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Photo by Fred Licht and Timothy Dunford

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TRADITIONAL BUILDING TURNS 30!

Happy Anniversary! We're celebrating TRADITIONAL BUILDING magazine's 30th year this fall.

You might have seen a recent article in *Architectural Digest*, which declares that traditional building and classical design is "trending." Several of the professionals whose work we regularly feature were quoted in the story. The gist of



their remarks might be summarized "trad is rad." Here we are, come full circle from 1988, when Clem Labine successfully founded TRADITIONAL BUILDING, to serve a growing need for product and design information, aimed at professionals involved in historic preservation, restoration and renovation, and traditional new construction.

Labine knew then what is still true today: that architects, contractors, interior designers, and building owners need credible

and easy access to period accurate products and services. Readers often tell us, "If I see it in TRADITIONAL BUILDING, I know the product is appropriate and that the supplier understands my business."

Twenty years ago, in 1998, TRADITIONAL BUILDING expanded service to readers by launching traditional-building.com, which, in concert with the print magazine, made product research and supplier sourcing even easier. The TRADITIONAL BUILDING audience grew beyond paid magazine subscribers, reaching a wider audience with freely available information on the web.

Effective with our 30th anniversary, architects, contractors, interior designers, and building owners who qualify may receive a complimentary subscription to TRADITIONAL BUILDING. The news gets better. Effective with the October 30th anniversary issue, we merge sibling publication PERIOD HOMES with TRADITIONAL BUILDING to make one magazine eight times a year with broad content about the field—commercial, civic, and residential. We've added new departments, columns, and features—more insight, more product coverage, more projects. There might be new content but our team are traditional building enthusiasts who have been in the business or reporting on traditional design for many years.

Although we say good-bye to editor Martha McDonald as she retires this fall and thank her for her loyalty and dedication to the subject, we welcome Nancy



Berry as the editor of the publication. As the editor of *New Old House*, and *Period Homes*, she is well versed in the marketplace and will lead the charge along with Managing Editor Emily O'Brien and Editorial Director Patricia Poore.

We're upping our game, and intend to serve readers and advertisers for years to come.

My Best, PETER H. MILLER

CONTRIBUTORS



ERIK EVENS is a connoisseur of all things classic, and a master of details. An architect, and a partner at KAA Design, Erik oversees initiatives related to design, client development and strategic growth. He is a passionate sailor, inspired by the lines, craftsmanship and romantic allure of classic sailboats. As an architect, he considers the principles of classical architecture—symmetry, harmony, proportion, order, and above all, beauty—to be fundamentals of good design.



JUDY L. HAYWARD is executive director of Historic Windsor, Inc. and the Preservation Education Institute. She serves as education director for the Traditional Building Conferences Series and Online Education. She blogs and writes a column regularly for Traditional Building. Judy joined the adjunct faculty in 2018 at Kennebec Valley Community College in Maine to teach New England Architectural Styles and Building Construction online. She specializes in the development of educational programs for builders, architects and tradespeople.



2019 PALLADIO AWARDS CALL FOR ENTRIES SEE PAGE 85 FOR DETAILS.

Maybe it's not about the money...

Industry trade publications continue to ruminate on lagging home sales. Bold predictions of a rebound didn't pan out and in some areas optimism has turned to anxiety. The blame is placed on millennials who won't settle down, college debt, job insecurity, and stagnant wages—all of which undoubtedly play a part. I submit, however, that there is another fundamental reason why people aren't buying new houses: they are **ugly**.

The majority of houses built today are virtually unchanged from the houses of 30 years ago. In any other industry, this design stagnation would be considered negligent. Consider the Volga car. It was the standard made in the USSR during the communist reign, and its dominance in that captured market evaporated when markets opened up. The Volga was virtually the same in the 1990s as it had been in 1956. No one wanted a Volga when Mercedes and BMW became available.

The U.S. housing market offers the same unchanged models and wonders why they don't sell. A home mortgage being the commitment it is, buyers have to really want the house. Too many people would rather rent than own something uninspired or even ugly. I am certain that if homebuilders focused on design, quality, and sustainability—instead of upfront cost and square footage—a stream of buyers would be there. Offer beauty and the opportunity is huge.

