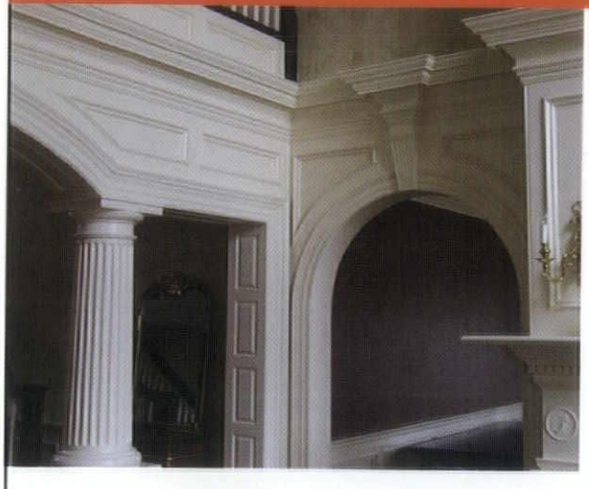

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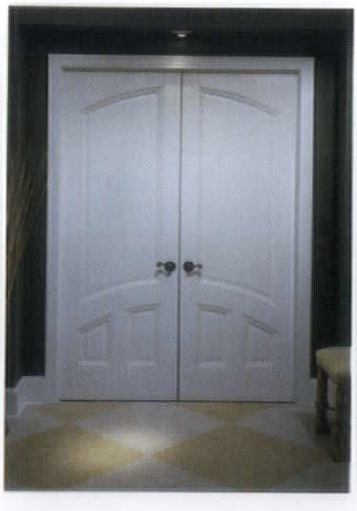

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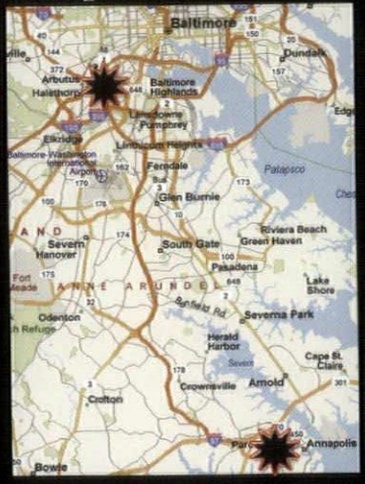

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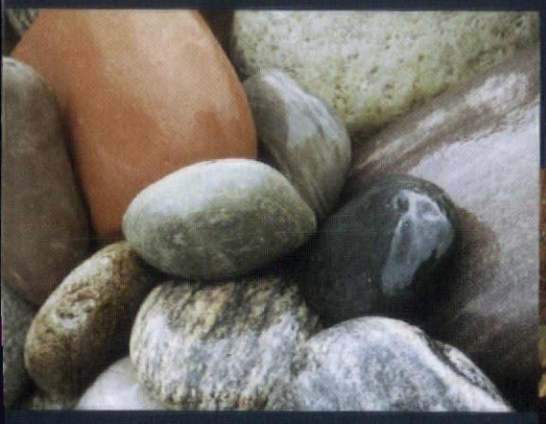

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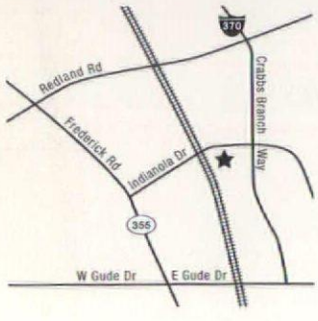

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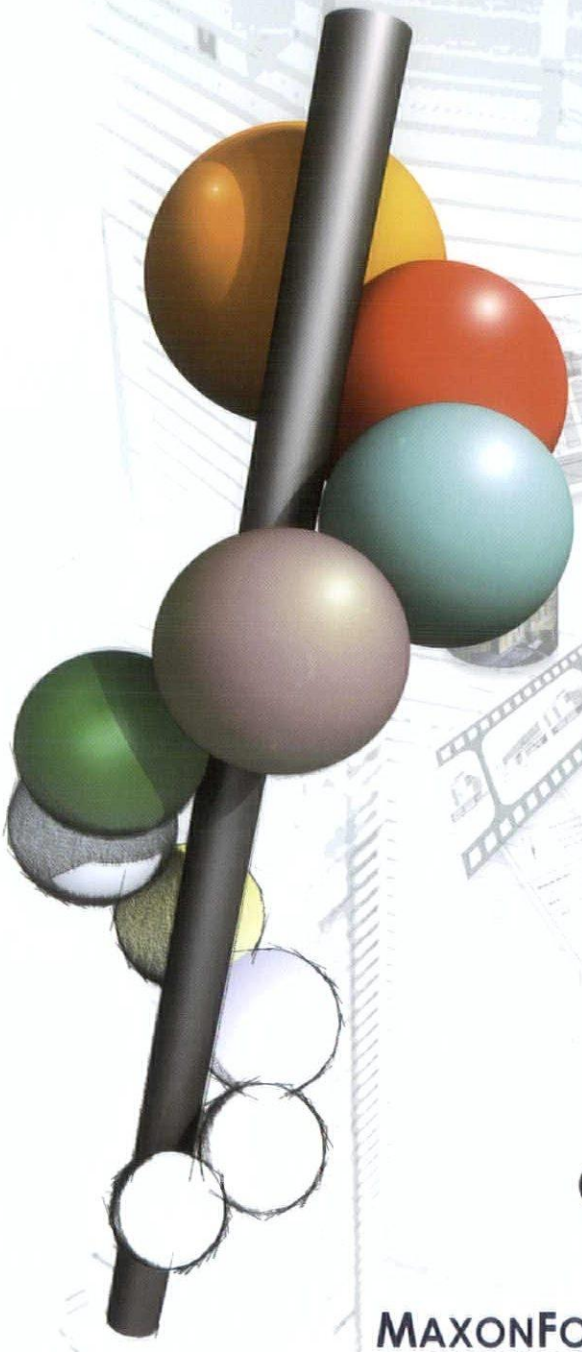

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AIA·PV Celebrates Architecture 2006

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Table of Contents

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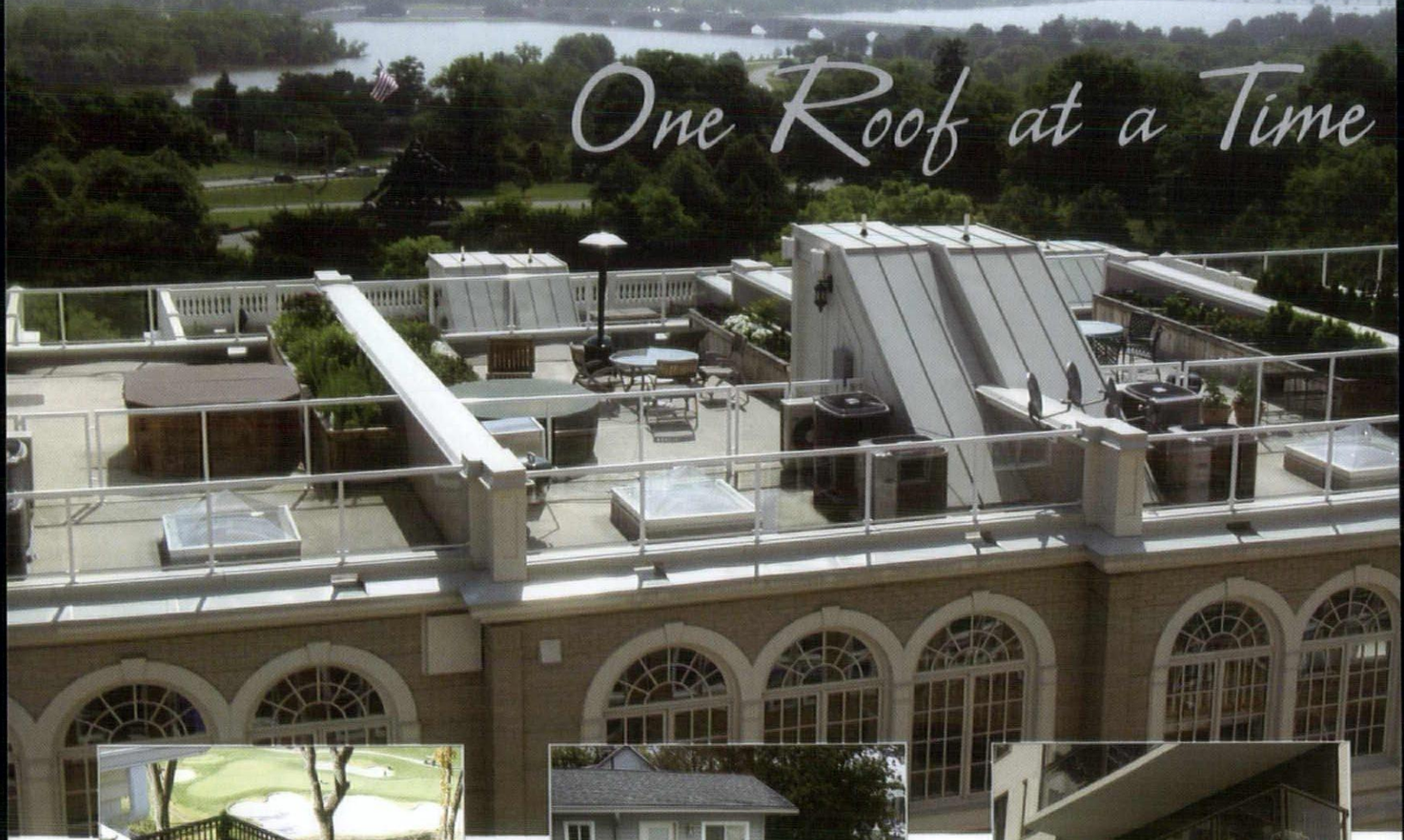

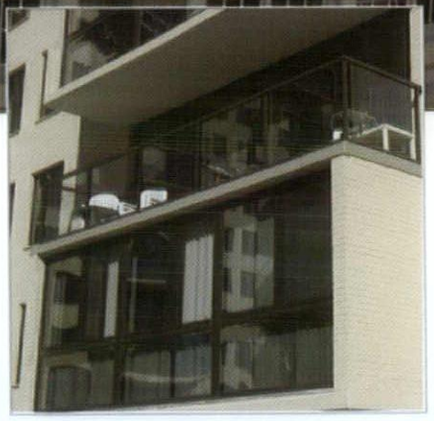

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In 2005, the chapter celebrated its 50th anniversary. We begin the next 50 years with optimism and excitement. We may in fact be seeing evidence of a "tipping point" as Malcolm Gladwell writes in his bestselling book. Design matters. Quality matters. Beauty matters.

The AIAPV chapter, along with AIADC, conducted the second annual Design DC conference where architects, professional affiliates, and educators came together to exchange ideas, technology, and fellowship. This alternative to the AIA national convention is one of the most important services we provide to our membership.

Our first ever "Architecture Week," highlighted by the awards banquet, was a great success. In this issue of the AIAPV magazine, we once again celebrate the work of our member architecture firms from both the 2005 AIAPV Chapter Awards, and the 2005 AIAMD Awards.

INTRODUCTION

In this issue we include some carry over from our 50 year anniversary including the 25 year building award and a timely article about the modern movement in Maryland by two University of Maryland professors. We invite you to discover the beauty of architecture as it is represented in these pages.

The Board of Directors, Potomac Valley Chapter
American Institute of Architects

"The longer I live the more beautiful life becomes. If you foolishly ignore beauty, you will soon find yourself without it. Your life will be impoverished. But if you invest in beauty, it will remain with you all the days of your life."

- Frank Lloyd Wright

AIA

Music Center at Strathmore

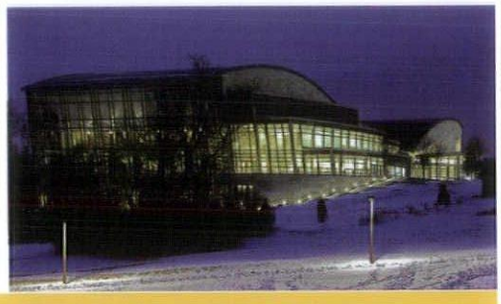
LOCATION
North Bethesda, Maryland

ARCHITECT
William Rawn Associates, Architects with
Grim + Parker Architects

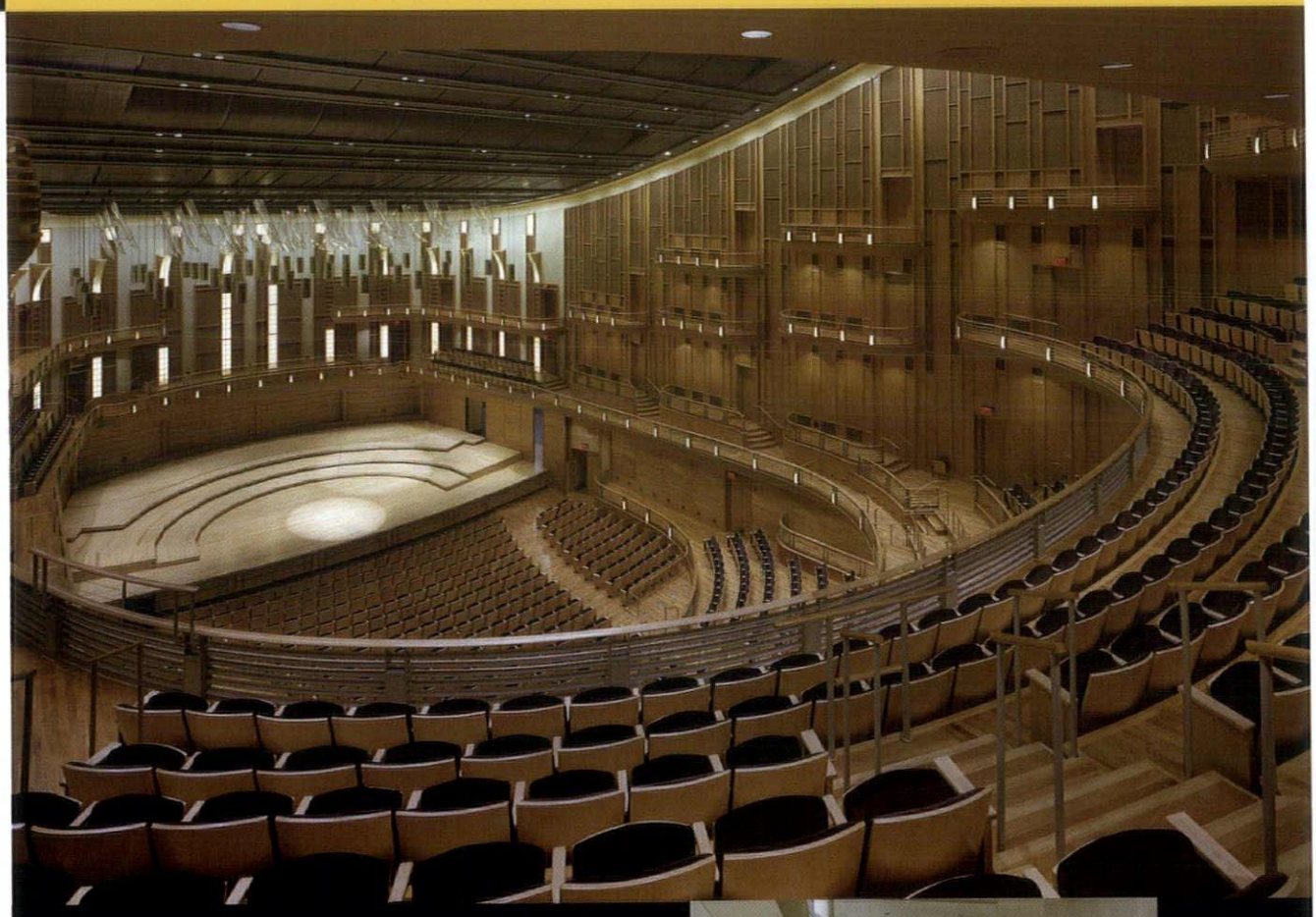
CLIENT
Montgomery County

PHOTOGRAPHERS
Alan Karchmer
Ken Wyner
Ron Solomon

CONTRACTOR
Clarke Construction Group, LLC



2005 MS AIA HONOR AWARD



This building was additionally recognized with a Citation Award from the AIAPV 2005 Design Awards Program

The Stewart's Building

LOCATION
Baltimore, Maryland

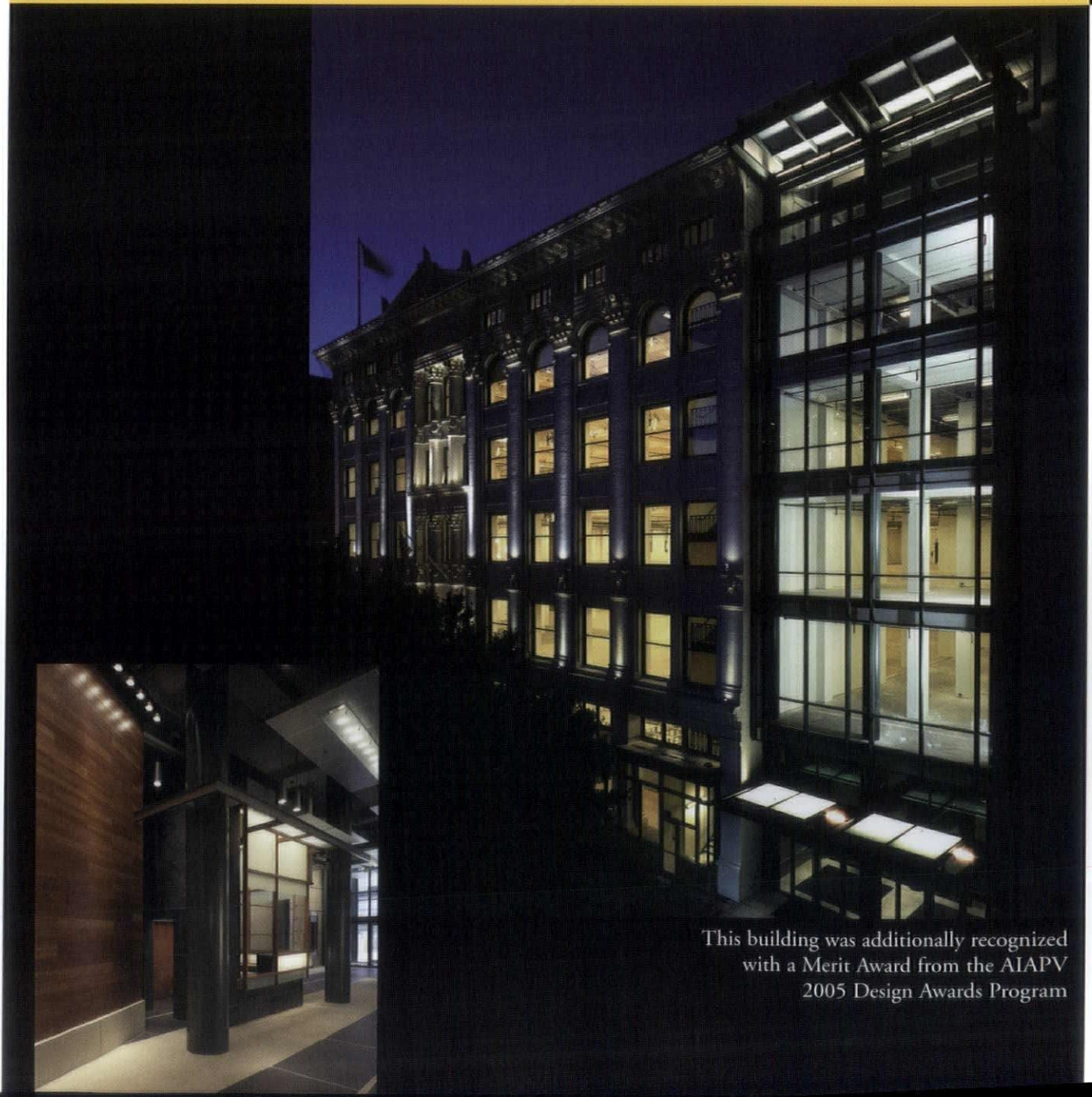
ARCHITECT
Design Collective, Inc.