—Brent Hull, Hull Historical Millwork

IN MEMORIAM

The world of architecture was downcast this fall by the death of Robert Venturi, who, with his wife Denise Scott Brown, led a revolt in the 1960s and '70s against the Modern movement. "Less is a bore," he stated in rebuttal to Mies van der Rohe's "less is more." Though a leader of the Postmodernist movement, Venturi said long after the revolt had been crushed, "I am not now and never have been a Postmodernist." He won the Pritzker in 1991.

His "gentle manifesto" of 1966, *Complexity and Contradiction in Architecture*, boosted him to the head of the counterrevolution against International Style modernism. But glass boxes festooned with ironic columns, arches and other embellishments were too contradictory to last. The Modernist establishment jiu-jitsued the revolutionaries by doubling down on its hatred of tradition. And yet, because of the opening fostered by Venturi, tradition slipped back into the practice of architecture, and with the aid of *Traditional Building*, classical beauty has by now vastly expanded its beachhead in the building arts. Venturi was 93. —David Brussat

FOR A REVIEW OF ROBERT VENTURI'S ROME, SEE PAGE 96







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INTERVIEWED BY MARY GRAUERHOLZ

Design Muse

Three of our country's esteemed architects talk about Classical Design, how their environment shaped their ideas, and where they find inspiration—and sometimes that elusive euphoria.







1 When and why did you become interested in Classical Design? Classical architecture was part of the post-modern debate and in the air while I was an undergraduate student from 1973 to 1978. It was implicit in the work and teaching of Michael Graves during my graduate studies from 1980 to 1982, and it finally took root in my own practice when I took a job at Parish-Hadley in 1984.

2 What or who was your first inspiration? I grew up on a family farm surrounded by farm buildings and orchards (in Elk Township, New Jersey). The varied buildings gave me a sense that building form was a function of use, materials, and customs. I sensed that the space around the buildings and its relationship with circulation paths, boundaries, and varied landscapes was just as important as the organization of space within buildings. I think the place hardwired my brain for architecture.

Leon Krier lectured at my school in the mid-1970s. The clarity of his think-

"I derive more pleasure from the journey than the destination."

MARK FERGUSON PARTNER, FERGUSON & SHAMAMIAN ARCHITECTS, LLP New York City FergusonShamamian.com

ing, the inventiveness of his designs, and the beauty of his drawings were hugely influential. He continues to be one of the most talented and important architects alive.

3 What is the most influential design book you have read and why did it affect you? The first architecture book to capture my imagination was the *New York Five* in my second year of school. The work was beautiful and complex, based on simple, pure forms. I wanted to emulate it. The essay by Colin Rowe introduced me to his work. His insights have stimulated my thinking for my entire career.

Another important discovery was the *The Architecture of Sir Edwin Lutyens*, a three-volume monograph. I purchased the reprint as soon as it was available in 1984 and have poured over the books ever since. He was one of the most naturally gifted architects to practice in the 20th century.

4 Have you felt euphoria upon completion of a project? What was it about your best experience that makes it so memorable: the client, design, setting, circumstance, or simple kismet? Finishing a project is pleasantly satisfying, although it leaves me with a few things I would do differently next time. I derive more pleasure from the journey than the destination. Sites, clients, and fellow designers are all essential to creating a stimulating process.

5 *If you had one piece of advice for a fledgling architect, what would it be?* Good work depends on people skills as much as it depends on design skills.



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"I find inspiration in the composition of firmness, commodity, and delight. I refer to it all the time."

RUSSELL WINDHAM

town, in really wide open spaces. Any sense of enclosure was exciting. I also

grew up with a shop and worked with

my hands to build things: lots of barns

and utility shelter for livestock. So I had

this sense of how things go together, and

My frustrations with architecture teachers led me to the library. I remem-

ber the first time I saw Leon Krier's

work and read his argument about the

city and its design. It spoke to me; it was like a breath of fresh air. I finally had

something that I could use to ground my argument. This is when the light went

off for me and, hence, Classical Design

2 What or who was your first inspira-

tion? Leon Krier's work was very inspi-

rational. Later, through books, I began to learn of the shingle style houses in

the Northeast. It was amazing how fluid

rectangular, natural materials could be

the beauty in craft.

principles.