CLIENT
The Harry and Jeanette Weinberg Foundation

PHOTOGRAPHERS
Anne Gummerson
Bob Creamer

CONTRACTOR
The Whiting-Turner Contracting Company

2005 MS AIA HONOR AWARD



This building was additionally recognized with a Merit Award from the AIAPV 2005 Design Awards Program

The Breer Residence

LOCATION
Washington, DC

ARCHITECT
Muse Architects, PC

CLIENT
Name Withheld

PHOTOGRAPHER
Maxwell MacKenzie

CONTRACTOR
Peterson & Collins

This building was additionally recognized
with a Honor Award from the AIAPV
2005 Design Awards Program

2005 MS AIA HONOR AWARD

Guest House in Dutchess County

LOCATION
Millbrook, New York

ARCHITECT
Meditch Murphey Architects

CLIENT
Name Withheld

PHOTOGRAPHER
Maxwell MacKenzie

CONTRACTOR
Heitmann & Heitmann

2005 MS AIA MERIT AWARD

Woolly Mammoth Theatre

LOCATION
Washington, DC

ARCHITECT
McInturff Architects

CLIENT
Woolly Mammoth Theatre Company

PHOTOGRAPHER
Alain Jaramillo

CONTRACTOR
Davis Construction

This building was additionally recognized with a Citation Award from the AIAPV 2005 Design Awards Program

Pierce Winter House

LOCATION
Withheld

ARCHITECT
McInturff Architects

CLIENT
Name Withheld

PHOTOGRAPHER
Alain Jaramillo

CONTRACTOR
Evergreen Homes

2005 MS AIA CITATION AWARD

New Edwards T. Lewis Residence Hall

LOCATION
St. Mary's City, Maryland

ARCHITECT
Muse Architects, PC

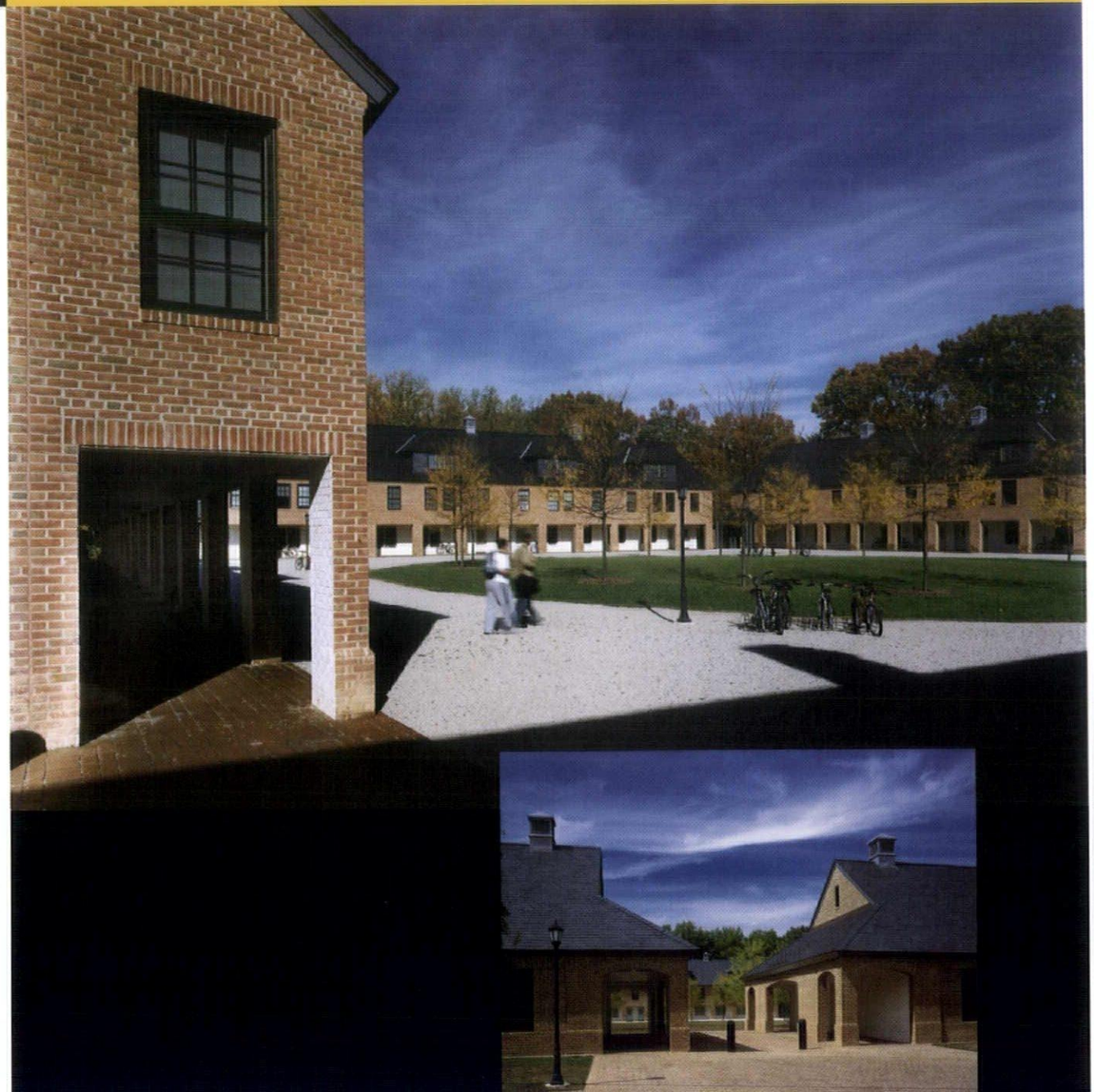
CLIENT
St. Mary's College

DESIGN TEAM

CONSULTANTS
Civil:
Stuuctural:
MEP:

CONTRACTOR:

2005 MS AIA CITATION AWARD



THE ALLIED ARTS were well represented in this year's AIAPV Design Awards. An art gallery and two performing art centers and a renovation to an historic theatre garnered top awards. There is a nice serendipity to this. As architects we like to think of ourselves as being connected to the arts. Many of our members paint, sculpt, dance, and play instruments. For those of us who have not forgotten the pleasures of drawing, sketching, doodling with pen and pencil, the connection to fine art will always be strong. We have in the Washington DC area a wonderful network of public and private galleries to inspire us in our work. And what great work it is!

As usual, this year's awards program celebrates the very best from our members in projects ranging from single family dwellings to science centers, to academic buildings, offices, housing, and religious centers.

Architecture has a profound effect on our society. Most of our waking hours are spent in some kind of building. We sleep in buildings, eat in buildings, work, learn, play and pray in buildings. The quality of our life can be measured in part by the quality of our built environment. Buildings form a significant part of our world. As architects, we endeavor to create buildings that delight the senses, nourish the spirit, and provide some comfort. It is this endeavor that we celebrate here.

The Board of Directors, Potomac Valley Chapter
American Institute of Architects

AIA

The Katzen Arts Center

LOCATION
Washington, DC

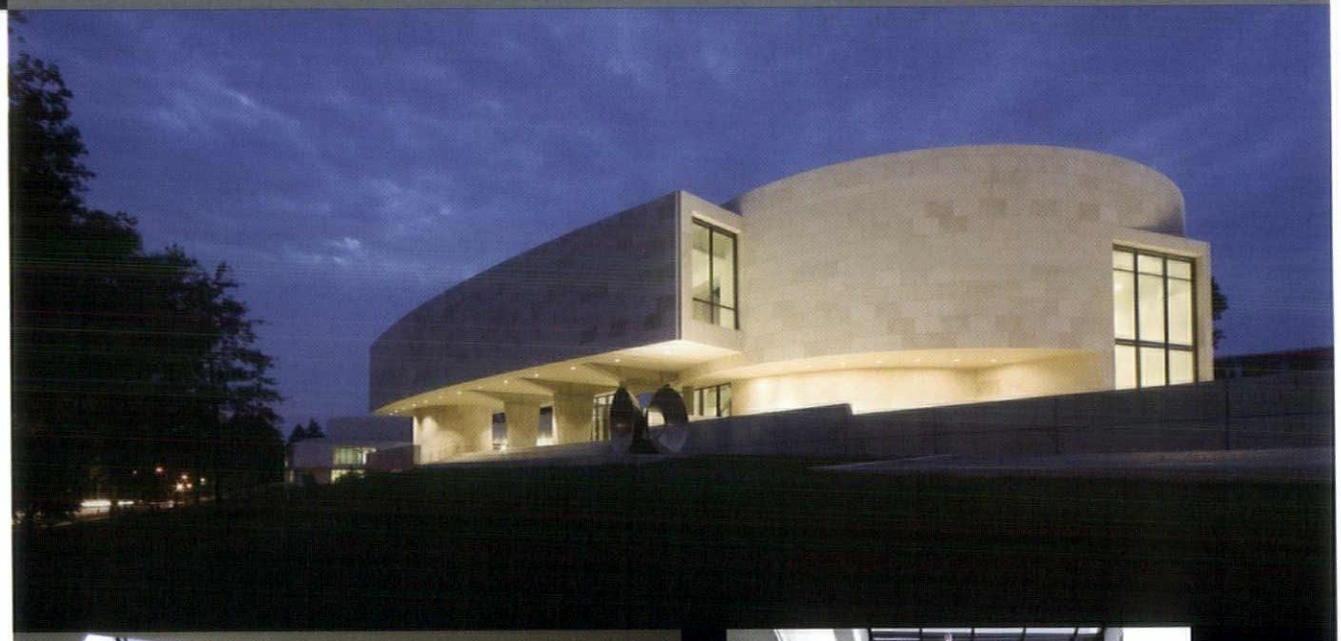
ARCHITECT
Einhorn Yaffee Prescott Architecture and Engineering, PC

CLIENT
American University

PHOTOGRAPHER
Peter Aaron/Esto

CONTRACTOR
Holder Construction Company

2005 AIA·PV GRAND HONOR AWARD



Baltimore Visitor Center

LOCATION
Baltimore, Maryland

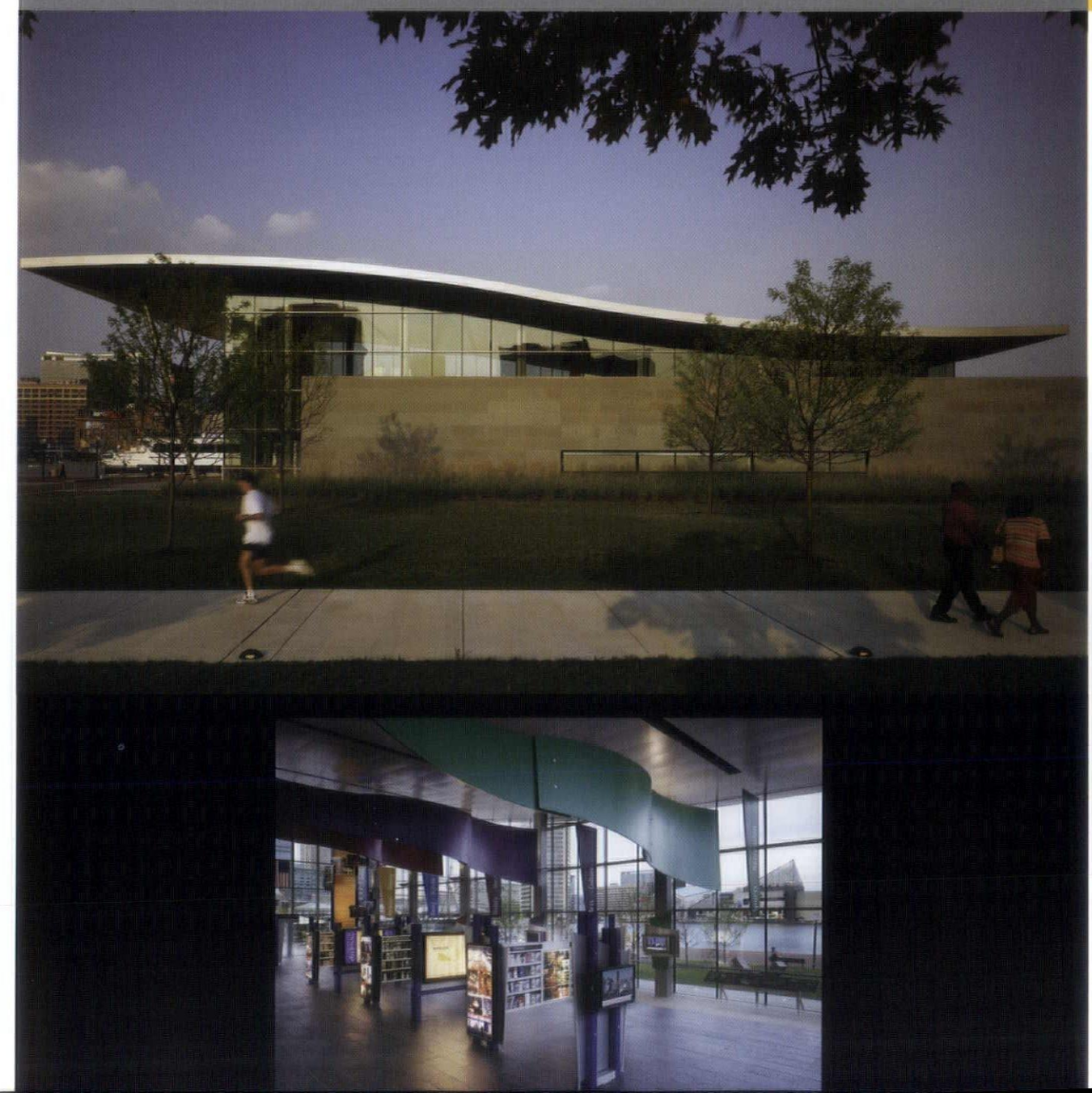
ARCHITECT
Design Collective, Inc.

CLIENT
City of Baltimore

PHOTOGRAPHERS
Prakash Patel
Michael Dersin
Ron Solomon
Bob Creamer

CONTRACTOR
Roy Kirby & Sons, Inc.

2005 AIA·PV HONOR AWARD



The Commons at UMBC

LOCATION
Baltimore, MAryland

ARCHITECT
Design Collective, Inc.

CLIENT
University of Maryland, Baltimore Campus

PHOTOGRAPHERS
Anne Gummerson
Ron Solomon
Bob Creamer

CONTRACTOR
Barton-Malow Company/Essex Construction

Maryland Science Center Addition

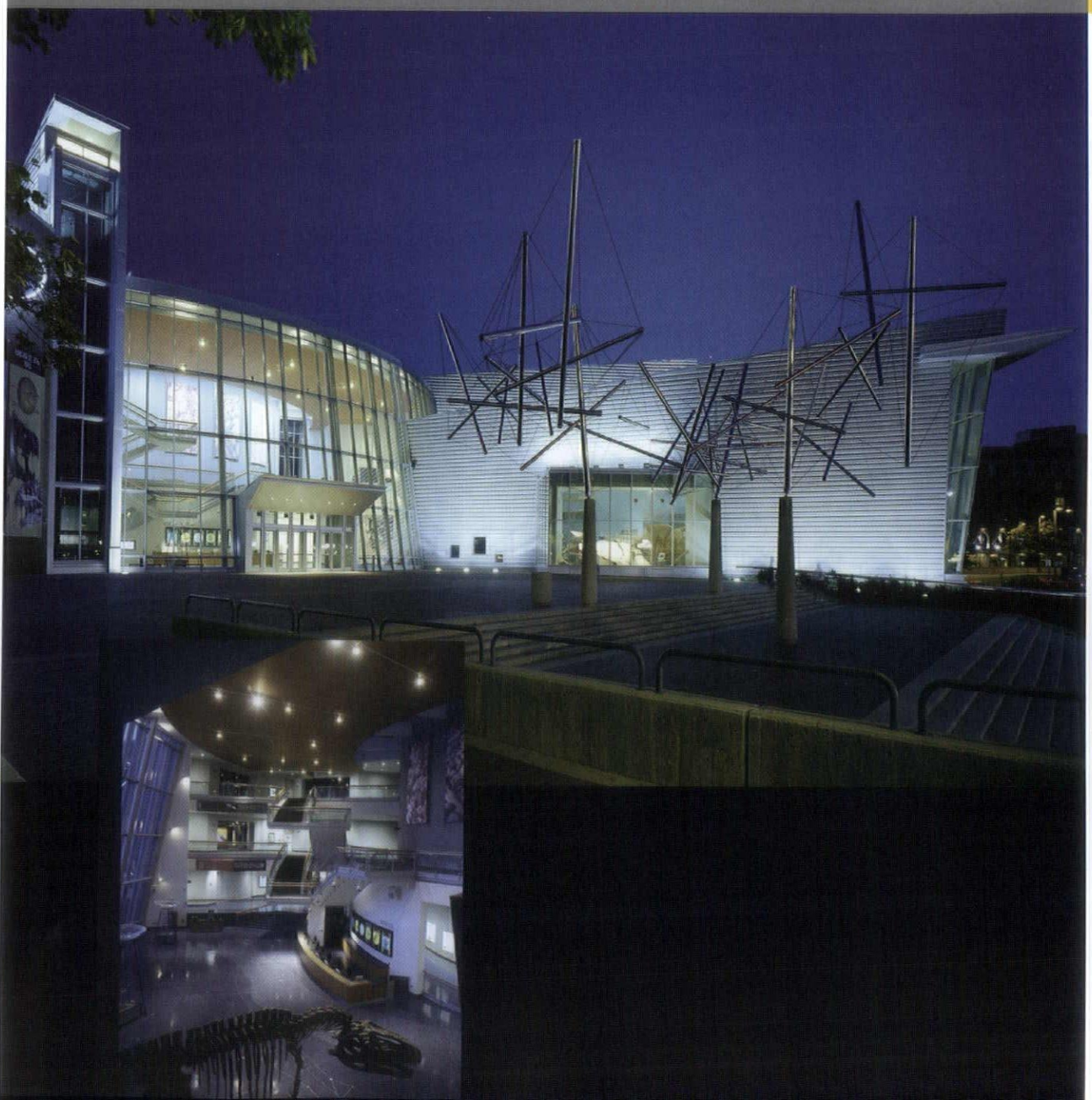
LOCATION
Baltimore, Maryland

ARCHITECT
Design Collective, Inc.
CLIENT
City of Baltimore

PHOTOGRAPHERS
Michael Dersin
Bob Creamer

CONTRACTOR
The Whiting -Turner Contracting Company

2005 AIA·PV MERIT AWARD



Jones Residence

LOCATION
Washington, DC

ARCHITECT
McInturff Architects

CLIENT
Name Withheld

PHOTOGRAPHER
Julia Heine

CONTRACTOR
Renovations Unlimited

2005 AIA·PV MERIT AWARD

Randecker House

LOCATION
Vienna, Virginia

ARCHITECT
McInturff Architects

CLIENT
Name Withheld

PHOTOGRAPHER
Julia Heine

CONTRACTOR
MT Puskar Construction

2005 AIA·PV MERIT AWARD

The Avalon Theatre

LOCATION
Washington, DC

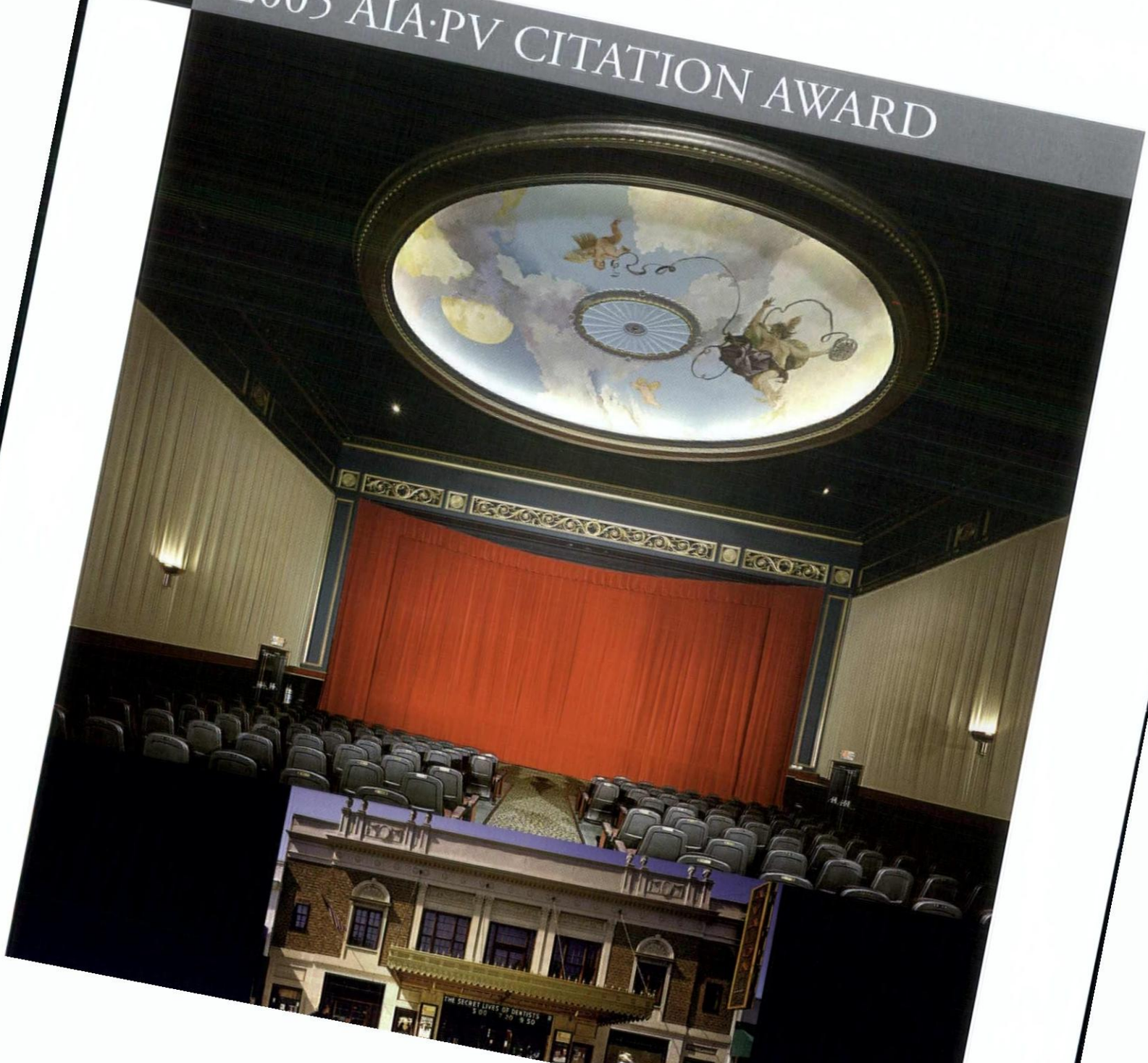
ARCHITECT
GTM Architects, Inc.

CLIENT
Name Withheld

PHOTOGRAPHER
Ken Wyner

CONTRACTOR
James G. Davis Constructioni

2005 AIA·PV CITATION AWARD



EYA Urban Properties

LOCATION
Washington, DC

ARCHITECT
GTM Architects, Inc.

CLIENT
EYA Urban Properties

PHOTOGRAPHER
Ken Wyner

CONTRACTOR
Caliber Construction

2005 AIA·PV CITATION AWARD

Adams Row

LOCATION
Washington, DC

ARCHITECT
Hickok Warner Cole Architects

CLIENT
Name Withheld

PHOTOGRAPHER
Prakash Patel

CONTRACTOR
PN Hoffman Construction Development

Ecevit Residence

LOCATION
Potomac, Maryland

ARCHITECT
McInturff Architects

CLIENT
Name Withheld

PHOTOGRAPHER
Julia Heine

CONTRACTOR
Wood Visions Construction

2005 AIA·PV CITATION AWARD

New Covenant Hall

LOCATION
Bethesda, Maryland

ARCHITECT
Muse Architects

CLIENT
Name Withheld

PHOTOGRAPHER
Alan Karchmer

CONTRACTOR
The Whiting-Turner Contracting Company

Guard/McGrath Addition

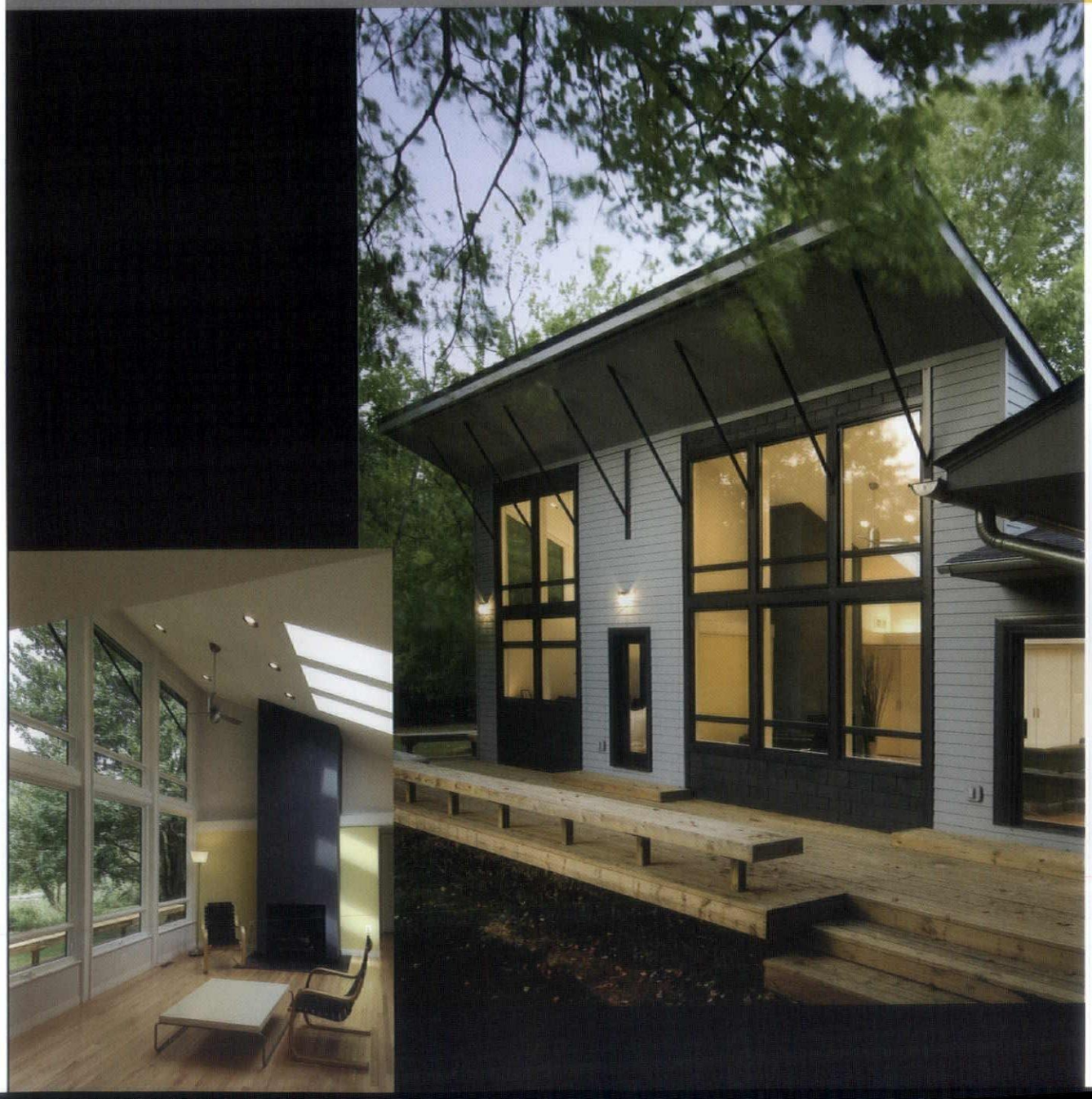
LOCATION
Churchton, Maryland

ARCHITECT
Uekman / Architects LLC

CLIENT
Name Withheld

PHOTOGRAPHER
Paul Burk Photography

CONTRACTOR
David Van Zant



Ashton Heights Residence

LOCATION
Arlington, Virginia

ARCHITECT
Wiedermann Architects, LLC

CLIENT
Name Withheld

PHOTOGRAPHER
Anice Hoachlander

CONTRACTOR
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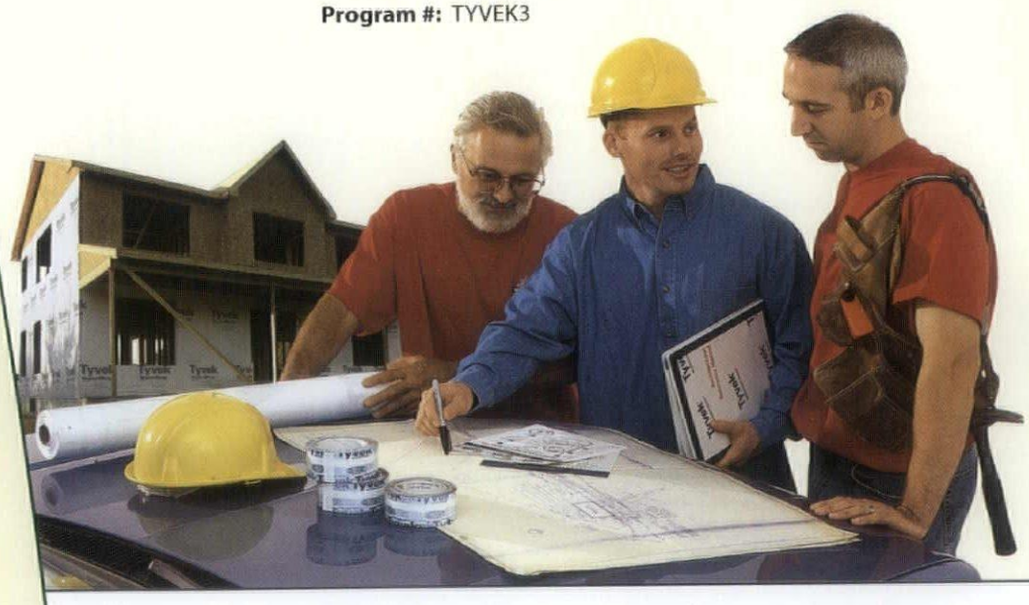

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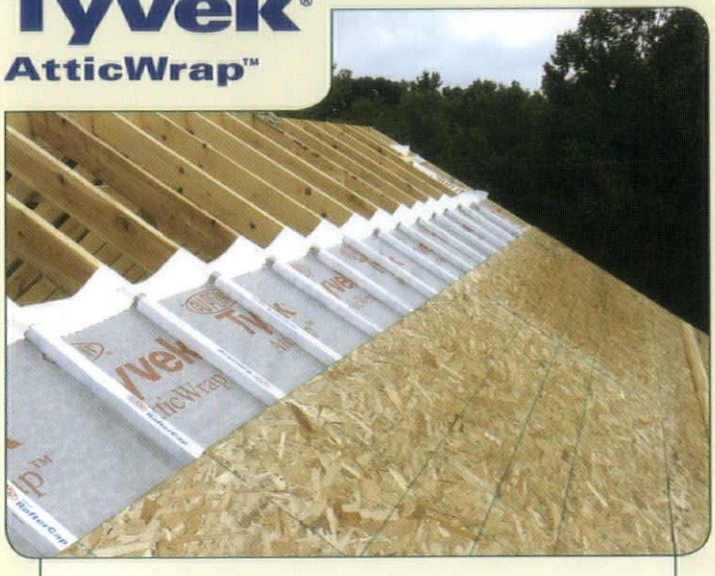

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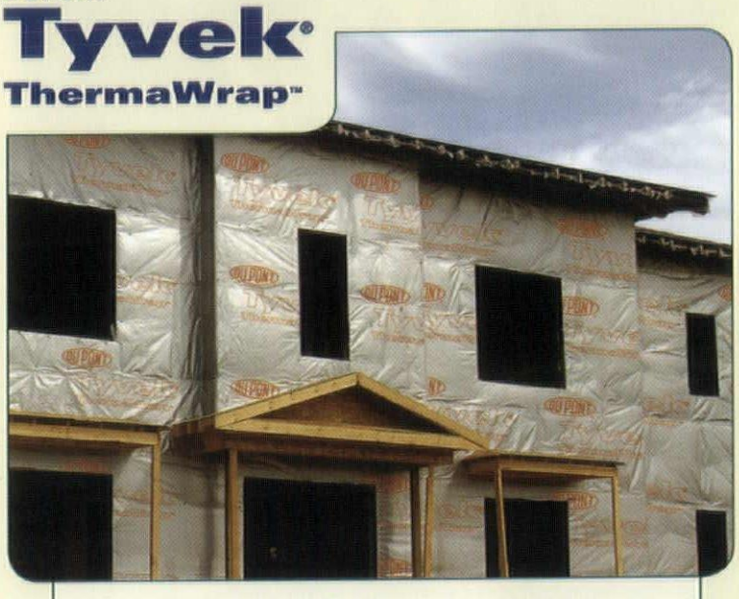

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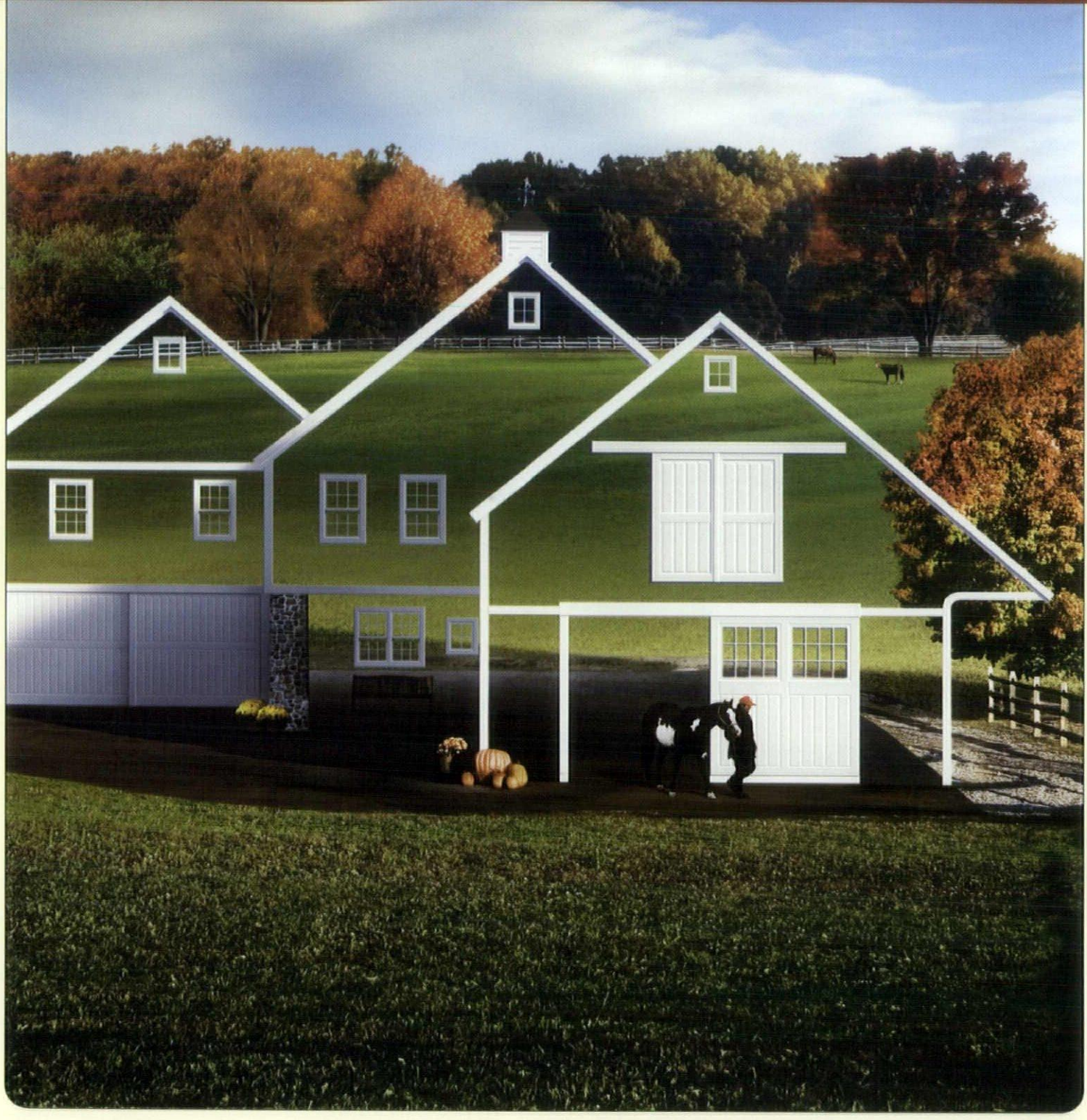

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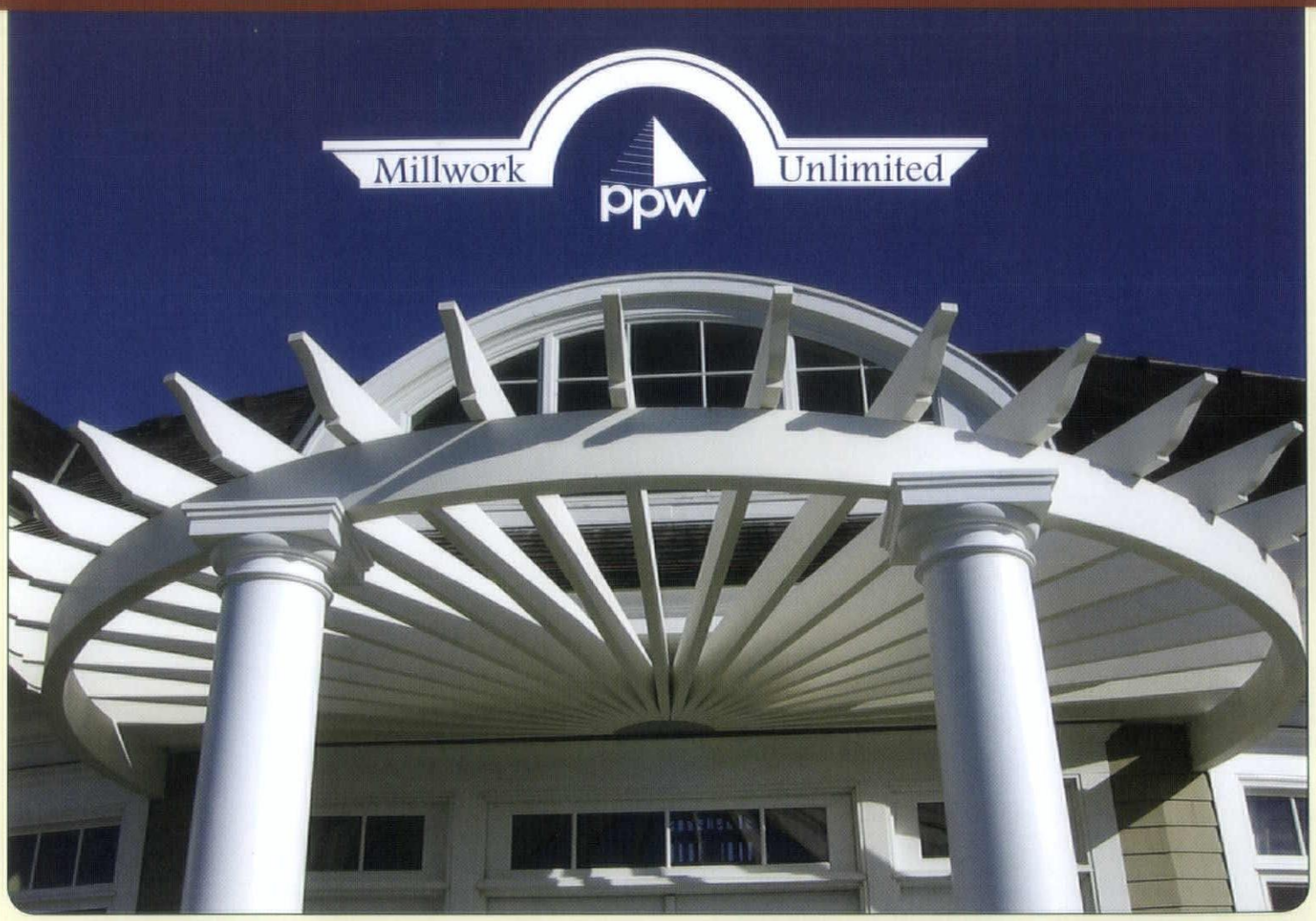

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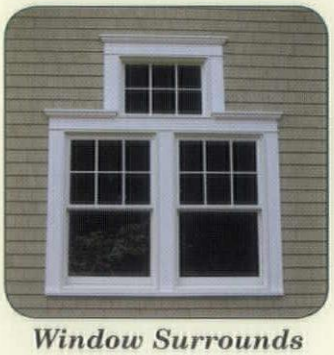

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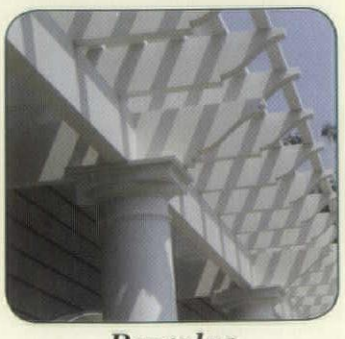

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Editor's Note: This speech was presented at the 2005 MSAIA Annual Meeting.

Reflections on Architecture 40 Years Ago

Ralph Bennett, AIA

This is a great moment - when we celebrate our best work. The objects of this celebration along with their architects will become part of the history of this Chapter in its 50th year.

A month ago, I was invited to say a few words about our profession in the birth year of AIA Maryland. I jumped at the chance because it gave me an excuse to look again at the landscape of the profession when I was a year away from finishing graduate school. For those of you who heard that talk - this is largely a reprise to which I have added a few items about our Chapter. I appreciate your indulgence - this may also be a good time for a restroom break.

In 1965, the country was still rebounding from the assassination of President Kennedy and the election of his vice President Lyndon Johnson to his own presidency. In this, LBJ's first year in office, he issued a statement in which he saw three changing forces which would influence the United States: growing population, the triumphs of technology and urbanization. He pledged to protect the environment from waste, prevent urbanization from "ravaging the land" (his words) and he committed to natural conservation on a global scale. The AIA endorsed the statement. How prescient. How radical. How unlikely today.

One way to look at the year is to check the AIA Journal - then an independent publication - remember? Sad to say, the Maryland Society's founding escaped the Journal's attention, but then, they didn't spend much time on Chapter affairs, except to note design awards. While there is no record of Maryland Society awards that year, the Potomac Valley Chapter noted the results of its 5th Biennial awards program, chaired by Edward Ball.

The chapter gave its highest awards to four projects, with Hugh Newell Jacobsen's Naftalin House in Edgewater first among equals - it's the house with the hat - remember. The jury consisted of Francis Taliaferro (called Toliver at College Park) of RTKL, Charles Burchard, Dean at VPI and Karel Yasko of GSA. Their other selections were a simple, modern house in Brookeville by Harold Esten, a Miesian apartment building on Massachusetts Avenue by Cooper and Auerbach, the Headquarters of the National Sand and Gravel Association and the National Ready Mix Concrete Association by John Henry Sullivan (I don't need to tell you what material the building was made of) and Holy Cross Hospital in Silver Spring by Faulkner, Kingsbury and Stenhouse - now disappearing under new layers of construction.

The Baltimore Chapter's awards didn't appear, but a Baltimore architect did. The National AIA Honor Awards jury included Charles Nes along with Nathaniel Owings and Philip Johnson. They named buildings which have worn well - at the convention held in Washington in June, they gave honor awards to Jose Luis Sert's Married Student Dormitories beside the Charles River in Cambridge - a really important and still teachable building for me. I.M.Pei's Newhouse School of Journalism at Syracuse University and Eero Saarinen's John Deere corporate headquarters in Moline - a really elegant riff on rusting steel - remember our infatuation with Cor-Ten?. Roberto Burle Marx got the Fine Arts Medal and Frederick (Fritz) Gutheim, the historian and urbanist from Montgomery County was made an honorary member. And Charlie Nes was elected first vice president and President-elect of the national AIA.

Joe Esherick, Harwell Hamilton Harris, Philip Johnson, Ralph Rapson and Jose Luis Sert all became fellows at that convention.

The AIA seemed impossibly stodgy to us as students. We were interested in hotter items like the Progressive Architecture Design Awards for unbuilt projects. That year, the jury, which included Serge Chermayeff, Edgar Kaufman, Jr., Gyo Obata (of HOK) and Lev Zetlin

(the structural engineer most famous locally for his proposal for a bridge to bring I-83 over the Baltimore inner harbour in Baltimore) gave the First Award to a dormitory project at the University of Rhode Island by Pietro Belluschi, then lately of Baltimore. Among the other awarded projects were The New England Aquarium by Cambridge Seven Associates and Sea Ranch by Moore Lyndon Turnbull and Whittaker.

Although I had been in Germany in the Army from 1962 to 1964, I completely missed the architectural avant garde in Europe. An amazing young visiting student from the Architectural Association in London told me stories about the AA and Team 10 and the Smithsons and Candilis Josic and Woods and ATBAT and the plan for Toulouse le Mirail. Architectural Design became my journal of choice - I still have some of them.

"The AIA seemed impossibly stodgy to us as students. We were interested in hotter items like the Progressive Architecture Design Awards for unbuilt projects."

Technology was king in AD as it was for architects here:
Especially interesting to us were:
- Everything about concrete from precast, to poured in place, or in situ in Britain, beton brut in France
- Neoprene gasketed glazing (single pane, of course)
- Prefabricated fiberglass everythings from bathrooms to housing units
- Mass production of everything from components to housing units

Computers were marginal - Caudill Rowlett and Scott (CRS) were noted that year for developing a program which would provide the optimum height for an office building. Charles Thomson of CRS noted that "It provided information, but did not produce architecture. That's still a job for men." Jonathan Barnett (author and urban designer) asked in an Architectural Record article reporting on a Boston conference, "Will the Computer Change the Practice of Architecture?" The question was not rhetorical - he reported on a demonstration by a Prof. Steven Coons of MIT in which a light sensitive pencil was used to draw on a cathode ray tube. Walter Gropius was quoted as saying that computers were "potential tools to shorten our working process" (right) and that we should keep an open mind about them.

Here are some of the architectural highlights for 1965:
- The AIA Headquarters Competition was won by Aldo Giurgola - the design, of course was never built - that's another story
- 25 year old Moishe Safdie was awarded the commission for Habitat 67 in Montreal
- Alison and Peter Smithson completed the Economist Group - that collection of London buildings whose attraction is still a mystery to me but which received international acclaim
- Hans Scharoun's Berlin Philharmonic was completed - today, it looks contemporary - then it looked just weird
- Jorn Utzon's Sydney Opera House design was being made buildable by Ove Arup's office
- Kenzo Tange had just completed his cable supported National gymnasia in Tokyo and the Yamanashi Broadcasting Center, an icon of the Metabolist movement
- Stirling and Gowan received the R. S. Reynolds Memorial award for the engineering building at Leicester University
- The School Construction Systems Development project produced its first, prototype school with a grant from the Ford Foundation - long span, light steel, flexible, Miesian, perfect
- The German Embassy by Egon Eiermann opened on Foxhall Road in Washington - it blew me away at the time and still does.
- Kallmann and McKinnell's competition-winning Boston City Hall was under construction - my first job was with them.

- The Toronto City Hall by Viljo Revell was dedicated
- The first phase of John Andrews' Scarborough College was completed
- And William Pedersen won the Rome Prize.