-RUSSELL WINDHAM

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3 What is the most influential design book you have read and why did it affect you? I rely on books; we use precedent all the time. I am a firm believer in the tradition of architecture. Here at Curtis & Windham, we have more than 3,000 volumes and use them regularly, so it is difficult to determine the "most influential." To pick one, I would have to go with Vitruvius's The Ten Books on Architecture. Its description of architecture is alive and has just as much meaning today. I find inspiration in the composition of firmness, commodity, and delight. I refer to it all the time.

4 Have you felt euphoria upon completion of a project? What was it about your best experience that makes it so memorable: the client, design, setting, circumstance, or simple kismet? Interesting question. I feel great about every project. Sometimes it is something simple, like a beautiful proportion, scale, or detail. I think completing a project and feeling euphoria happens when all components come together: a happy client, the project on time, and a really beautiful building. It's great working on houses because the client is really there all along; it is great at completion when they feel like they are part of the success.

We completed a dining hall for a local private school. The school had great expectations, but I don't think it had a real grasp of the building and the surrounding campus that we had planned. So to see that client as well as the users be excited was just incredible. I still enjoy visiting the project just to see how kids and family admire the architecture.

5 If you had one piece of advice for a

fledgling architect, what would it be? Find a firm whose work inspires you the most. Do everything you can to get a job at that firm and work more than they allow. I believe the first three years of a young architect's career are the most vital. Learn how to think about architecture from a master: practice and practice more. It is one thing to conceive of architecture in an ivory tower; it is something completely different to create beautiful, functional, and responsible architecture.



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"I think some of my most memorable and best project experiences have been because of extraordinary clients."

-GIL SCHAFER III

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1 When and why did you become interested in Classical Design? I became interested in architecture at a very young age, and never realized until I went to architecture school that people differentiated between classical and modern design-I had just thought it was all design and thus all worthy of interest. I didn't realize that I would pursue Classical Design in my career until after I got out of school and it became clear that approaching my work from the foundation of tradition resonated more with me. It felt more connected to the way I grew up-to the kinds of houses and places I knew growing up.

2 What or who was your first inspiration? I think those houses I knew and lived in growing up— all of them more or less traditional and some even fairly classical—were what first inspired me. I seemed to innately understand them and the qualities that made each of them unique and special. It also helped that I had a grandfather who was an architect and a stepmother who was an interior decorator, so matters of design were always in the conversation growing up.

3 What is the most influential design book you have read and why did it affect you? Oh gosh, there have been so many, from Robert Venturi's Complexity and Contradiction in Architecture to Charles Moore's The Place of Houses, to monographs of Lutyens, Charles Platt, and David Adler. That first book from the 1970s about David Adler's work really showed me that houses could be elevated to a high art, yet still be livable and have charm. And it showed how key his collaboration with his decorator-sister Frances Elkins was to many of those houses having such a unique sense of style.

4 Have you felt euphoria upon completion of a project? What was it about your best experience that makes it so memorable: the client, design, setting, circumstance, or simple kismet? Oh, I feel the euphoria, always. And, at the same time, a great sadness because it means you are, in a sense, giving up your child to someone else to raise. But there is nothing more wonderful than that moment when your client walks into their house for the first time when it is fully complete, furnished, books in the shelves, paintings on the walls, flowers in the vases, and seeing that look of wonder in their eyes-and the realization that this is where they are now going to live.

It all starts with the client, doesn't it? Without them, there is no project. I think some of my most memorable and best project experiences have been because of extraordinary clients—people who were themselves inspired, had great vision and great taste, who pushed you to do something you hadn't done before, and who trusted you. The architect-client relationship is a funny one because it is so intense, for a relatively short period of time. But I've found that the best ones endure for your lifetime.