Books published in 1965 included:

D'Arcy Thompson's "On Growth and Form"

The 6th Edition of Architectural Graphic Standards

"The View from the Road" by Kevin Lynch and Donald Appleyard

"Campus Planning" by Richard Dober

Architectural Design published an issue called "The Heroic Period of Modern Architecture" which I still prize and Forum, its name shortened from the previously deceased Architectural Forum came to life again for a brief run.

In the Schools,

- Robert Geddes became Dean at Princeton
- Aldo Giurgola became Chair of Architecture at Columbia
- Charles Moore became Dean at Yale
- Pietro Belluschi became Dean at MIT
- John Hejduk began his long run as Dean at Cooper Union
- Don Lyndon became Dean at Oregon
- Alvar Aalto received an honorary degree from Columbia

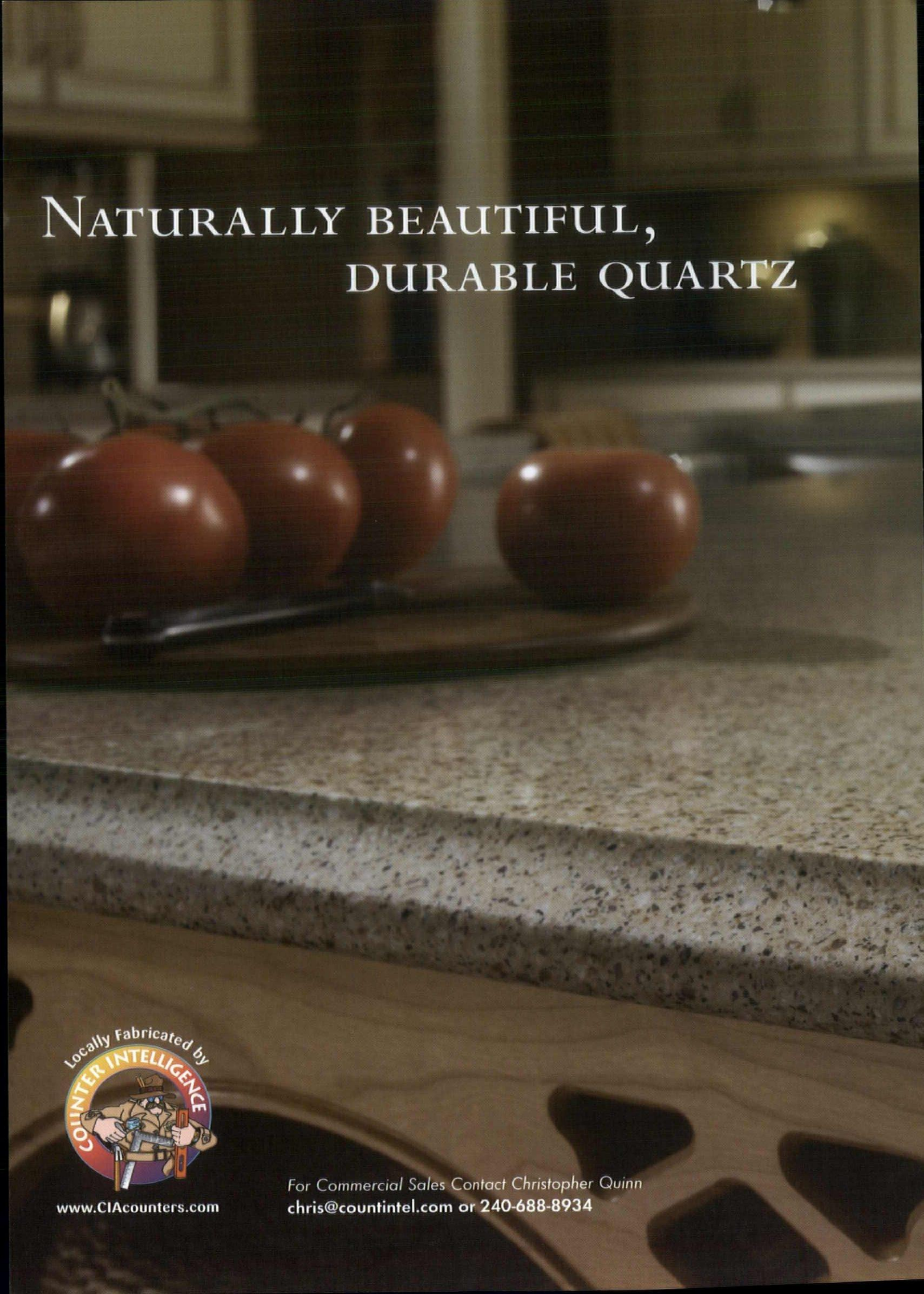
And conversations were underway about a School of Architecture in Maryland. Charles Nes was instrumental in establishing a commission which recommended starting a School in College Park. A number of Baltimore architects including Alex Cochran organized to try to get the School for Baltimore - they failed, of course, but Cochran is credited by founding dean John Hill as a great advocate for the School despite his disappointment. And Charlie Nes got the commission for the building. The firm had just finished the School at Princeton, so it must have been Qualifications Based Selection. That year, Catherine Bauer Wurster, the great advocate for modern housing in America died and le Corbusier died on August 27 at Cap d'Antibes; his capital complex at Chandigarh was nearing completion.

I'll end this with a personal anecdote which will bring us up to date, in a strange kind of way. In 1964, 5 small towns in the San Francisco Bay area combined to become the City of Fremont - then, in area, the second largest city in California. A competition was held in late 1965 to design a Civic Center for the new city. My parents lived in Fremont then, so I entered the competition as my thesis project, using Michael Graves' registration on the condition that I pay his fee that year, which I happily did. I received an honorable mention in the competition which made my thesis jury fairly relaxed. The competition was won by Robert Mittelstadt, a protege of Paul Rudolph, who went on to build the project and found a short lived architecture program at Stanford. This past June, my wife and I returned to Fremont to see the building, but couldn't find it. We went to the big, new public library and I asked a reference librarian who was seated with his back to a large window looking out onto a park with a grassy hill. He said, "See the hill? That's where the civic center was; it was demolished last year." So there you are.

"Your work will become the benchmarks by which our successors in 2045 will remind themselves of the best architecture of 2005."

To reverse the Latin saying "Ars brevis, vita longa" - art is short, but life is long.

But we know better. Art really lives long and life really is short. Thanks very much for letting me review the year of AIA Maryland's birth with you, and congratulations to those of you whose work is recognized in this 50th year of the Potomac Valley Chapter. Your work will become the benchmarks by which our successors in 2045 will remind themselves of the best architecture of 2005. ❐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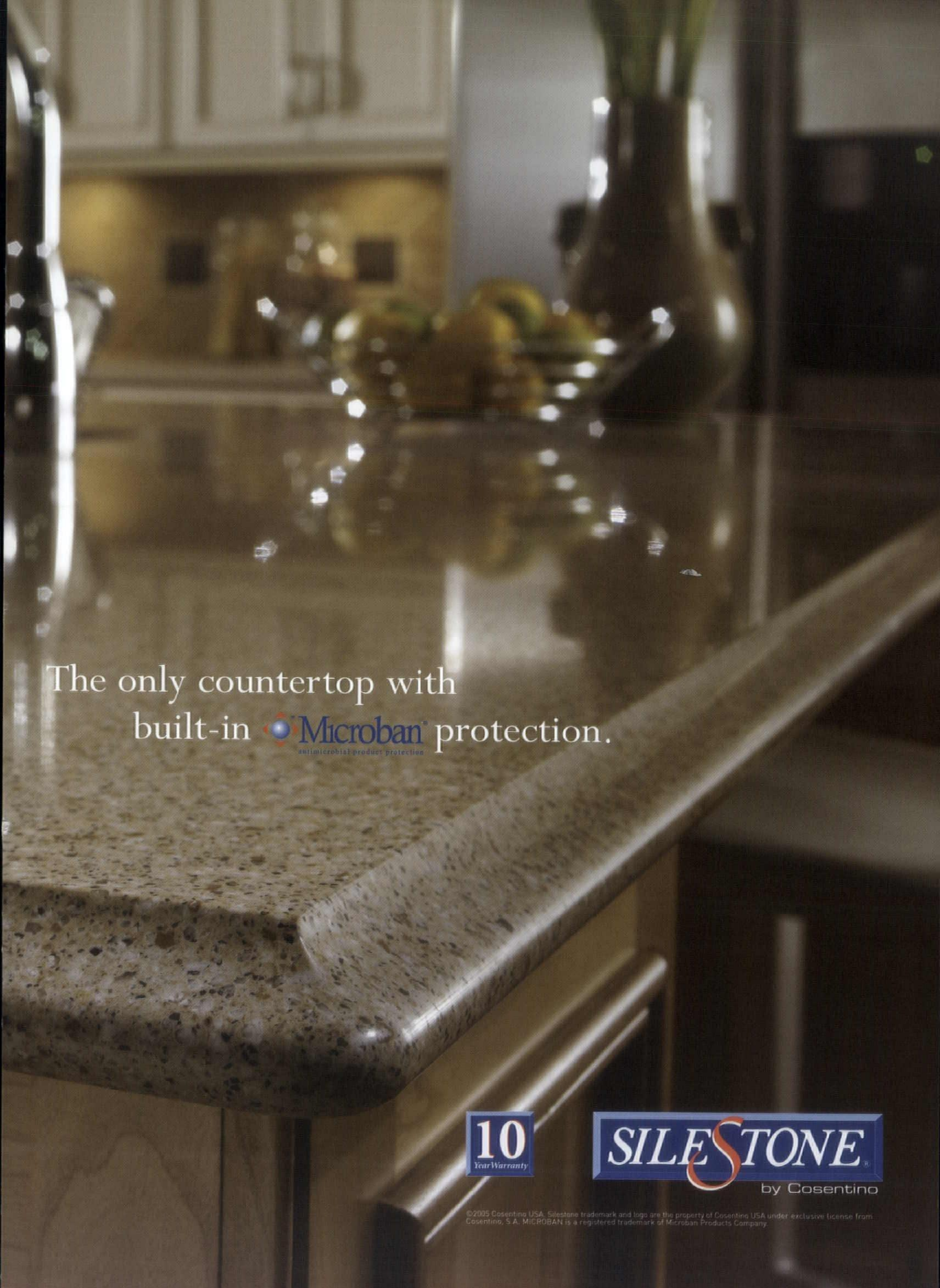
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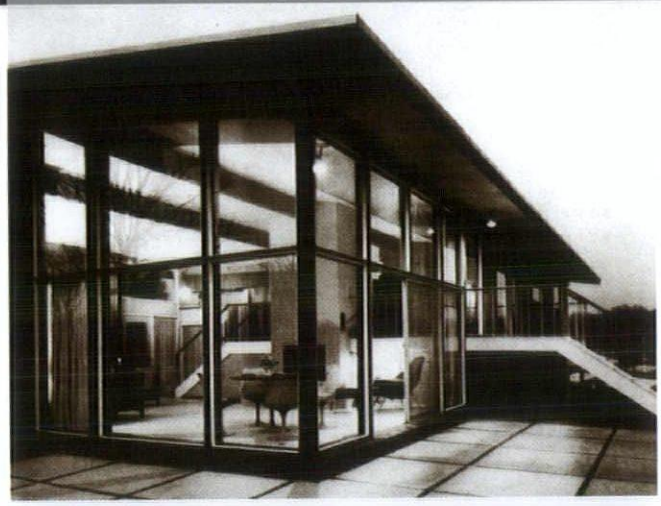
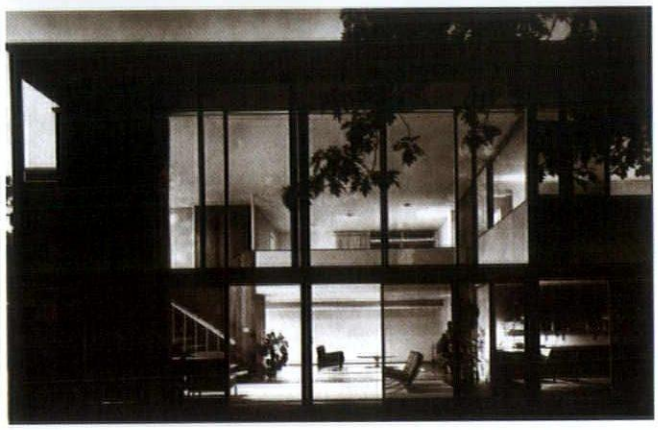
48 The Story Behind the Buildings: Documenting Modernism in Maryland

In 2001, the Maryland Historical Trust (MHT) commissioned the University of Maryland Graduate Program in Historic Preservation to survey resources of the Modern Movement in Maryland. The "MoMoMa" project is a pathbreaking effort for a state agency charged with initiating and funding landmark protection. We have generated windshield surveys, interviews with architects and builders, and biobibliographies of key protagonists (including many architects registered with the Potomac Valley Chapter). We have also provided research and documentation for eighteen landmark nominations, following the exacting U.S. National Register format for single or multiple properties.[1] We have organized public events, given conference papers, and are planning a traveling exhibition and a book to showcase our findings. One of our most important products, however, has been a context essay intended for stu-dents, scholars, historical societies, restoration architects, neighborhood associations, and realtors. This article presents some key findings about the policies, leading institutions and personalities, promotional tools, and building programs that framed the development of modern architecture in Maryland from the early 1930s to the early 1970s, with special emphasis on the jurisdiction area of the Potomac Valley Chapter and on the work of its members.





A contextual inquiry that pays as much attention to coordinated building efforts as to individual commissions makes particularly good sense in the case of Maryland, where modern architecture is better understood as a movement rather than a style. The vast majority of our resources post-date 1945, although the 1930s saw important departures from tradition, such as the planning of Greenbelt. Modernist building activity intensified during 1940—46 in technically and stylistically progressive federal and civilian construction around industrial sites and military bases. The postwar era is divided into two socially and visually distinct phases. The period 1946—65 was marked by the baby boom, tremendous demographic and economic growth, massive population movement to the suburbs, urban renewal, and the popularity of a self-assured High Modernism. The period 1965—72 was more unsettled from every perspective; revisions affecting architecture resulted in a broadening palette of formal, more weighty or contextual expressions.

In our context essay, we meant to answer the following questions: Who sponsored modernization in Maryland? How were ideals of modernity shaped and promoted? Which forms did modernism take? We differentiated between moderni-za-tion - political, social, and economic - which denotes processes by which western societies transformed themselves; modernity, which focuses on the ideological dimensions of the break from historicism and tradition; and modernism, a culturally and historically situated, self-referential construct that defines a creative process.[2] We therefore studied processes of modernization affecting Maryland, explored national and regional interpretations of the modernity concept, and established definitions of modernism that are appropriate to our locale.

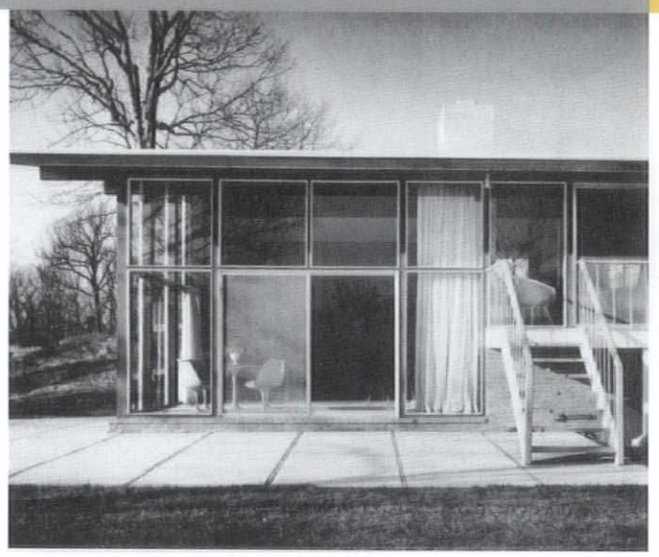
Who sponsored modernization in Maryland? A first group consisted of policymakers and bureaucrats operating at the national, state, county, and municipal levels. Federal sponsorship affected the D.C. suburbs by responding to the related Cold War imperatives of decentralization and highway construction. It also spurred the creation of high technology industries, such as COMSAT Laboratories in Clarksburg. County executives and agencies created public library systems, underwrote hospitals, and undertook significant planning for parks and recreation. Significant municipalities, such as Rockville, undertook their own planning and development, commissioning city plans, recreational and cultural facilities.

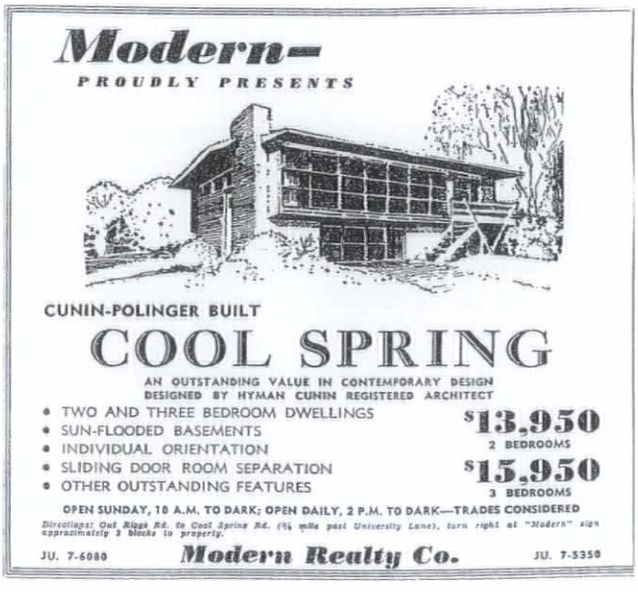
Entrepreneurs made up the second group that invested heavily in Maryland's modernization. They included

large-scale developers such as apartment builder Carl Freeman or the Blumberg brothers, who commissioned an ambitious office complex in Hyattsville from Edward Durrell Stone. Equally as important were automobile dealer Philip Lustine, whose 1951 showroom in Hyattsville (recently saved from demolition) was the snazziest in the entire state; homebuilder Edmund Bennett, whose Montgomery County tract subdivisions rival those of better known west coast builders; and architects like Hyman Cunin who teamed with Polinger to build small modern homes in subdivisions such as Cool Spring in Prince George's County.

In and around Baltimore, individual sponsors of modernization generally belonged to moneyed elites of WASP gentlemen, Jewish businessmen, or society ladies. In the DC suburbs, however, they consisted of a larger group of middle-class suburbanites: this highly educated cohort advocated volunteerism; the modernization of schools, planning, and infrastructure; and replacement of entrenched political machines with non-partisan and technocratic management. The most culturally progressive wing of this cohort embraced modern design for their custom-built or tract houses. An early and idealistic example of suburban architecture and planning was Bannockburn, a cooperative community, spearheaded by Vernon de Mars, which anticipated Planned Unit Development. Members of the Potomac Valley chapter - such as Hyattsville's Paul Kea or Rockville's John Sullivan, themselves socially active suburbanites - designed new buildings for public safety and leisure. We call this infrastructure of community buildings "baby boom modernism." Good examples include Walton and Madden's Hyattsville regional library, which adopted an excellent site strategy and traffic pattern and provided a welcome element of fantasy with its flying saucer entrance canopy. Other central components of suburban social practice were places of worship that combined religious, educational, and social activities in one compound, such as Johnson and Boutin's St Hugh's Catholic Church in Greenbelt; St. Catherine Labouré in Wheaton, and Sullivan's Saint Matthias in Lanham.

As an ideology, modernity required the existence of a debate and mechanisms of support and publicity to be formulated and propagated. It needed adherents to flourish and it found them both locally, in the burgeoning post-war suburbs, and nationally, in the out-of-state designers of international stature who received prestigious commissions in Maryland. An under-appreciated phenomenon that spurred the dissemination of ideas of modernity centered on the new generation of architects and planners coming to Washington, D.C., during World War II, whose experimentation with materials and construction affected Maryland's built environment for years to come. Both public and private sectors undertook considerable building and infrastructure to meet the national defense emergency, including military installations, hospitals, highway construction, and all manner of housing: single family detached houses, garden apartments, prefabricated and temporary housing, experimental housing, and public housing. A noteworthy but little-known example of well-designed but





temporary wartime housing was the Calvert Houses in College Park designed by SOM.

Post-war "baby boom" modernism developed into a national phenomenon that promoted new ideas for domesticity and enjoyed tremendous media support. Shelter magazines with national circulations, such as House and Garden and McCall's, promoted ideas of modernity in postwar houses, such as open plans, flowing space, large expanses of glass, easy access to terraces and transparency to the out-of-doors, natural materials, built-in furniture, and ease of housekeeping. Many of these features were incorporated into a rather large group of custom-designed homes in southern Bethesda by architects such as Esten, Jacobsen, and Keyes, Lethbridge and Condon, as well as a few distinguished houses architects built for themselves, such as Edwin Ball's residence in Cheverly and modern dwellings scattered along Greenbelt's Lakeside Drive.

Maryland had no architecture school until the late 1960s, but local news media and professional organizations helped disseminate a new spirit of modernity. In this regard, the Potomac Valley chapter played a key role, with its journal and annual programs (sometimes co-sponsored with local chambers of commerce) that recognized originality and design excellence. Modernity expressed the spirit of the time in a variety of ways, such as novel pedagogical ideas that inspired new architectural forms in schools or through the cosmopolitan appeal of subdivisions marketed to European employees of Washington agencies and embassies.

A broadly endorsed movement rather than a specific stylistic expression, Maryland's modernism manifested itself in a myriad of ways: as a vehicle of consumer culture, a functional tool for sheltering specific business types, and a means of supporting community spirit in the suburbs. The mode of expression ranged from a more nature- and home-bound, site-specific modernism found chiefly in the suburbs, and a radical, hard-edged, functional modernism found in buildings for commerce and industry, but most ubiquitously in schools.

A critical mass of MoMoMa post-war resources can be best thought of as "situated modernism," architecture adapted to specific contextual and programmatic requirements and emphasizing local materials, vernacular traditions, and shaping buildings to their surroundings and the needs of their users.[3] The Maryland-National Capitol Parks and Planning Commission, the principal planning oversight agency in Maryland's D.C. suburbs, provided the infrastructure of public green space and favored clustered residential planning. Their Prince George's County headquarters was sheltered in a remarkably transparent Miesian office building open to its natural setting on all four sides. Our research documents the tremendous appeal of situated modernism to Maryland's suburban cohort, which embraced an ecological understanding of their surroundings. Their preferences are evident in commissioned houses like Chloethiel Woodard Smith's economical home in the woods in Rockville and the school building of the Paint Branch Unitarian Church in Adelphi by Cohen Haft & Associates. Young suburban professionals were attracted to new subdivisions adapted to the topography of the stream valleys of tributaries of the Potomac River. Homebuilders commissioned tree surveys prior to platting subdivisions and oriented homes to take advantage of the views and privacy afforded by the landscape and topography.

Maryland's largest category of modernist resources, however--buildings for public education--did not often comply with the "situated" ethos. Every level of government-- from legislators, the State Board of Education, county school boards elected by the citizenry, superintendents, nationally-known educational consultants, and specialized architects—promoted modern schools.[4] Among the pioneering examples in the Potomac Valley chapter's jurisdiction were the Kensington Middle School by Rhees Burkett, demolished and virtually erased from memory, and the Greenbelt Center School (now Greenbelt's Community Center).

The massive numbers of public schools constructed after the war stood as powerful symbols of the drive for educational equality and they were the building type most likely to introduce modernism to every town and jurisdiction in the state. Maryland's educational institutions introduced a whirlwind of new pedagogical programs and methods: kindergartens, schools within a school, non-graded elementary programs with open classrooms, and early childhood centers. One of most noteworthy examples of architecturally and pedagogically innovative school building campaigns in the nation took place in Washington County, under the leadership of William M. Brish, Superintendent of

Schools there from 1947 to 1973. Brish commissioned many Potomac Valley Chapter firms, such as Chapman and Leffler, who designed Pangborn Avenue Elementary School in Hagerstown.[5] The state actively promoted equal quality of equipment and design for schools in poor and rich counties and for some African American schools prior to the Brown vs. the Board of Education of Topeka, Kansas Supreme Court decision in 1954. Noteworthy examples were McLeod and Ferrara's Carver School in Rockville, for African American students, and Ronald Senseman's Forest Grove Elementary, originally for white students in segregated Silver Spring. During the late 1960s until the late 1970s, Maryland underwrote a tremendous building campaign for community colleges, as well.

CONCLUSION

In Maryland's Potomac Valley suburbs, modern architecture was anything but the cold and alienating, brutal style thought to be roundly rejected by ordinary citizens. Indeed, modernism in Maryland was sponsored by every level of society. We attribute our success in uncovering the Free State's embrace of everyday modernism to our use of a culturalist approach that sought the "story behind the buildings," combined with our interrogation of a great variety of information sources, using a systematic primary research strategy. Without the former we would not have been able to recognize the full significance of what we were discovering from the latter. A-priori aesthetic taste was not our primary criterion for evaluating noteworthy structures. We frequently studied MoMoMa resources as building typologies more than isolated structures. We researched as groups, for example, the suburban synagogue complexes of Northwest Baltimore, branches of the Enoch Pratt Public Library System, and Edmund Bennett's planned tract subdivisions in Montgomery County, because the significance of those resources became more apparent when we understood their serial sponsorship of modernization and ideals of modernity. Other buildings that may look rather pedestrian, we argued, deserved documentation and protection because they were clear and successful embodiments of major social engineering ideals.

By providing a multidisci-plinary intellectual foundation for understanding MoMoMa buildings and sites and an evaluation of the universal and local characteristics that shaped them, we hope our work will raise protection awareness among the owners and users of these resources. Preserving the recent past requires the articulation of an intellectual framework for the study of modernism and in-depth documentation of highly-volatile resources that are vanishing not only from view but from collective memory. These houses, schools, and community-oriented structures within the Potomac Valley Chapter's reach exemplify a common landscape of modernity that worked, that met the needs of everyday suburbanites with good service and architectural aplomb. We hope that our methodology and the stories behind the buildings that we've documented may guide others undertaking similar research to preserve the recent past and encourage adaptive reuse and sympathetic additions here and in other parts of the state and the nation. ❐

ENDNOTES

This article has been adapted from a paper entitled "The Modern Movement in Maryland: research contexts, issues, and methodologies," by Mary Corbin Sies and Isabelle Gournay, originally presented at the DOCOMOMO VIIIth International Conference entitled Import-Export: Postwar Modernism in an Expanding World, 1945-1975, Sept. 2004, New York City. The authors gratefully acknowledge support of a Non-Capital Grant from the Maryland Historical Trust, which partially underwrote the research and writing herein.

[1] Documentation for these properties in PVC's jurisdiction can be consulted at the Archives of the Maryland Historical Trust in Crownsville, MD.

- Greenbelt Center School, Greenbelt, 1937, Reginald Wadsworth and Douglas Ellington, architects (with co-authors Jennifer Feldman and Stephanie Ryberg)
- House at 135 South Van Buren Street, Rockville, 1948, Chloethiel Woodard Smith, architect, (with co-author Liz Creveling)
- Lustine-Nicholson Automobile Dealership, Hyattsville, 1951, F. Dano Jackley, architect, (with Benjamin Riniker)
- St. Luke's Lutheran Church, Cumberland, 1959, T. Norman Mansell, architect
- Wheaton House, Wheaton, 1960, Cohen & Haft Associates, architects, (with Liz Creveling)
- M-NCPPC Building, Riverdale, 1967, Edwin Ball, architect, (with Stephanie Ryberg)
- COMSAT Laboratories, Clarksburg, 1968, Cesar Pelli for DMJM, architect

[2] See Hilde Heynen, Architecture and Modernity: A Critique (Cambridge, 1999), 8-14..

[3] Sarah Williams Goldhagen, "Coda: Reconceptualizing the Modern," in Goldhagen and Legault, Anxious Modernisms: Experimentation in Postwar Architectural Culture (CCA and MIT Press, 2000), 306.

[4] In 1957, The Potomac Valley Chapter of the AIA formed "an area council of architects living in Suburban Maryland," ready to serve the Montgomery County Board of Education's school building program. "Architects Form School Council in Md," The Washington Post (July 13, 1957), C3.

[5] For more on Washington County's building campaign for modern schools, see Isabelle Gournay, "Washington County's Campaign for Modern Schools," Catoctin History (Spring/Summer 2004): 24-31.

[6] Two important local efforts to document the recent past include historian Joey Lampl's effort to study and protect modern tract subdivisions designed by Charles Goodman and Peerless Rockville's current inventory of architecture of the recent past.

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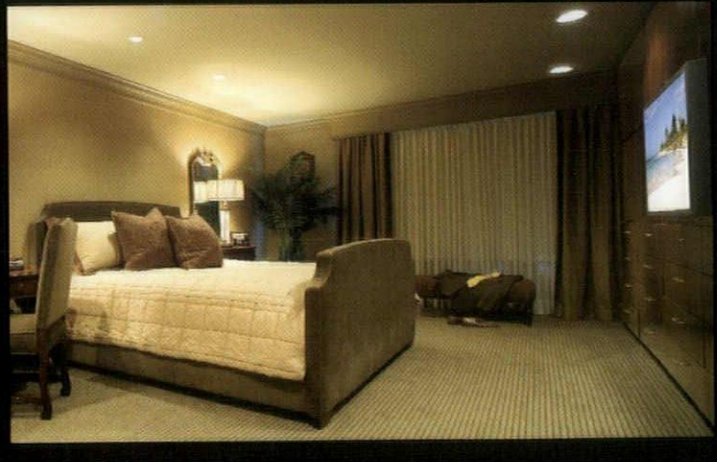

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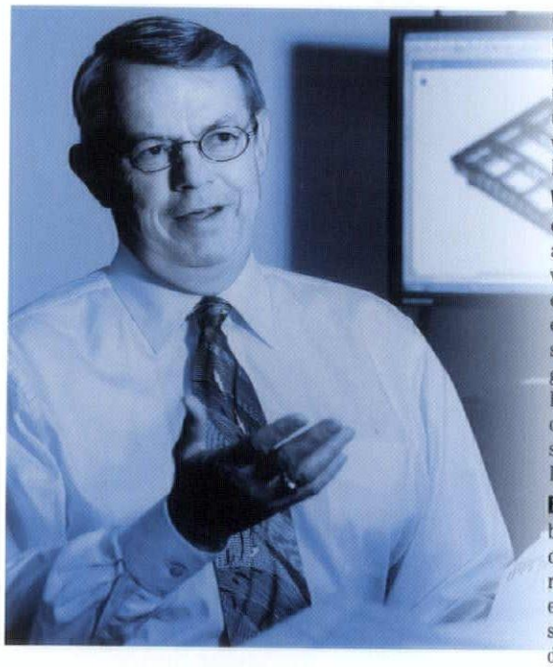
ON RUBY INTEROPERABILITY

DAVID I. RUBY, P.E., S.E., Structural Engineer. Principal, Ruby & Associates P.C., in Farmington Hills, Michigan. Specializing in steel designs that speed and ease constructability. Recently consulted on a community college project where his design and use of Interoperability resulted in a hyper-fast and efficient design—and a six-figure rebate from the fabricator to the school.



***INTEROPERABILITY** is the ability to manage and communicate electronic product and project data between collaborating firms. It allows the exchange and management of electronic information, where individuals and systems are able to identify, access, and integrate information across multiple systems. The goal of interoperability is to create greater efficiencies by eliminating the manual reentry of data, duplication of business functions, and the continued reliance on paper-based information management systems. The steel design and construction industry uses the CIMSteel (CIS/2) neutral file format to enable interoperability.*

CONSTRUCTABILITY "When doing the pricing on a recent project, Douglas Steel Fabricating Corporation asked us to review the job to enhance constructability. It was a community college project that originally called for fully welded moment connections and knee-braced frames. The number of pieces and amount of field welding made the project uneconomical. Douglas Steel sent us the original design documents. We put together an alternative design that satisfied the intents of the owner and architect. We then transferred our CIS/2-compliant model back to Douglas Steel, enabling them to process the model in SDS/2 so they could bid both the original and alternative designs on time. Without CIS/2 Interoperability — or what used to be called Electronic Data Interchange — we couldn't have turned it around fast enough to keep the job on schedule."

VALUE "The architect's drawings, the site constraints, points of access, equipment — there are so many different things to consider to come up with the most economical product that meets a client's needs. A lot of people talk about value engineering. What that really means is examining a set of decisions that have already been made, and going from there. You're talking inside the envelope. But when you design for constructability and value, outside-the-envelope thinking leads to things like speed to market and achieving budgets. CIS/2 Interoperability is a tool that lets us think like this."

EFFICIENCY "For the community college, the floor beams were spaced at about 3-foot, center-to-center, with a very light metal deck and a reasonably thin slab. As a rough count, we eliminated over 700 members, as well as 11,000 shear studs from the floor system and it was designed so everything could be field bolted. We ended up with a metal deck system and a thicker slab that added a little dead load to the structure, but increased the strength of the composite beams. Basically, we made it easier to build, stronger and much more economical. Plus, we stayed on schedule because the design only took four days thanks to CIS/2 Interoperability."

PERSPECTIVE "Working with Fazlur Khan to design the Hancock Building early in my career gave me a different feel for construction. One thing about the Hancock: the steel out-raced concrete to the roof. In fact, steel was 25 floors ahead at one point! We even had to design temporary braces to keep the structure together because we were so far ahead. Faz was such a great concept engineer. I learned you can't just look at a building as a design — it has to be built too! Piece by piece, stability is an issue during construction. But once it's done, the issue goes away and you let the building act as it should."

COMMUNICATION "The advantage of Interoperability is speed through the elimination of paperwork and many layers of communication. Typically, a detailer would verbalize a problem to the fabricator who would submit a request for information to the contractor who'd send it to the architect. A response from the structural engineer would be communicated through the contractor to the fabricator and ultimately, back to the detailer. And many times the detailer would respond, 'That's not the question I asked.' This happens time and time again when you're trying to explain a three-dimensional problem in 50 words or less. CIS/2 Interoperability means the pertinent decision-makers — the engineer, detailer and fabricator — can look at the model in real-time, discuss the problem and collaborate on a solution. Better, faster communication is the value of Interoperability."

INTERACTION "With Interoperability, I work with the fabricator and detailer directly. We receive their files over the Internet, pull them into our system, make comments and send them back in just a couple of hours. This saves a tremendous amount of time and keeps us on schedule. Let's say there's a connection issue, or perhaps the fabricator has a question. We're not waiting because the drawings are in the mail. They just send us their three-dimensional models and we solve the problem today. That's what Interoperability is all about."

UNIVERSAL "The files a fabricator works on are generated from the RAM model we send them. So when they pull our models into the system for detailing, they have the most current designs. There is less paperwork to keep track of and that's a significant advantage. If I send files at noon, by 3 o'clock the fabricator has his bill of materials. Manually, this process took a week. And we're not talking just 40 hours — but two or three people putting in 40 hours to pull that all together. Those extra hours are an expense completely eliminated due to Interoperability."

INTEROPERABILITY "The primary reason for Interoperability is to integrate design and construction processes by eliminating the need for manual re-entry of data. The advantage for steel is that the CIS/2 standard enables compliant software—Tekla, SDS/2, Bentley, RAM, FabTrol and others—to exchange data electronically with accuracy and speed. In fact, CIS/2 makes most structural steel design, detailing and manufacturing applications interoperable."

STEEL "Steel already gave us a much quicker delivery time. And that's now clearly enhanced by CIS/2 Interoperability. Steel lets me build a structure that can be modified, easily reinforced, adapted to another use and has overall economy from start to finish. Unless you're building sidewalks, there's never a reason not to use steel."

IT SEEMS EVERY OTHER WEEK THERE IS ANOTHER design or construction journal espousing the virtues of building information modeling (BIM). Just what is BIM? What can it do? What can't it do? Is it a noun or is it a verb? Regardless of the answers to these questions, BIM, whether it's something you create or something you do, is taking the design and construction community by storm and will change the way you do business. Here's why:

The Trouble with Drawings

Drawings have been around for as along as construction has been around. Drawings will continue to be part of the design and construction process for a long time to come. Drawings have always represented the essence of design. They represent the constructed product. The adoption of CAD in the early 1990s did not change that. CAD was merely a different way to produce drawings. Even using CAD, drawings are produced by a draftsman creating lines and text. Lines and text which convey information to the various other stakeholders on a construction project. And that's the trouble with drawings. The lines and text have to be read by human eyes. Other stakeholders must read the drawings, understand them and create new information, new drawings, perhaps, for their own use. The trouble with drawings is that there is a lot of man-hours spent creating drawings, reviewing drawings, understanding drawings, coordinating drawings and revising drawings. That's a lot of man-hours spent on what are merely lines and text arranged in such a format (a drawing) to convey a huge amount of information.

"The trouble with drawings is that there is a lot of man-hours spent creating drawings, reviewing drawings, understanding drawings, coordinating drawings and revising drawings."

Will BIM replace drawings? Not necessarily and not anytime soon. What BIM will do is allow designers to spend less time on drawing production and more time on designing the project. Most of today's BIM software packages allow the designer to create views of the model that look like, well, traditional drawings. The beauty of the BIM model is that if the model is revised the drawings are updated accordingly. So then, the best BIM packages in the hands of the best BIM designers can produce the best drawings.

Sharing Digital Data?

Even with the best BIM packages in the hands of the best designers, drawings are still drawings, which have to be read by human eyes. Enter interoperability. Interoperability is the concept where computers and software of different platforms can transmit and read information easily. When you withdraw cash from an ATM you are benefiting from interoperability. When you use your credit card at a self-serve gas pump you are benefiting from interoperability. The automobile and aerospace industries rely on interoperability to allow vehicle design data to run robotic manufacturing equipment.

In 1999 the structural steel industry, led by the American Institute of Steel Construction, established the first standard for interoperability in the building construction industry. This standard, known as CIS/2, allows for the direct digital exchange of structural analysis and design data with structural steel detailing applications. This data can then be fed to CNC fabrication equipment that is found in most of today's modern steel fabrication plants. Today there are many documented cases of structural engineers, steel detailers and steel fabricators and erectors sharing digital design and fabrication data, resulting in significant benefits to the project cost and schedule.

The successes in the steel industry were slow in coming. One reason for this was that structural engineers, who typically use 3-D analysis and design programs as a normal part of their business, were not willing to share their 3-D models. One reason for their reluctance to share their digital model was that it was not completely accurate. It was accurate enough for them to produce an adequate structural design, but not geometrically accurate enough to share with a steel detailer. This was often the case because they did not have the need, or the time, to keep their models geometrically accurate. Much of their time, in fact, was devoted to drawing production.

Some savvy structural engineers, however, began partnering with steel detailers and fabricators. These 'Steel

Teams' began working together, offering design-build steel packages. The steel teams were able to rapidly deliver to owners and contractors a completely erected steel frame without the usual RFIs, shop drawing review, mill lead times and, most important, claims and extras.

"The beauty of the BIM model is that if the model is revised the drawings are updated accordingly."

The 'C' Word

The use of 3-D modeling also began to grow in the MEP industry. MEP contractors were creating 3-D models of HVAC systems on construction projects. Some high-tech sheet metal contractors even have their own software that would drive duct manufacturing equipments in their shops. Soon a new form of sharing of digital data began. This is in the form of integrating structural steel and MEP models. This integration of system models allows for easy coordination of the various trades and early detection of clashes between the various systems. The key here is that the models reflect the 'as-to-be-built' systems, not the design intent. This is what makes the clash detection so successful. Detailed models are coordinated on the computer, prior to construction, not in the field. This has allowed a significant reduction in labor and materials on the job site, resulting in faster, better and less expensive construction. There have been claims in the MEP industry that labor costs are reduced by as much as 20% as result of doing more of the MEP work in the shop, not the field. Another surprising benefit to reduced labor and materials on the job site is a safer job.

Cladding and curtain wall contractors are also getting into the act. This is another trade that relies heavily on shop fabricated components and CNC equipment. There are now more and more cases steel contractors and cladding contractors sharing digital model data. The GSA Federal Office Building in San Francisco is one of them, where cladding support point geometry was given digitally to the steel contractor for location of connection details. The Hearst Tower in New York City is another where the steel fabricator for the intricate 'diagrid' structure shared his 3-D model with the cladding contractor. This allowed for near flawless fit-up in the field.

The real 'C' word here is not simply coordination, though. It is collaboration. The successful sharing of digital data has inspired project teams to include subcontractors early in the design process. A common collaborative design process has designers and subcontractors sitting around the table during the design development phase reviewing integrated models of the entire building. This results in earlier ordering of materials and a more constructible end product – with virtually no RFIs or claims.

"There's a Disturbance in the Force..."

As a result of these types of successes in collaborative, model-based projects, the AIA, the AGC of America and CURT (Construction Users Roundtable) on July 20, 2006 issued a joint press release titled 'AIA, AGC, and CURT Form Collaborative Group to Transform Design and Construction Industry'. You can read it at http://www.aia.org/release_072006_curt . This was issued "In an effort to address and solve problems caused by industry fragmentation, lack of clear communications across professions, and old business models..." and is the result of a two year string of meetings and discussions among the three groups. According to the press release "the working group will address the need for new business models, insurance products and contracts as well as industry "primers" and "how-to's". These three groups will now collectively and collaboratively establish design and construction practices, business models and procedures to encourage, enable and leverage the use of BIM technologies and methodologies. So the secret is out. BIM works and the owners are now driving the change toward full implementation across the design and construction industry. And don't worry; drawings will remain in the picture as a by-product of this fully integrated and highly collaborative process of design and construction. ❐

"A common collaborative design process has designers and subcontractors sitting around the table during the design development phase reviewing integrated models of the entire building."

by Thomas Farrone
AISC Marketing, LLC

ON Englot PARKING GARAGES

Joseph M. Englot, P.E., Asst. Chief Engineer/Design, Port Authority of New York and New Jersey. Responsible for 350 architects and engineers of every discipline. Leads the design and construction of critical transportation infrastructure, fulfilling all needs of the bi-state region's businesses, residents and visitors. The field-experienced Englot oversees all PANYNJ projects, ensuring budgets, schedules and quality standards are met.

INSPIRATION I've been interested in engineering since I was a kid – I was always building things. My dad was the maintenance engineer for the building we lived in and he had this great workshop. I spent a lot of time in there with him. And I remember when anything was being built, I watched – I wanted to see how it was done. When they installed the storm sewer in the street when I was a kid, I went down and just sat there watching it all.

CHOICES I knew I wanted to be an engineer since I was young. I just never knew that civil engineers did so much. One day at school, we had a career fair and I started talking to a guy. He was a construction engineer. I told him the things I wanted to do and he said, "You want to be a civil engineer." From then on, I knew what I wanted – to design buildings. I was 13 years old.

EDUCATION I stayed focused, graduated high school and looked into engineering programs in the area. Brooklyn Polytechnic offered me a scholarship to a specialized program where I earned my bachelor's and graduate degrees at the same time. It was a heavy credit load – I was taking my grad courses during junior and senior years. But I wanted to get into the world and find a job.

PORT AUTHORITY Working for the Port Authority was my first job – I've been here 31 years. Even growing up in Queens, I wasn't familiar with all their facilities. When I thought of the Port Authority, in my mind it was the bus terminal on 42nd Street. But when I interviewed, I learned that they managed so many other things – they really drive the regional economy.

INSIGHT If you look at old parking structures in New York or New Jersey, you'll see a lot of flat-plate construction with cast-in-place concrete and the resulting deterioration from corrosion. An example, there was a parking facility that we rehabbed in 1998 at one of our facilities with flat-plate construction. That's when I saw firsthand how quickly previous generations of parking structures deteriorate. Snow and chemicals would sit and penetrate the concrete. The shallow covers used for parking structures allowed it to corrode. We finally recognized that you can't design parking structures like you would a building. The deck requires special protection.

PROGRESS I've worked on highway bridges. The technology we began to use for bridge deck construction 10 years ago is now used in parking structures. A parking garage can be designed to include the benefits of steel frames and columns using pre-cast double-Ts. Micro-silica additives in the concrete Ts make the deck impervious to moisture and protect the entire structure from corrosion. We've found this saves hundreds of thousands of dollars in repairs over the lifetime of a structure – it's a better investment.

SOIL Both the Newark Liberty and the JFK International airports have poor soil. So we designed the structures to be supported on steel tapered tube piles and pile caps. These can withstand the bending forces even if the soil liquifies in a seismic event. Because steel is light and requires less of a foundation, it cuts the weight of the structure and is perfect for those locations.

SEISMIC For these garages, we moved the stairwells and elevators to the exterior and designed them to be self-supporting in case of a seismic event. This is unique – a lot of structures use shear walls in stairwells. Ours use ductile steel frames and have worked very well. Because of this, we could open the lower floors of the garage while finishing the upper levels and installing the elevator equipment.

OPENNESS We can use longer spans with steel – 60-foot beams. People passing through the garage don't have to navigate a forest of columns. Open grid facades replace solid pre-cast parapets. It's more user friendly – more open – and lets in more natural light, which increases security. With steel, we also have fewer columns, equating to more parking spaces. Basically, we can utilize more of the footprint for intended use.

VALUE Although Kennedy's Green Garage was driven by a tight schedule, it was the basis for Newark Liberty's P4 Garage— and is now the standard system. But because cost is always a tremendous concern, we performed a value engineering analysis. The results were great! The independent VE panel concluded that this is the most efficient design in terms of cost per square foot and space economy when compared to other systems.