5 If you had one piece of advice for a fledgling architect, what would it be? Have patience. The younger generations have come of age in a time when everything is instant. But architecture just takes time. As a design process, it takes time, and as a construction process it takes time. And the things you learn that make you a better architect are an accumulation of knowledge from those often years-long project experiences. I found it is hard to rush the accumulation of that knowledge, which I realize is an especially alien idea in a time when Amazon can now deliver your order in a couple of hours.



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BY JUDY L. HAYWARD

The Word on Wood Windows

Practicing proper maintenance techniques will increase the lifespan of your wooden windows.

hether wooden windows are old, new or historic, there are some simple steps to help extend their life. The objectives of a sound maintenance strategy are to keep water out of the windows in the first place, and to make sure they dry out if moisture accumulates despite the best efforts at thwarting it. Excessive moisture will accelerate decay.

ANNUAL CLEANING

"We should clean our windows once a year just because it feels good and they look so good when freshly cleaned," says Sally Fishburn, President of SA Fishburn, Inc., in Danville, Vermont. Fishburn is a graduate of the prestigious North Bennet Street School Preservation Carpentry program and for more than 20 years, she has specialized in wood window restoration and reproduction. Cleaning, she says, gives the owner or craftsman tasked with the job, "an opportunity to inspect each window annually." Start by vacuuming the windows, screens, sills and casings. Use a HEPA vacuum if lead dust is present. Wash all the wooden elements of the sash and frame, inside and out. Use a mild solution of dishwashing detergent or a linseed oil soap and rinse with clean water. Glass cleaner and cleaning clothes are all that are needed for the panes of glass. Wash the window panes after washing the windows.

It is best to work on a day with low humidity. If the windows are operable, open them and let the air move. Opening only one sash should do the trick. If you use screens throughout the summer, this will effectively dry the windows out before the next heating season as well.

CREATE A WINDOW INVENTORY

Prepare a list or inventory of the win-

dows and give them a direction, number and location. For example, a first-floor southern exposure window—working from left to right—would be labeled S1-1, S1-2, etc. Make a sketch or take a photo of each side or elevation and label it. Eventually you can transfer this list to a spreadsheet and keep notes from year to year. This will help you document changes, problems and successful care strategies.

THE INSPECTION PROCESS

Look for peeling paint, fissures in the wood and missing elements, cracked glazing, or broken windows.

If you observe peeling paint and fissures, the time to fix them is right then. Remember that paint may be decorative to you or the owner, but it is really protecting the wood from UV degradation. A good sound coat of paint is important. Unfinished wood will lose 1/16th of an inch of material every 25 years on average. Glazing and wood must be painted; it protects the weather seal on the window, but Fishburn prefers not to paint the wear surfaces on the edge of the sash. She says some craftspeople do, and it is a debatable point. She doesn't like to paint the bottom of the bottom rail. She likes to allow moisture to move through the wood. Some craftsmen prefer to seal everything equally.

If you are going to repaint, take the windows out of the frame and allow them to dry or cure before reinstallation in a stable environment for two weeks. Don't fill the gap between the sash and frame with paint. Sally prefers oil-based paints because they have a harder finish and they facilitate sliding better with less friction. Waxing the edges of the window during annual cleaning will make them





Steps for Good Window Maintenance

- Perform an annual cleaning and inspection.
- Open all windows at least once a year on a dry day.
- Create an inventory and assign a code to each window based on location.
- Touch up paint.
- Fix fissures and nicks when they are relatively small.
- Wax window edges during the annual cleaning.
- Reglaze if more than 30 percent of the window glazing is damaged.



slide up and down better. A couple of waxes work well: Butchers bowling wax or a carnauba wax. "Maintain the finishes; the sun is at work everywhere," cautions Fishburn.

CONDENSATION

If lots of condensation and ice build up on the primary sash during the winter, a couple of tasks should be addressed. Either the primary sash or an interior storm (if present) should have the tightest fit to prevent warm air from accessing the cold glass. Exterior storms need weep holes to allow the moisture to evaporate. Also, notice where the water gathers: the top of the meeting rail and the bottom rail of the lower sash usually collect the most moisture and that can accelerate decay. Weather stripping and repairing damage to the sash can help to remedy these problems. Where can the water go and where can it get stuck? Can it evaporate or drain?

A FEW WORDS ABOUT LEAD PAINT

If the windows have not been tested for lead content, it is a good idea to get a professional test. The lead test kits available in hardware stores can be helpful, but are not legally recognized, and depending on the function of the building, that may be a concern. With a professional test, you may find that the lead content is at a permissible level. Stringent laws apply to rental housing and childcare facilities. It is best to check with state health departments about state regulations and visit epa. gov for federal laws. Anyone working on old buildings-should take a lead RRP course. The course provides important information about documentation, leadsafe work procedures and requirements for using RRP-certified professionals in specific situations.

If one finds that the friction surfaces have been painted already; it raises some concerns for lingering lead paint. Lead can still be present even if it has been stripped away previously. The EPA has determined that if the wood fibers contain at least one milligram per square centimeter, then lead safe work practices must be followed. If there are concerns about lead dust from the wood that is worn down, consider painting the surface so that the paint becomes the friction surface. Priming with a different color is a means to alert an owner that the surface should be recoated before reaching the lead-containing fibers below.

STORM WINDOWS

Do you have exterior storm windows?

ABOVE Alison Hardy launched her business, Window Woman of New England, in 2003 to preserve historical windows. To date, there have only been two windows that she could not salvage.

If so, they must have weep holes on the bottom rail to allow moisture to escape. All the storm windows should be opened on a dry day and given some time to dry. In the 19th century, many wooden storm windows featured an adjustable vent on the bottom rail. If you have storm windows with such a device, use them. Interior storms should be removed annually for the cleaning and air-drying process, too.

With a little effort, wooden windows can look better, perform better and last longer.

HISTORIC MATERIALS

Introducing Scagliola

Scagliola

an artful Italian technique for

columns, had a revival during

the Victorian era through the

1920s. Because it is cementi-

the touch than paint-marbled

wood. In marezzo scagliola,

casting make it a credible

match for the real thing.

tious, scagliola is colder to

creating faux marble, as for

A venerable technique has plaster posing as marble.



Scagliola in Toronto's Romanesque Old City Hall, 1889–99, designed by E.J. Lennox. Note in the closeup (right) that the base has joints, indicating it is made of real stone. The scagliola is missing material from an impact; the cracking shows it is scagliola, not stone.

A Brief History. Materials similar to scagliola can be traced back to ancient civilizations: in Egypt, for coating walls in tombs; in Greece, for lining aqueducts; in India, for finishing the interiors of domes.

In its modern iterations, scagliola is associated with Italy, where a key ingredient—selenite, a crystalline form of gypsum—is mined in the Apennine Mountains. Scagliola, the use of plasters to imitate marble, is attributed to Guido Sassi of Cari, Italy, who, working in the early part of the 16th century, introduced more colors as well as pieces of marble and alabaster to make the material harder.

The Material. Scagliola may be mistaken for fine stone, such as marble, lapis lazuli, or malachite. It can, however, be distinguished by its temperature when touched, as it feels warmer than stone. It sounds more hollow than stone when tapped. Scagliola is made from a mix of Keene's cement (industrial, double-fired, quickset gypsum) and "size water," a Scotch glue and water solution, to which lime-proof fresco pigments are added to provide color. The cement and glues both set up extremely hard, resulting in the final material being stone-like in composition and appearance. There are two types of scagliola: traditional scagliola, and marezzo, or American, scagliola.

Traditional scagliola starts with placing knobs of the pigmented plaster on a stone working surface.