STEEL In 1996, we had 18 months for the design/bid/build process for the Kennedy Green Garage and it had to fit into the location visually and functionally. So we fast tracked the design and concentrated on the foundation first. We issued that package and broke ground three months later. The design was quick to fabricate and to erect – we only used one crane and iron workers did both jobs. It went up so fast – it was unbelievable! We could have only accomplished this with steel.

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A FRIEND AND CLIENT OF MINE HAD A PROBLEM. He and his wife wanted to build their dream home. He is a successful builder, so they understood the process. They found the lot they wanted; they worked with an architect they respected; and my builder friend picked the best crews and subcontractors to build the house. The project took over a year, but he and his wife worked through each step of the process. So, you might ask, what's the problem? Well, when the house was completed, his wife HATED it! My friend was shocked. His wife had been in every meeting. She had been part of every decision. But, when she saw the house completed, it wasn't what she expected. As my friend put it, at the end it came down to a simple decision... "it was going to be either the house or me." The silver lining in the story...the house sold for a good price.

The word "communication" comes from the Latin word communis meaning "common." When we communicate with others, we are trying to establish "commonness" with someone. That is, we are trying to share information, an idea or an attitude. For those who have to communicate with clients on a daily basis, you know that communication may be common, but it's not easy!

You have a tough job! You have to communicate concepts that include artistic concepts, spatial ideas, mechanical issues, engineering challenges and other industry-specific matters. There are MANY issues in communicating architecture, especially in the residential market where the client may not be familiar with the architectural process. I would suggest that the most serious challenge facing architectural communications is the ability to truly communicate what a three-dimensional object (i.e. the building) will look like with com-

Communication and Architecture

Images courtesy of the British Museum collection

How could this happen? There were architectural drawings, renderings, extensive discussions regarding the architectural intent, spatial uses and living patterns. In the end, it all came down to one thing: she did not "see" it. All the drawings and other architectural information designed to communicate the intent of the project had not worked. The client did not understand what she was going to be getting until there was a physical structure to see, and by then, it was too late. The communication process failed.

In my practice, I hear variations of this story over and over again. It seems simple. An architect wants to build understanding and consensus around her design. She uses words, drawings, sketches, images, renderings, gestures, passion, and a host of other tools to help her. Her purpose is to create mutual understanding. On the other side there is the client. He wants to hear, absorb, and comprehend. He is trying. He uses his eyes and ears to absorb. He asks questions to help clarify gaps in his understanding. The process continues until it ends, and at the end there is but one simple question to see if communication truly happened:

"Do we share the same vision?"

monly available two-dimensional tools (i.e. drawings, renderings, sketches).

Your designs are intended to meet the clients' needs, but designing a building that is perfect for your client is only half the battle. The other half is communicating to them that it truly does meet their needs. To communicate your design to your client, you will pull from your arsenal of tools: blueprints, 3D CAD "fly-throughs," renderings, drawings, sketches, and your superior verbal communication skills. Once the client understands the brilliance of your design, they will of course sign off on the project and you can begin the construction process.

But here is the problem... not all clients see it. They want to trust that you see it. They want very much to see your vision themselves... but some don't. Why?
The answer may be found in studies performed by the Johnson O'Conner Research Foundation. Johnson

O'Conner is a nonprofit scientific research and educational organization focused on the study of human abilities and aptitudes. They have found through aptitude testing that only 25% of the general population can visualize what a three dimensional (3D) object will look like by viewing a two dimensional (2D) image, and they found no statistical difference between paper 2D image presentation and 2D virtual representation of a "3D" model (PC monitors are flat 2D displays).

There is your challenge! Only one-quarter of the general population are able to visualize your project from the tools you're using to communicate. That is not to say that the 2D tools you are using are not useful. They are essential for the implementation of your program. However, it does suggest that something else is needed in your communication process to compliment these 2D tools. One solution is using 3D scaled physical models in your presentations. Physical models are great communication tools in that they are "common" (Latin meaning of "communication") to all people and cultures. They provide an instant understanding of the overall project, and people relate to them on an almost instinctive level. Time and time again I have seen the same reactions when a scaled physical model is placed in front of a client... they get close to the model and reach out to touch it. Models seem to activate an instinctive tactile response in people, and create a clearer and deeper understanding about the project.

This is not a recent phenomenon. Throughout history models have been used to communicate architecture. Architectural models date back to as early as 2000 B.C. (see previous page).

Today, however, relatively few models are created as part of the architectural process, even though there benefits are extraordinary. The question is, why?

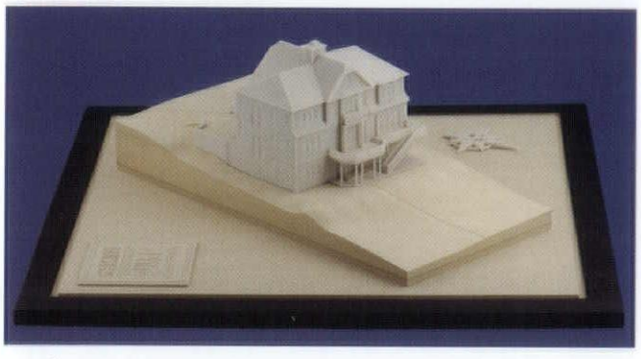
The fundamental reason for this is economically obvious: traditional scaled physical models have been created by hand. In today's world, that translates into:

1. **Expensive:** Hand-made models are expensive because of the amount of high-skilled labor involved in making them
2. **Time Consuming:** Having a model made can take weeks AFTER you get your project into a model-shop's queue
3. **Difficult to Manage Quality:** The model making industry has many wonderful artisans in it, but the quality of your model is fundamentally linked to the skill of the person assigned to your model (and that may change from job-to-job)

That doesn't sound like a rousing endorsement for going out and getting models built, but there is a fundamental shift happening in the model-making industry that you may not be aware of. Like many industries, technology is making in-roads to improving the efficiency, value and quality of the model-making industry. Today, models can be made using automated manufacturing techniques. There are a few modeling shops out there that can use your CAD files to automatically manufacture models. They can also deliver your model in a fraction of the time it has taken traditionally, at a fraction of the cost with consistent, excellent quality. In many cases, the cost to outsource these models may be less than your costs to build them in house.

The news here is this: if you are not using models because you think (or your experience has shown you) that they are too expensive or take too long, you now have another choice. Models built with automated manufacturing techniques can be used to improve communications with your client in a cost-effective, efficient, consistent and professional manner. ❐

by Larry Swift
President, SwiftVue, LLC www.swiftvue.com



SwiftVue Models courtesy of Patrick K. Keating & Co. and Studio Z Design Concepts

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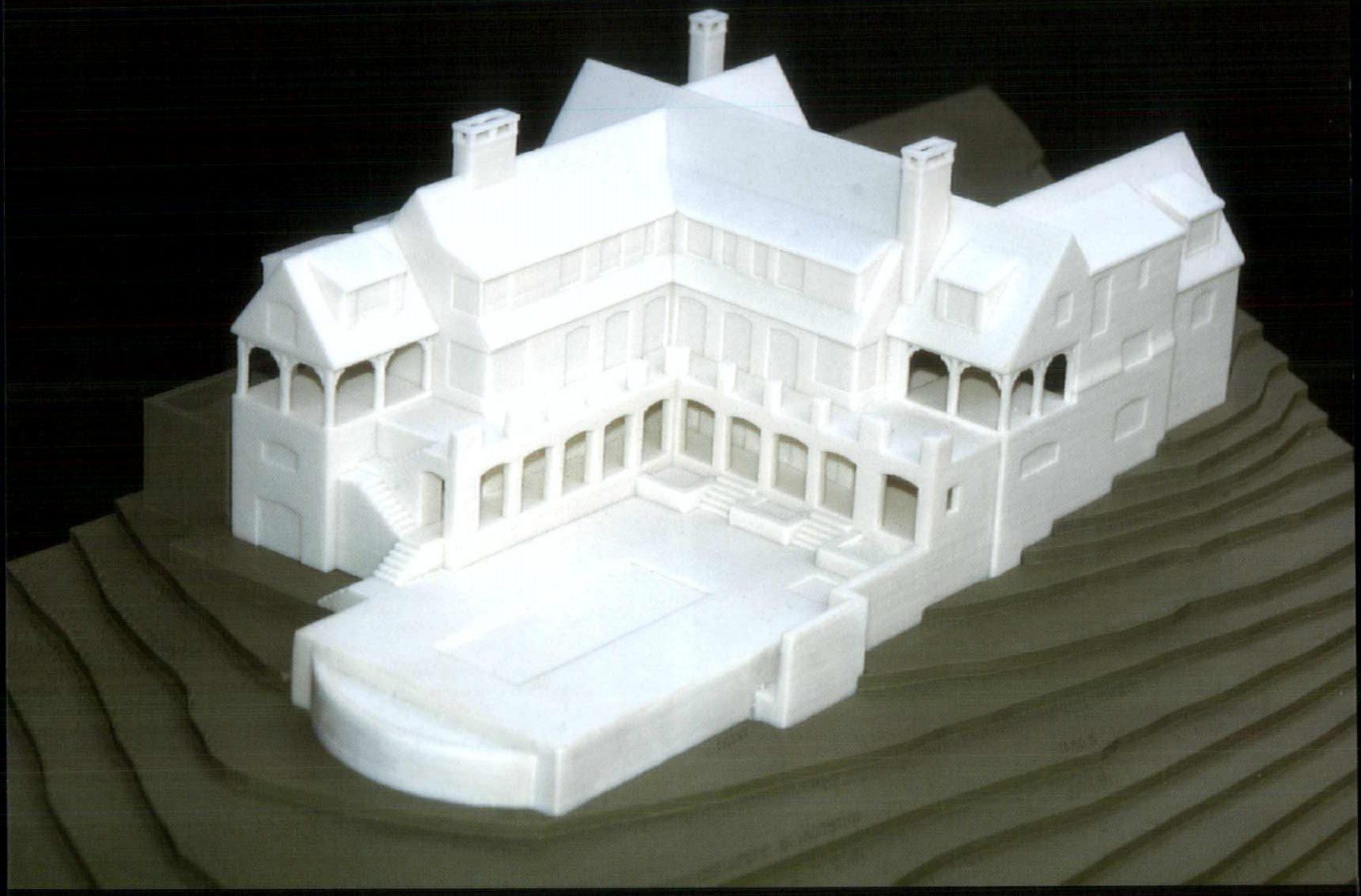

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Fixed-Cost or Cost-Plus? Consider This.

VETERANS OF THE PRACTICE OF ARCHITECTURE will tell you that the most successful projects are the result of open and honest relationships between the client, architect and builder based on clear communications and mutually understood expectations.

Nowhere is this truer than in the design and construction of an architect-designed residence, especially when it comes to the issue of compensation.

There are two schools of thought regarding compensation for a custom home building project – some prefer fixed-cost contracts, others prefer cost-plus agreements. There are pros and cons to each.

FIXED-COST CONTRACTS

A fixed-cost or fixed-price contract is one where the price for the project is set at the contract signing based on the items described in the plans and specifications.

Most architects agree that fixed-cost contracts work best when they involve new construction or when the scope of work is clearly defined. Material price fluctuations can be minimized and it's easier for an owner to obtain financing with a fixed-price agreement. Such contracts also tend to eliminate paperwork and disagreements.

The biggest advantage of the fixed-cost contract to the consumer is that generally all risk of cost increases, damage or loss is absorbed by the builder. The disadvantage is that builders may cover this by increasing fees or including a contingency to carry this risk. In fact, some builders are reluctant to use fixed-price contracts as they require much more precision and up front effort to ensure an accurate budget.

"A well-run, experienced contractor will prefer a fixed-cost contract because they know the risks and are in the best position to avoid them," said Bill Neudorfer, Principal, Zaras & Neudorfer Architects. "This may increase their profit margin. I also find that owners like fixed-cost contracts because their exposure is known beforehand."

One of the criticisms of fixed-price contracts is that the owner has limited flexibility to make changes once building starts. However, most fixed-price contracts can be changed during construction by written change orders.

"We strongly prefer fixed-price contracts and so do our clients," said Stephen Muse, FAIA, Senior Principal with Muse Architects. "If drawings aren't complete and the client wants to start construction, we still recommend fixed-price – we'll just include a letter in the contract outlining the assumptions we made to come up with the price. We'll also include an allowance for items yet to be decided upon."

"The key is to control all costs and have contingencies in place so that there are no surprises," adds Joe Bohm, President of Horizon Builders, Inc. "Total specificity is not always realistic with custom residences, especially at the start of a project. The range of choices in interior appointments has exploded in recent years, so clients sometimes want to delay decisions on those things. In these cases, we provide fixed costs for as much as possible and budgets or allowances for the rest."

"A well run, experienced contractor will prefer a fixed-cost contract because they know the risks and are in the best position to avoid them."

Bill Neudorfer, Principal, Zaras & Neudorfer Architects

Horizon has an "open book" approach to bidding on projects that provides an owner concerned about cost with the peace of mind that comes with a fixed-price contract along with the flexibility of a cost-plus agreement. "We'll take whatever drawings are available and provide a ballpark price based on our experience," Bohm explained. "Once more drawings are available we'll do a more formal bid. During the process we create a dialog with the owner and architect and share with them how costs are determined. It's an educational process that brings all parties together and defines expectations – it creates a partnership."

COST-PLUS CONTRACTS

In a cost-plus agreement the owner pays actual expens-

es plus a percentage for the builder's overhead and profit. This includes everything that goes into the construction process – all materials, labor, subcontractors, allowance items and expenses. It may also include the cost of site supervision, insurance, and setup. So the owner carries the risk for any changes in cost.

The biggest benefit of cost-plus agreements is that construction can start without a complete set of drawings. "Cost-plus is more common today due to the timing of projects," said David Neumann, AIA, Partner, Versaci Neumann & Partners. "The construction of a home can take two to three years and most clients want to compress this timetable. Getting fixed prices can delay the process for months. With cost-plus you can begin things like site prep prior to the drawings being complete."

Cost-plus agreements are also often used in situations where unexpected problems or design changes may arise, making it difficult to cost out until after construction starts. "If there's uncertainty about the site, or the structure of a building in the case of a historical renovation, cost-plus may be the best option," Bohm explained.

Cost-plus contracts appeal to many owners because they only pay for what the builder does and have the opportunity to review bills. Some feel it also gives an owner greater flexibility as they can regularly monitor the budget on a project and reprioritize if they want.

However, a cost-plus contract shifts the burden of controlling costs to the owner. Like an open-ended contract, if costs increase due to unforeseen circumstances, inflation or inaccurate estimates they pay the extra. And if the builder does not maintain good records or communicate well, there can be misunderstandings.

"Owners need to understand that they are paying for everything including time." Muse said. "Building is not always an efficient process, so it can be very irritating for an owner with a cost-plus contract to watch laborers just standing around."

"Every cost-plus contract still has a good faith estimate as its basis. You have to trust the contractors and believe they will work in everyone's best interest."

David Neumann, AIA, Partner, Versaci Neumann & Partners

"Every cost-plus contract still has a good faith estimate as its basis that is full of actual costs from subcontractors," Neumann pointed out. "You have to trust the contractors and believe they will work in everyone's best interest."

"Both approaches can be fair. If the owner, architect and builder have a good partnership, you'll have clear communications throughout the construction process."

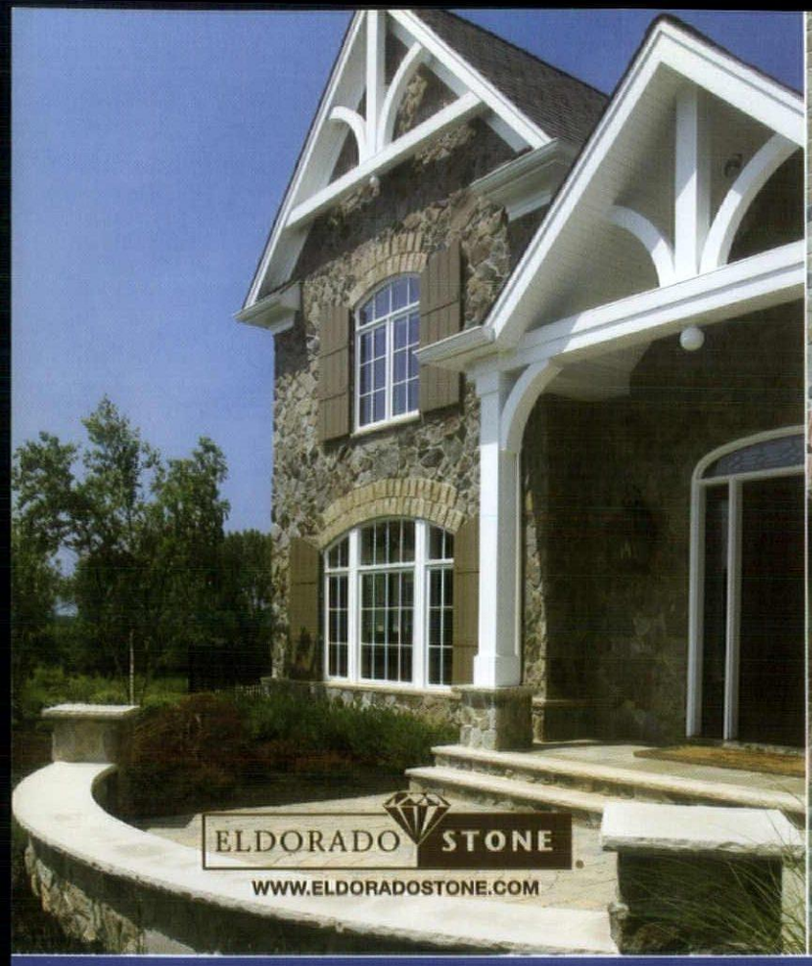
Joe Bohm, President, Horizon Builders, Inc.

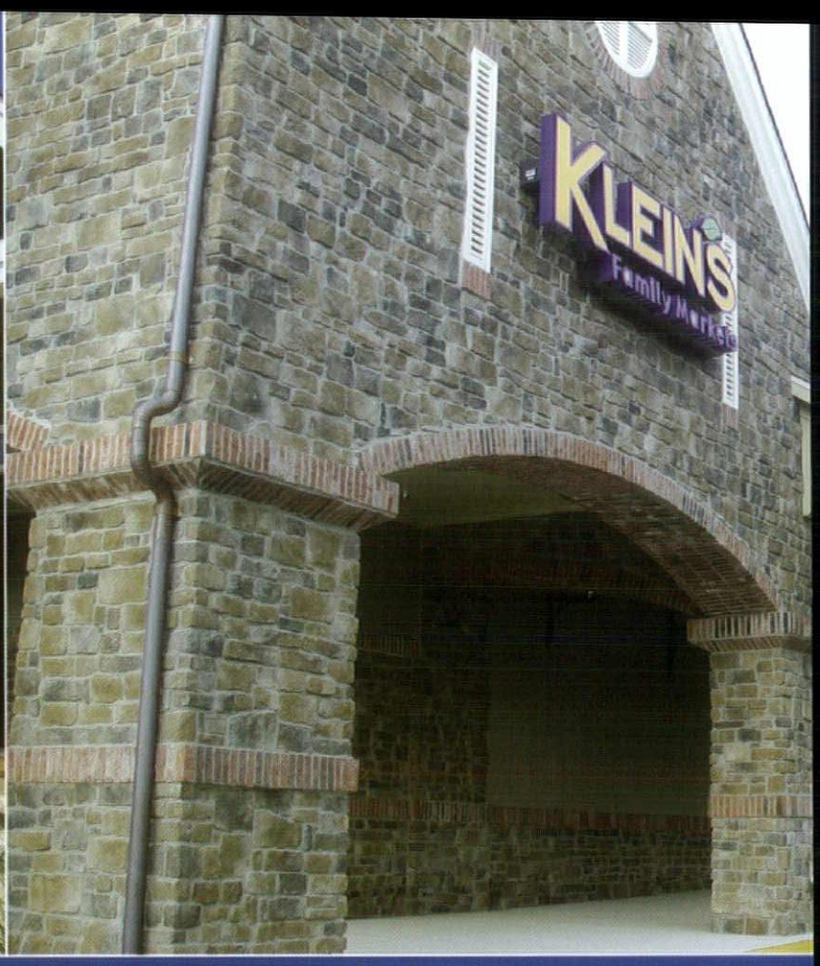
Some also feel that there is less incentive for the builder to control costs as the builder is getting paid a markup on every dollar spent. However Neumann noted that if a contractor doesn't manage costs and move the project along they won't get more work from his firm. "A contractor wants the owner and the architects to be happy so they'll get more recommendations," he said.

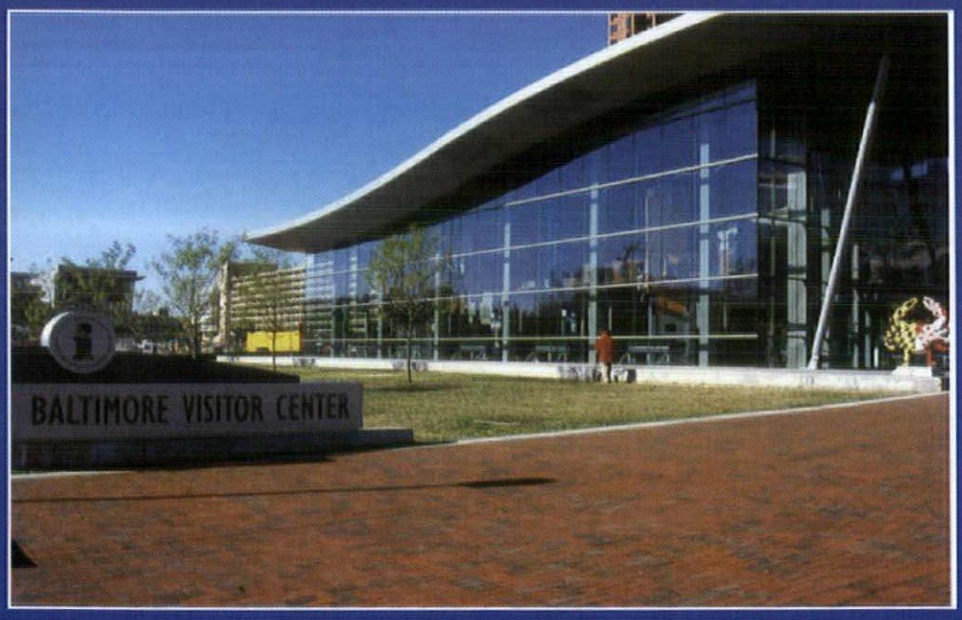
"The key to the success of either method, fixed-cost or cost-plus, lies in the amount of risk the owner is willing to take and pay for and the amount of experience the contractor and the architect have with the chosen contract method," said Neudorfer.