It is then sprinkled with veining colorant composed of dry and crumbly gauged plaster mixed with stone dust. These materials are repeatedly lumped together and cut, resulting in the appearance of veining. The final lump is pressed tightly into a mold to form a loaf, and sliced. These slices are applied over a base of brick, wood, or plaster, about 1/8" more than the desired final thickness to allow for dimensional loss during polishing. To ensure its keying into the substrate, the slices are beaten onto the base with a flat mallet and gauging trowel. The surface is finished to its final smooth appearance by the polishing process described below. Marezzo scagliola dates to the 18th century, and often is used for covering large, flat areas. This process involves silk threads soaked in colored dyes, placed on a glass sheet over which wet pigmented plaster is placed. Veining is created by the threads being drawn through the plaster, leaving colored trails that mimic marble veins. Once the plaster is partially set, it is transferred to the base by pressing the plate to the wall, leaving a smoother top surface than does traditional scagliola.

Both techniques employ a polishing process, which starts by honing with pumice stones and continues with several rounds of honing with a fine-grit Water of Ayr stone (or its modern equivalent) and damp sponges.

The next stage is "stopping," during which a slightly set gauged cement mix is brushed over the surface to fill tiny holes and voids. As it dries, it is scraped off with a sharp-edged wood scraper. This is repeated several times. Once the last stopping coat is fully hard, a final application is wiped off with a damp rag. The final step is polishing with putty powder (oxide of tin) using rags and pure linseed oil and, sometimes, wax. The traditional finish is easy to maintain and will withstand gentle wear and tear.

It is important to differentiate between the methods only when repairs are required, since each requires a different approach.

Assessment. Prior to repairs, engage a qualified consultant. Only professionals can differentiate between traditional and marezzo, identify the nature and cause of deterioration, and perform repairs correctly. Drawings made to itemize all repairs should illustrate patterns of failure to inform causes and solutions. As always, the underlying cause of failure must be addressed before repairs are made.

To ensure a correct color match, clean a small area in an inconspicuous location to reveal the true color and. A set of samples targeting the original appearance should be prepared on boards, cured and polished, to compare with the cleaned original. Each sample will have its own recipe, and the final repair will use the exact recipe from the sample selected.

Repair. While durable, scagliola requires expert craftspeople to repair it. Repair materials must be compatible with the substrate, or the scagliola could be further damaged by new stresses, chemical reactions, and staining.

To address missing material, clean away any damaged area, leaving the perimeter beveled towards the missing area. Rout out cracks with the floor of the gouge wider than the top. In both cases this slanted sidewall permits a good key between old and new material. For traditional scagliola, the material is applied to the crack in loaf form, ensuring that the grains match and the surface levels are marginally proud of the adjacent material. For marezzo, the crack ispartially filled to within 3/16" of the finished surface and roughed up. Then colored threads are laid into the crack, matching the adjacent veining, and colored plaster is applied to slightly proud of the finished surface. The threads are drawn through the wet plaster to create veining, before curing.

Where scagliola has separated from the substrate, acrylic lacquers applied behind the scagliola, or injection of epoxy resins through the front face, can reattach it to the substrate. This work should be undertaken only undertaken by professionals.

Cleaning. Hand grime, or yellowing caused by a subsequent coating, frequently mar the appearance of scagliola. Removing grime and restoring the original finish is a simple if labor-intensive process. Scagliola historically had a finish coat of linseed oil or, in more recent installations, blond flake shellac, paraffin oil, styrene, or polyurethane. Modern coatings are not advisable, as they are difficult to repair later, and those repairs result in the removal of more historic material when they fail. When removing an inappropriate coating or deteriorated finish, use careful, mechanical methods in lieu of solvents, which can harm the scagliola. Once the coating is removed, a new stopping coat will restore the original luster.

FROM LEFT: Bianco Bianchi; courtesy EverGreene Archite

Arts

SUSAN TURNER is a Canadian architect specializing in historic preservation of national registered buildings. She is the Director of Architecture for The Tradesmen Group, a restoration contractor specializing in the repair and preservation of historic buildings. She can be reached at sturner@tradesmengroup.com





Damage & Deterioration

While scagliola is remarkably durable, its shallow depth makes it fragile to impact and movement.