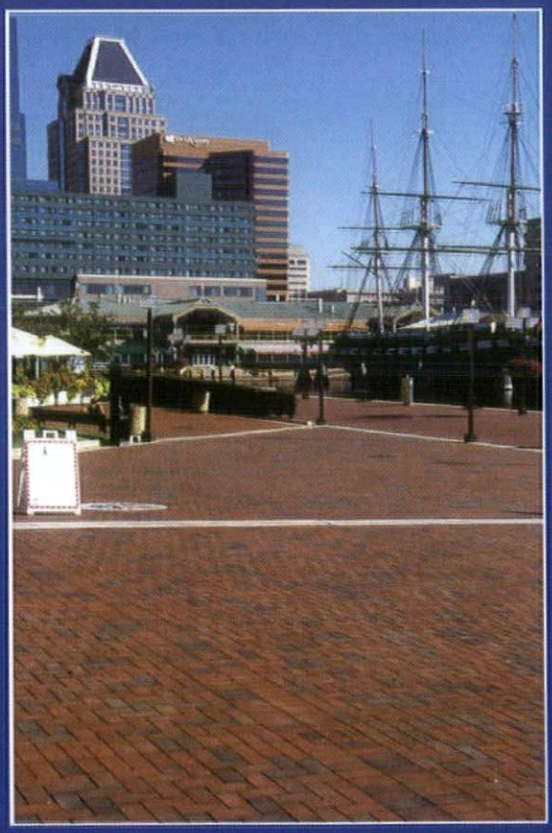
"Both approaches can be fair," Bohm added. "If the owner, architect and builder have a good partnership, you'll have clear communications throughout the construction process. That's the best way to manage costs for the owner, eliminate surprises, and deliver thorough execution of the architect's design." ❐

by Constance Whittington Helms
Whittington Helms & Associates, LLC cvwhelms@msn.com









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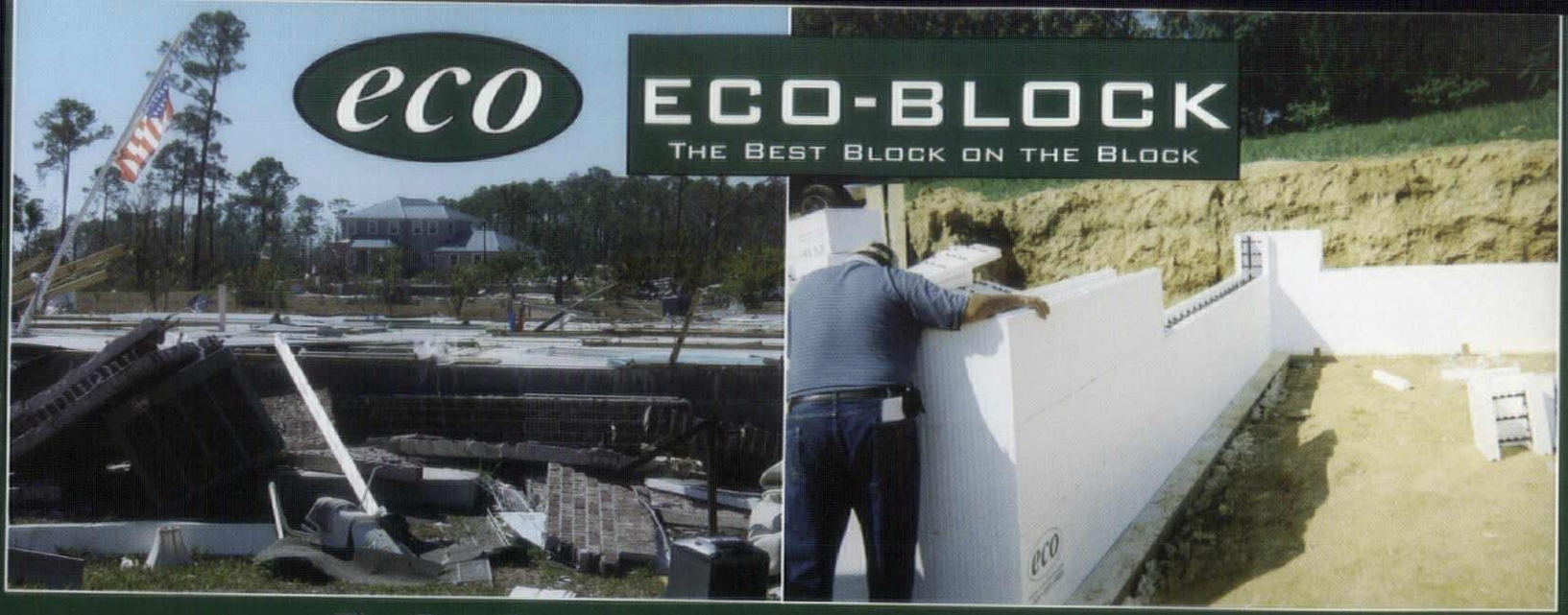

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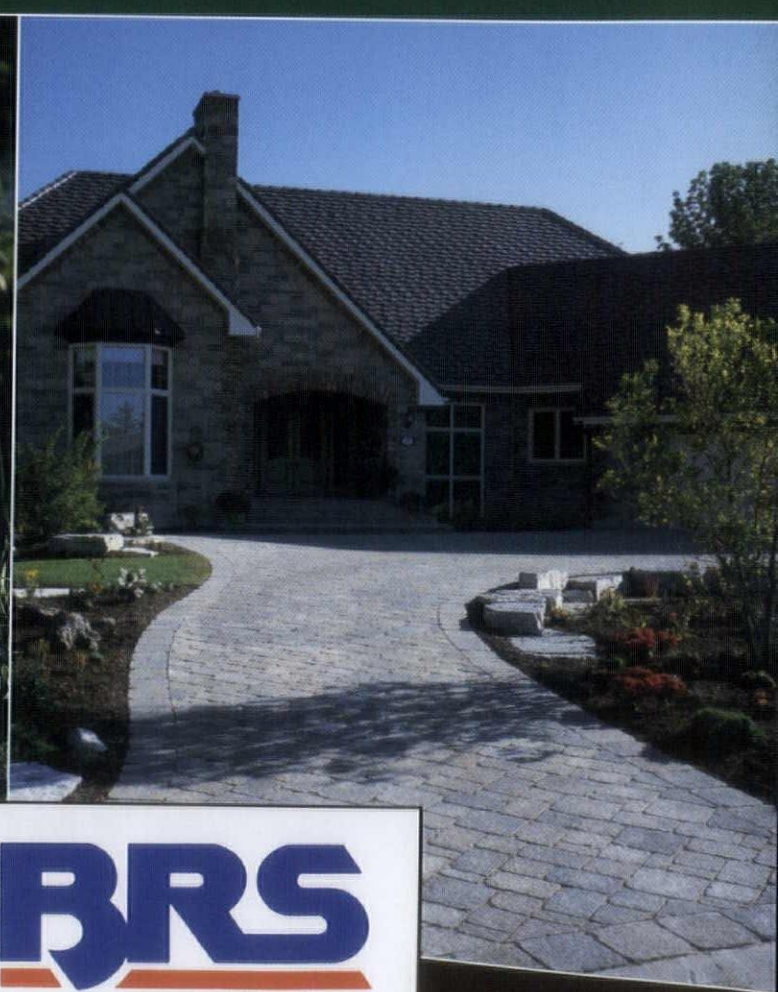

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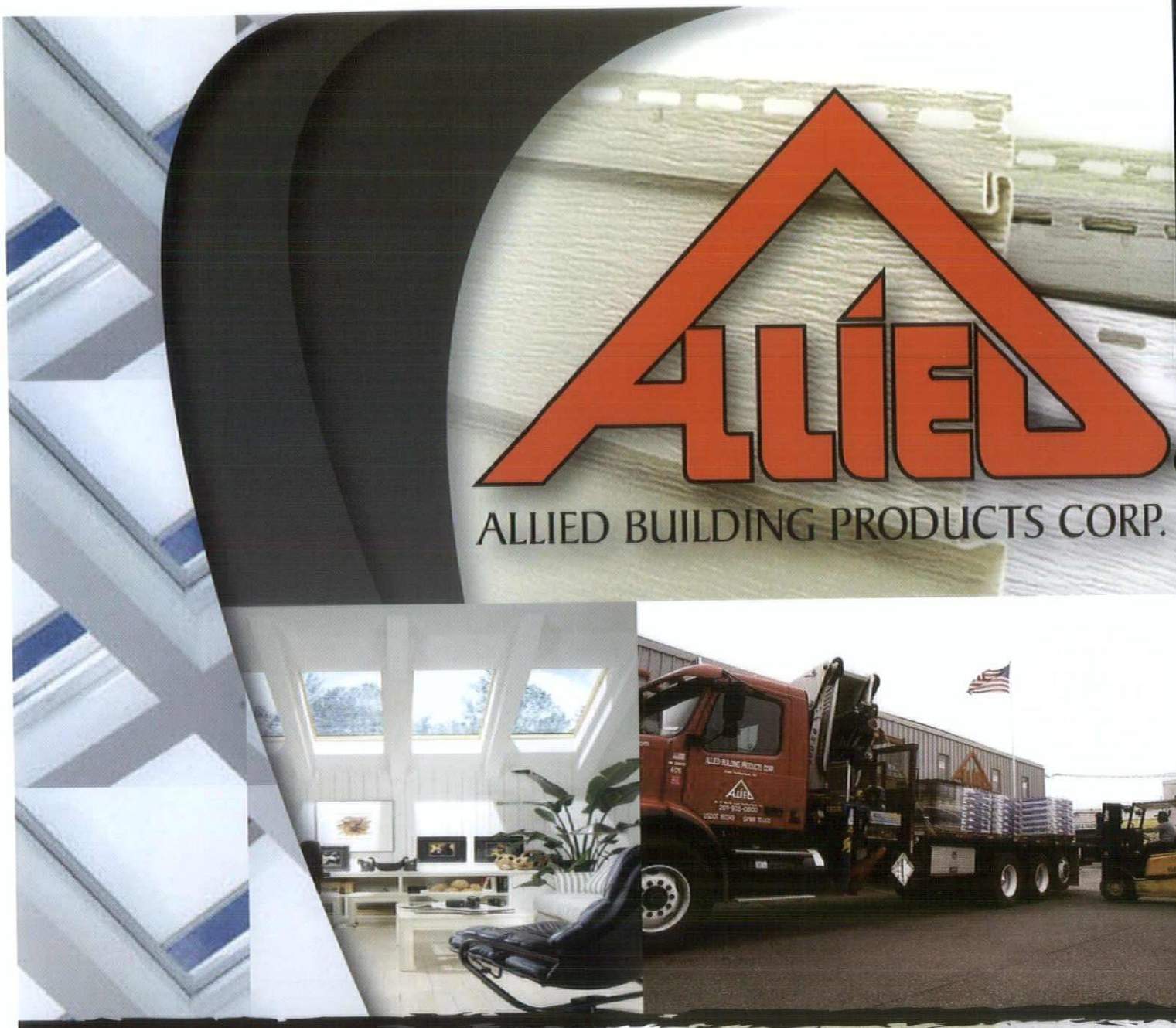

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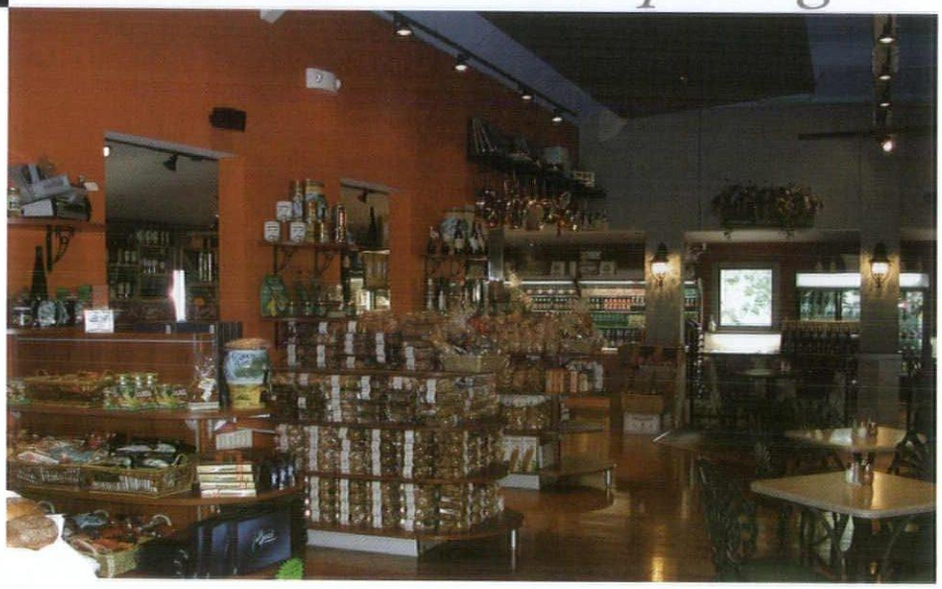

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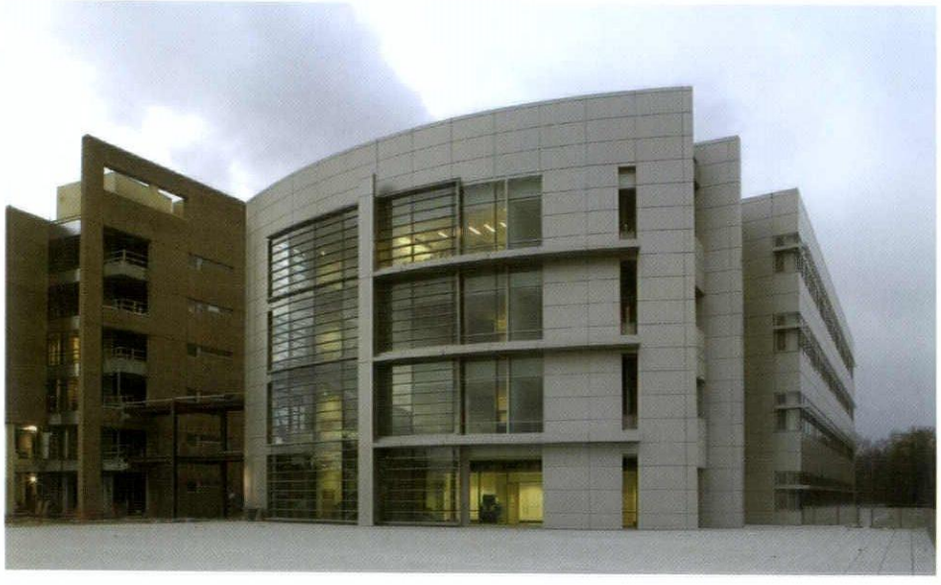

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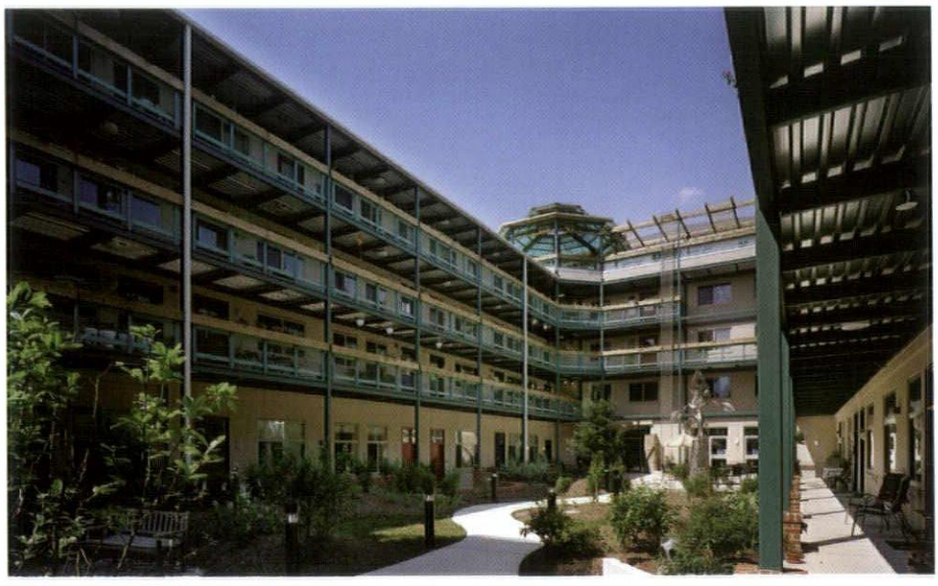

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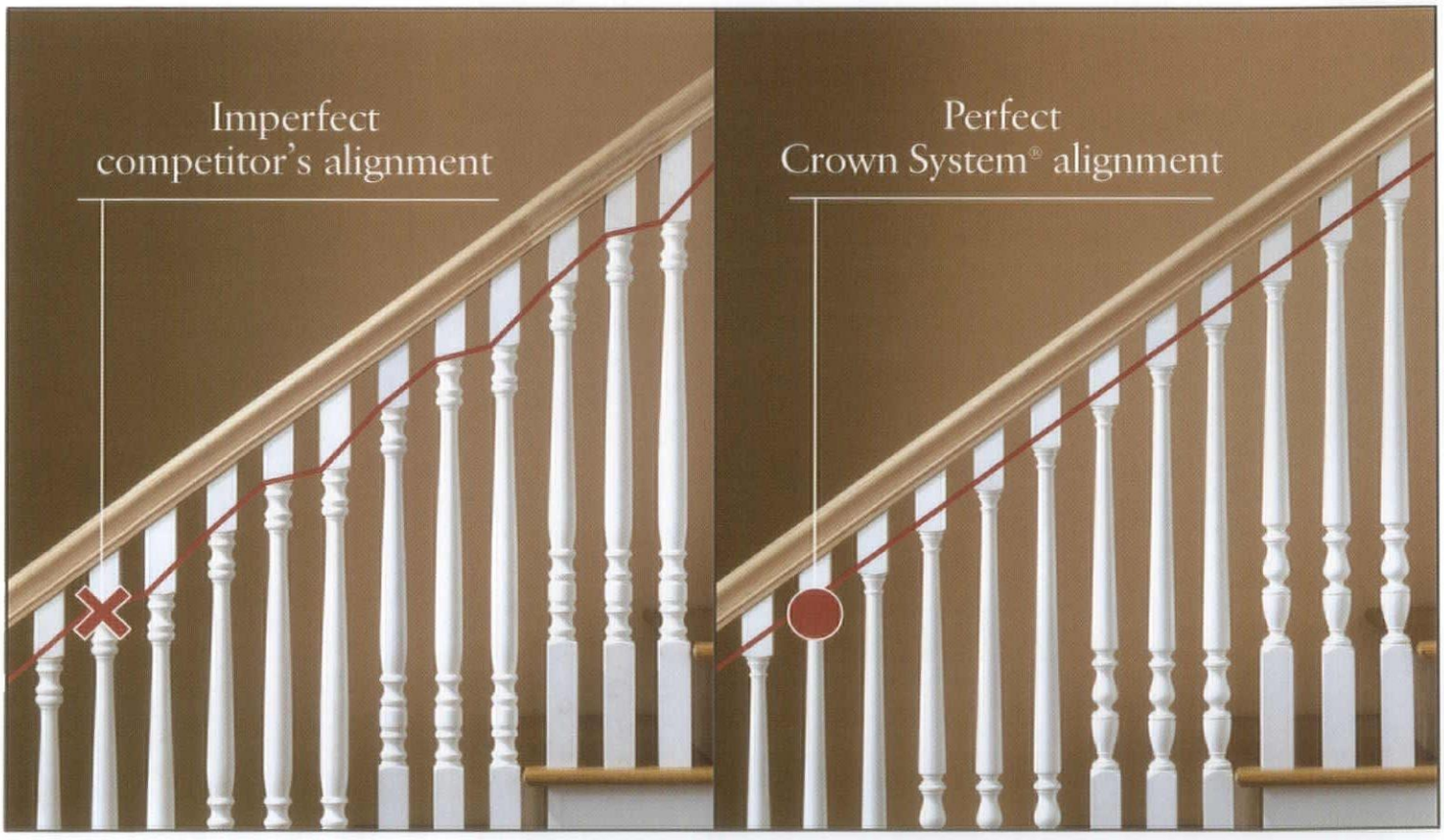

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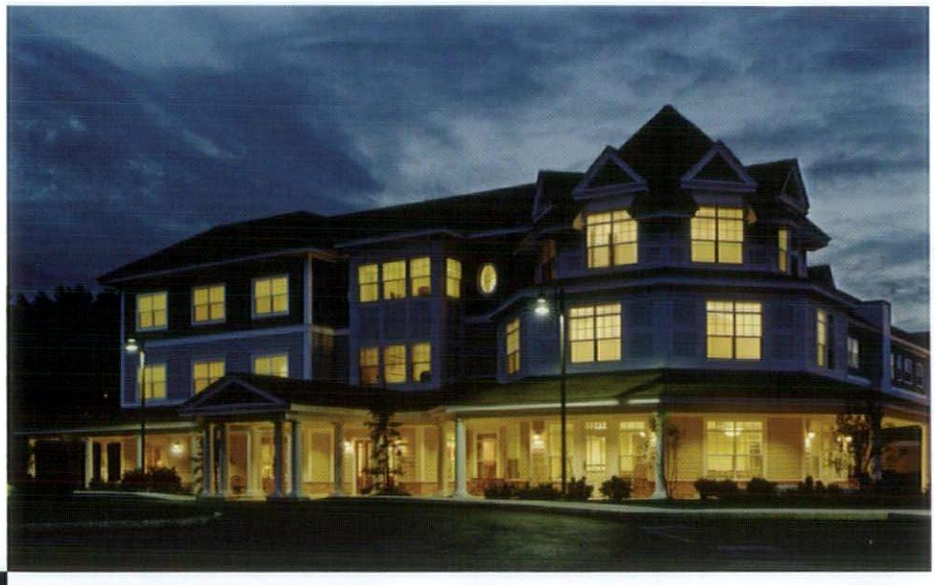