- A blow or impact may break off a portion of the material.
- If the substrate moves or cracks (due to seismic activity, building settlement, etc.), the scagliola may crack, just like finish plaster.
- Excessive moisture or humidity causes delamination. Because scagliola contains gypsum, it is hygroscopic. Moisture causes swelling, which may force the material to separate from the base. Moisture may cause portions of scagliola to dissolve and flake or effloresce.
- The surface may yellow due to hand soiling, exposure to ultra-violet light, or coatings later applied.

ABOVE The *impasti di colore*: knobs of pigmented plaster are sprinkled with veining colorant.

LEFT Ports are drilled into scagliola for the injection of adhesive, which will secure the scagliola finish to the substrate. The Co-Cathedral of St. Joseph in Brooklyn was built in the Spanish Colonial Revival style in 1912.



Craftsman Doors 101

Learn about best practices when it comes to building doors for historic structures.



Period Architecture specified this historically inspired custom door for a home in Pennsylvania.

I n 25 years of building doors at Hull Historical Millwork, we have made nearly every mistake possible. The wrong wood, the wrong technique, bad execution; whatever the mistake, we have made it. We have also made good decisions in projects that still failed. The truth is, it isn't easy to build wood doors—residential or commercial—that last 100 years.

Use, exposure, and abuse all contribute to determine a door's life. The good news is that after years of success and failure, we have learned that by focusing on three key attributes, you can build a historically accurate door that functions well for decades.

Wood doors are terrifically challenging, whether they are new or historic: Rotting wood, cracked panels, fading paint, and loose joints are all plagues on their integrity. Modern hardware does not help door life, either. Door closers can wrench and wrack doors, while panic hardware can weaken key areas of a door's joinery. These challenges are the reason many large manufacturers have turned to plastic and composite-wood materials, not a perfect solution.

Another major challenge is modern HVAC systems, which exert a tremendous amount of stress on doors. Here in Texas, we have intensely hot summers. Sometimes by midday, a door with a southern exposure can bake to over 130 degrees on the exterior. Yet, on the inside of the building, the same door is greeted by an acclimated temperature set at 72: a near 60-degree swing within 2 inches of wood. This puts amazing stress on the wood, the panels, and the finish.

Keep in mind that 100 years ago, doors had the advantage of virgin and oldgrowth wood, no false climatization from HVAC, and hearty lead-based paint coatings that wore like a Kevlar jacket in the elements. In the last 50 years, we have hindered the functional longevity of wood doors; thus, we need to design and build smart so our doors can succeed.

The three keys to building longlasting historic doors, wood choice, construction methods, and finish—are all important. I believe that wood choice is the most important. Wood quality today is not what it was 100 years ago. Since we no longer have virgin timbers and oldgrowth lumber readily available, we must use woods that can withstand the elements.

WOOD CHOICE

Forest Product Labs, an independent testing lab focused on wood performance and longevity, did a study on the decay resistance of the heartwood of major woods. (Note: The heartwood of a tree is the longest-lasting, most mature part of the tree, closer to the center and often darker in color that sapwood. Sapwood is young wood residing on the outer layers of the tree and is not as stable or rot-resistant as the heartwood.)

Forest Product Labs tested common woods like oak, walnut, pine, and fir to determine which ones lasted the longest. They sorted their findings into three categories: resistant or very resistant; moderately resistant; and slightly resistant or nonresistant. In other words, distinguishing good wood and crap wood.

Choosing woods that are resistant or very resistant is the key. These woods include white oak, redwood, oldgrowth cypress, walnut, and cherry. The secondtier, moderately resistant woods are Douglas fir, new cypress, eastern white pine, and longleaf yellow pine. These second-tier woods can still perform well in the right conditions, and we occasionally use them.

The last category, nonresistant woods, should be avoided. These include western pines, red oak, poplar, birch, beech, and maple. Western pines are sold by common names like sugar pine, radiata pine, and ponderosa pine. Unfortunately, these are inexpensive woods and get quite a bit of use from large manufacturers. While improvements in technique and wood preservatives advance each year, I think using a wood known to fail on exterior applications is very risky.