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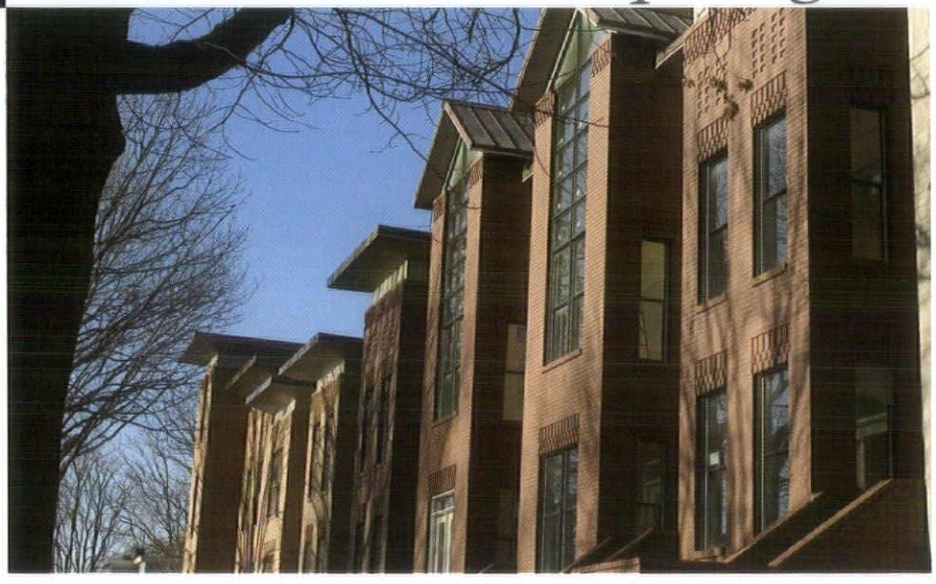

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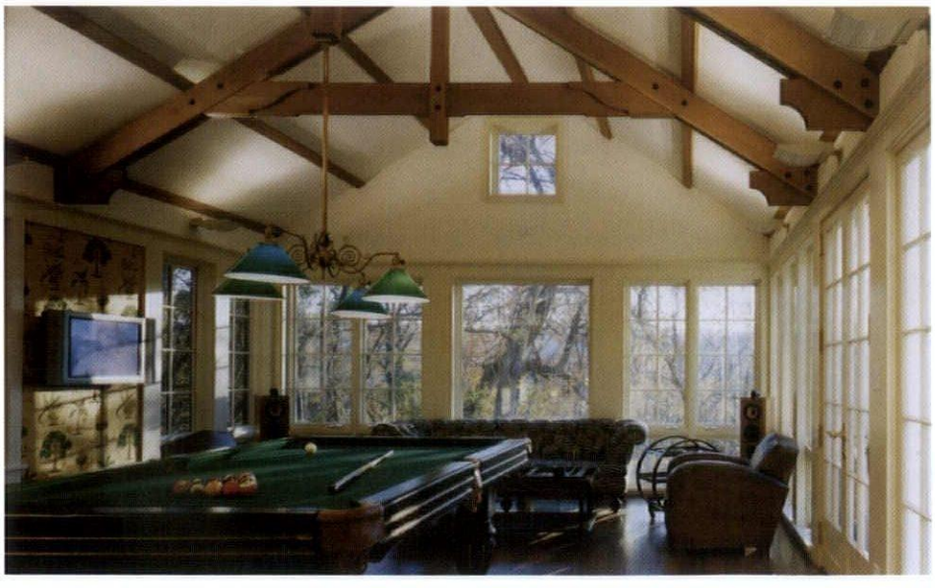

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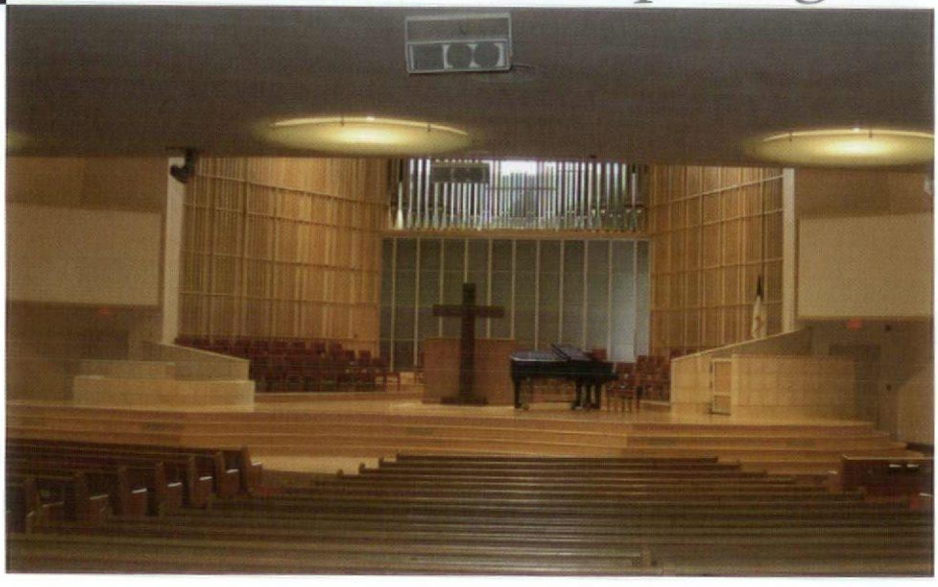

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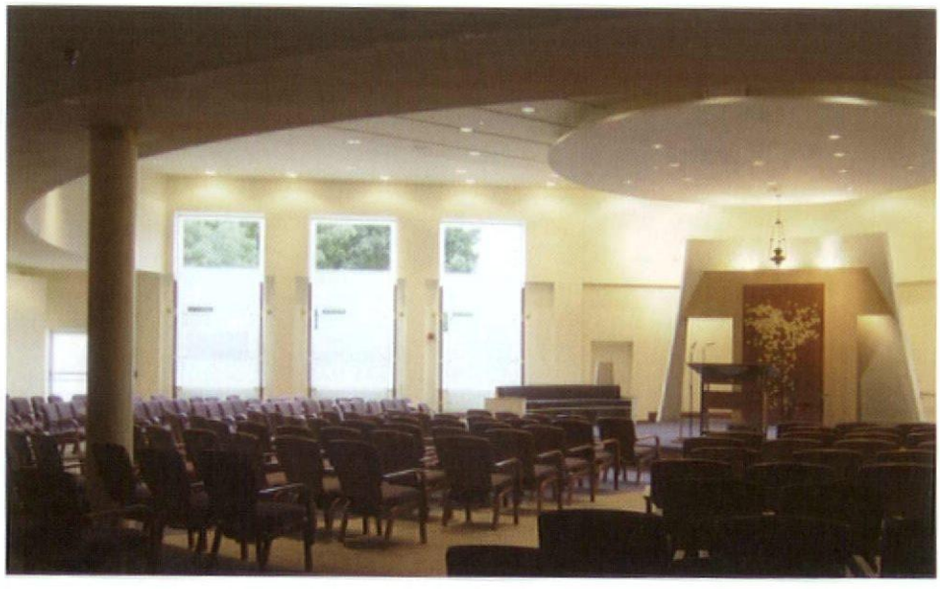

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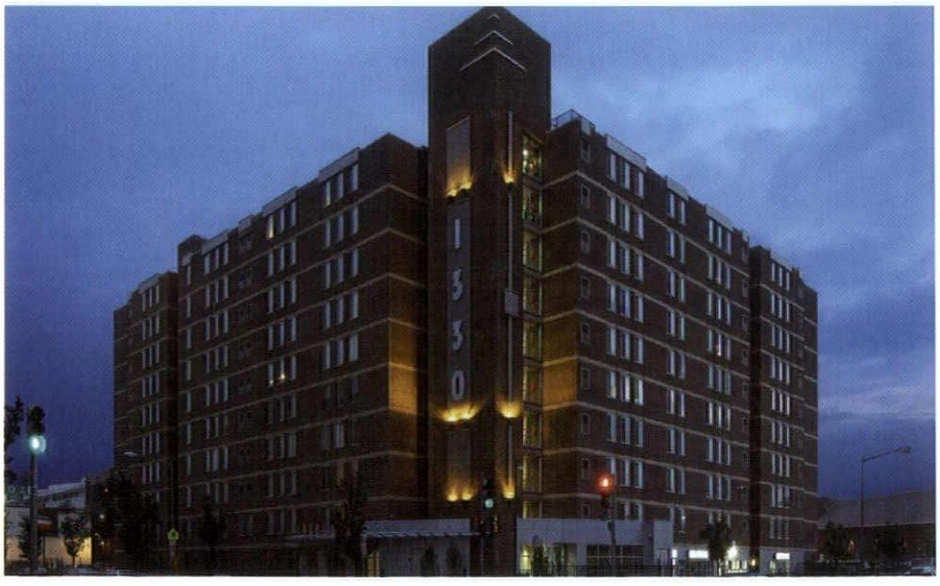

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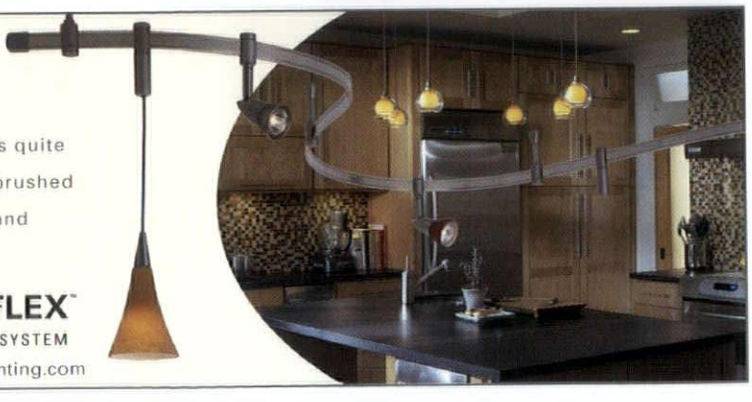

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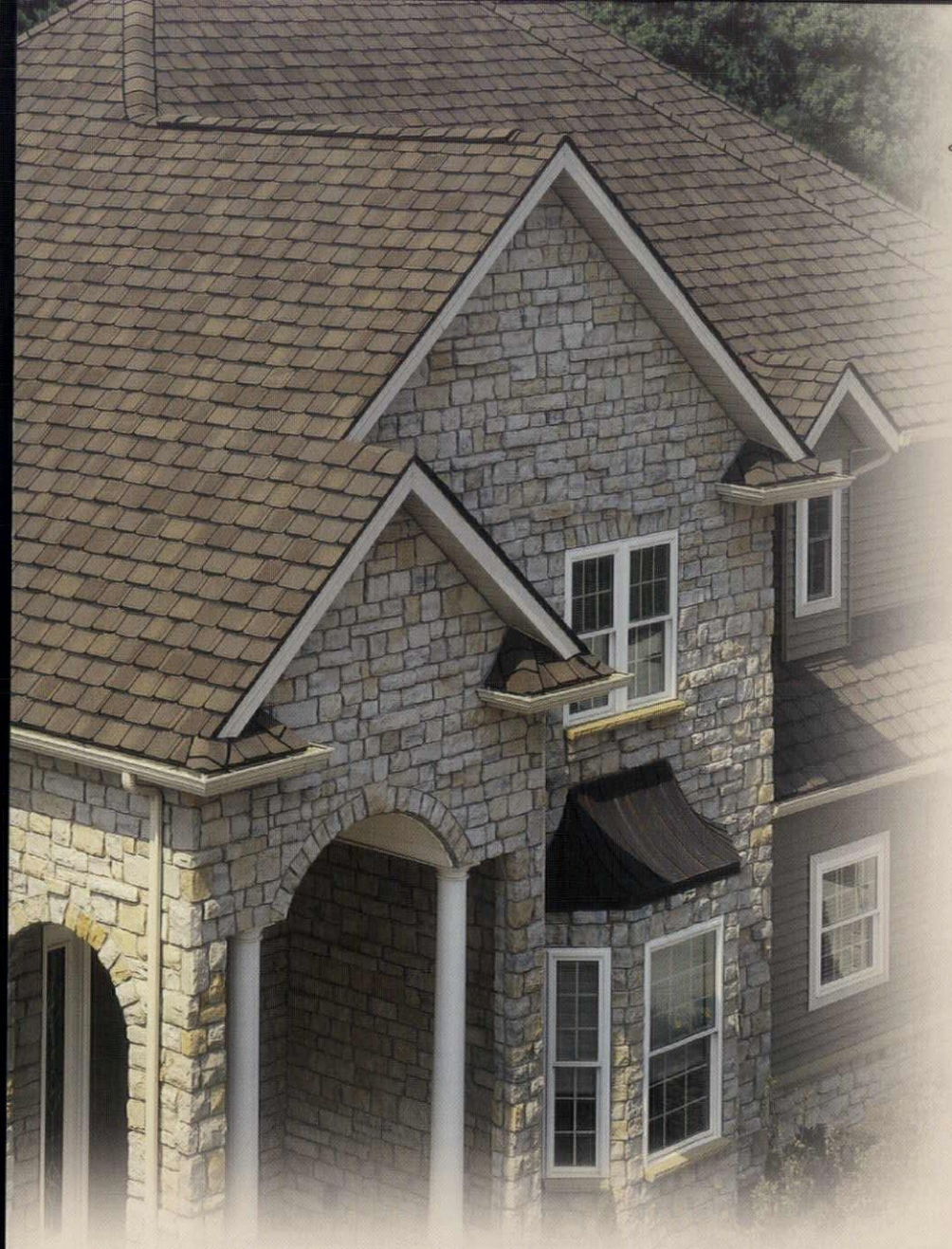

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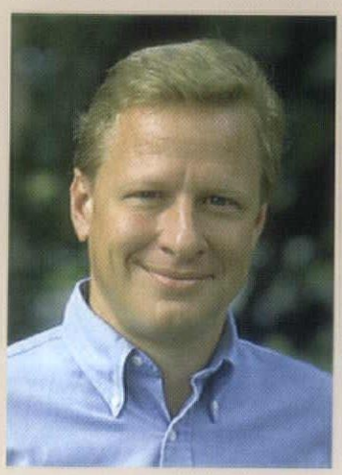

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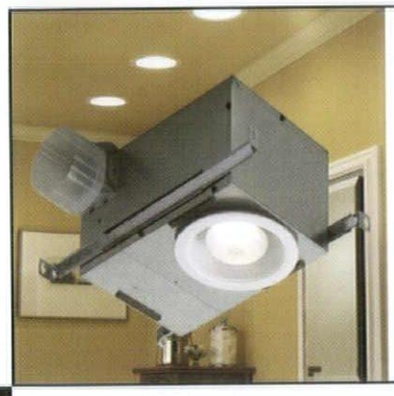

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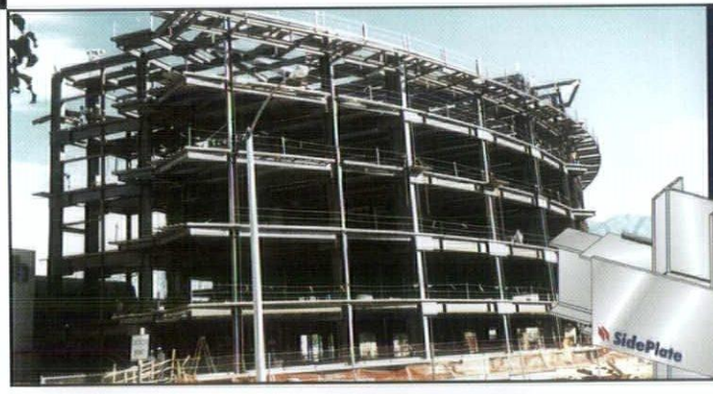

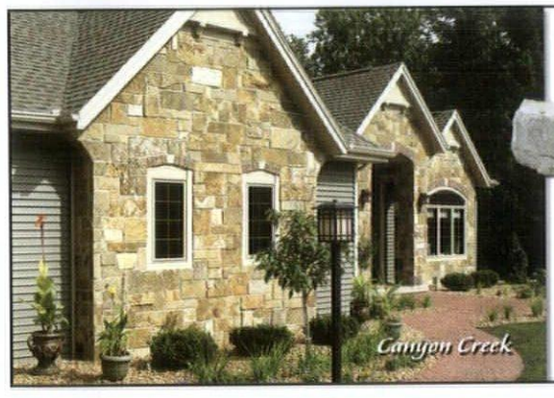

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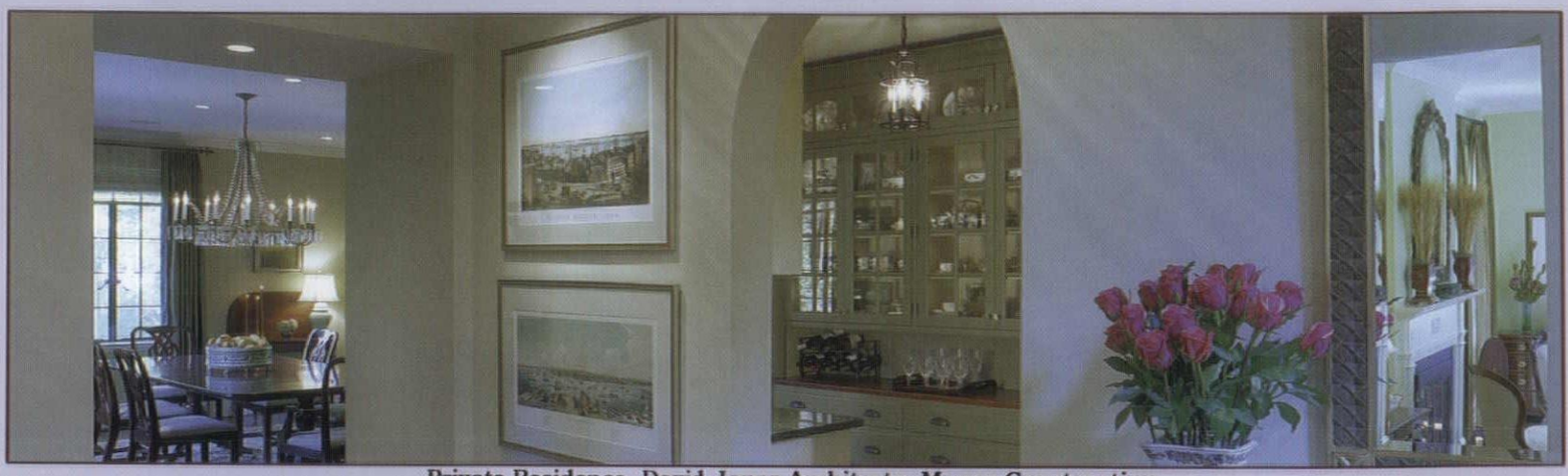

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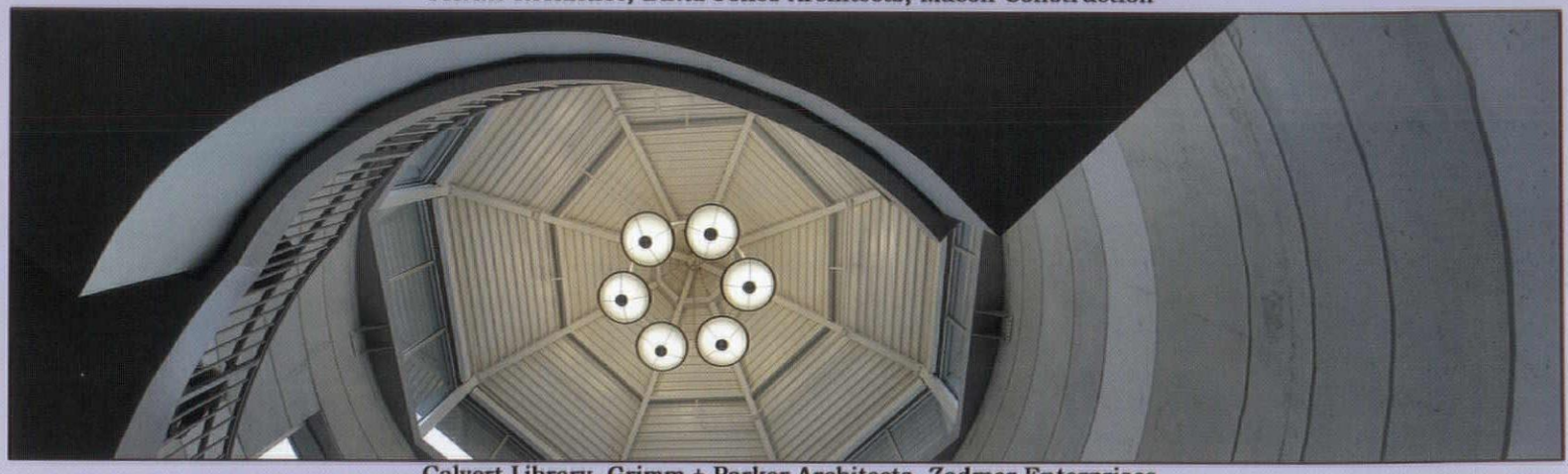

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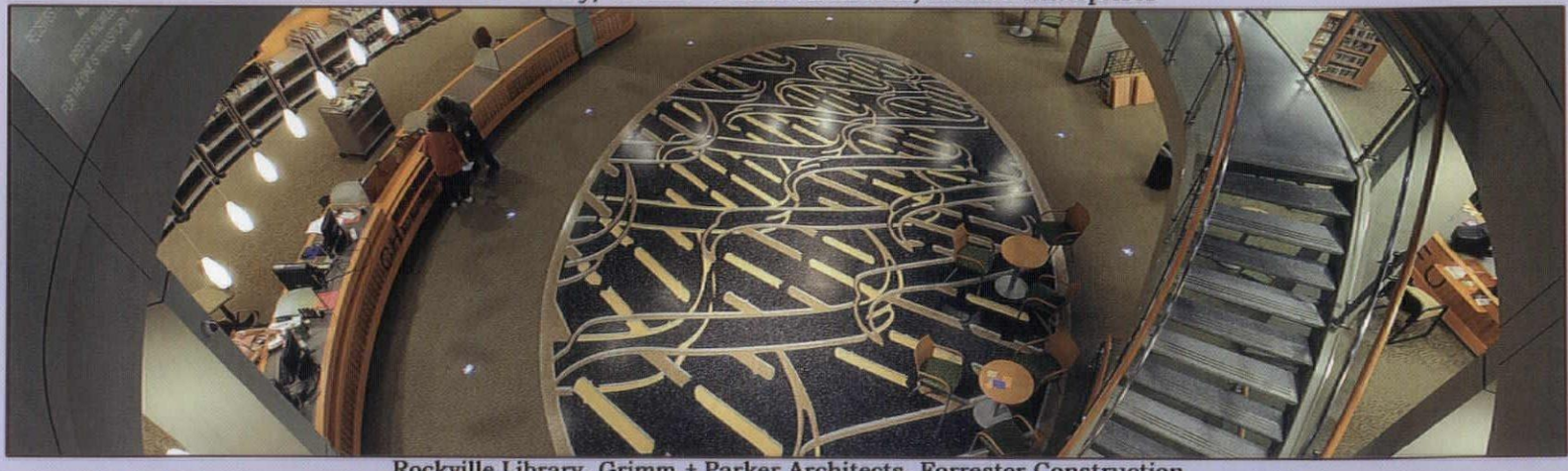

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When you add Kolbe's 5/8" pdl bar, history is recreated even to the smallest detail, which truly adds to the overall appearance of any historic project.

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