Unfortunately, choosing the right wood isn't enough; you also need to specify the right cut. This means specifying the proper orientation of the grain to the face of the door, so that the door is more stable. There are

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STAVE & CORE

three cuts of wood: plain sawn (moves the most), rift sawn, and quarter sawn (moves the least). Note in the diagram how the plain-sawn boards have a lot of grain movement on the face of the board. A plain-sawn piece of wood 8 inches wide could move 1/8 inch in width or more, depending on moisture in the environment. By contrast, the same board, rift-cut or quarter-sawn, is much more stable.

Our company uses Tidewater red cypress, longleaf yellow pine, and quarter-sawn white oak for most of our historic projects. These woods have great historic precedent, and we commonly find them on historic buildings. These woods have a proven track record of success. When using longleaf pine, it is often salvaged material, which can be expensive and harder to source, but it is also virgin timber and therefore will last for generations. For those times that historic wood type isn't an issue, we typically use sapele and Spanish cedar for exterior work. These are excellent, stable woods that we trust and have a track record of long term-performance. Bottom line: Choosing the right wood and the right cut of wood can help increase a door's life by 10 times.

JOINERY

The second key to a long-lasting door is the joinery. Proper construction techniques can make a big difference, especially for exterior doors. According to historic precedent, the best and longest-lasting joints were mortised and tenoned together and then pegged (see illustration). We've found that this type of joinery lasts longer and is stronger than any doweled door or short mortise door. For a door that is going to experience a lot of stress, a mortise-and-tenon door with a deep tenon (at least 3 inches) is hard to beat.

Around the turn of the 20th century, another type of historic door developed that we find on the best historic buildings: stave core doors. We find them to be more stable than singlepiece wood doors.

A stave core door is a wood door, whose inside core is constructed of many small pieces of wood that are reoriented to create inner stability (see illustration). This inner core of smaller wood slices creates great structural stability by changing the direction of wood movement inside the door. This keeps the door from twisting and bowing. Because it is structurally stable there is less stress on the door's joinery, which in turn helps the door last longer.

The key to a good stave core door is a thick outer veneer. The best doors of the early 1900s had veneers that were 1/4-inch thick. Compare this to modern door veneers which can be as thin as 1/16-inch to 1/32-inch. A thicker veneer protects the core longer and in turn the door is more durable.

Finally, we believe mortise-and-tenon joinery is key. There are many ways to join a door stile to the rails. Developed in the late-1890s, dowels—short round wood pieces—were a cheaper and faster way to glue up a door. Our experience in over 25 years of restoring doors is that the longest-lasting doors have mortiseand-tenon joinery.

Remember that glues were substandard before the 1930s. Animal-hide glues were most common. These glues are not water resistant and can come loose and break down when exposed to moisture. Because these glues did not hold up, early craftsmen, and then manufacturers, often put a peg through the mortise-and-tenon joinery,

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TIP

Another trick we have stolen from the past is the use of a drip edge on a door. This type of detail was common in France and on better doors in America in the early 1900s. A drip edge sits on the outside bottom of exterior doors. Any door that is exposed to the rain needs a drip edge, because modern thresholds are not enough. A drip edge kicks the water away from the bottom of the door and keeps it from leaking.



which created a mechanical joint that lasts much longer. Today, with many high-tech glues, you can be lulled into thinking joinery doesn't matter, but from our experience glue is a factor but only about 10 percent of the solution. If you want your doors to last for over a generation, good joinery matters.

We once helped a client who had tall French doors with nearly no overhang that constantly leaked. They were old doors and she wanted to save them. Instead of building an overhang or using an invasive trick, we simply added drip edges to the bottom of her doors. It stopped the water leakage, and the homeowners were very pleased.

THE FINISH

The final secret to long-lasting doors is the finish. Water and sun are the enemies. Water causes wood to expand and contract. Joints can quickly become compromised, and-if you have an inferior wood-rot can soon set in. The sun's UV rays destroy the fiber and quality of the wood. Water and sun can be controlled with a good finish. In many ways, it is the last defense a door has. If you can keep the door under cover and away from the sun, your doors will last much longer.

My quick rule of thumb for the best door finishes is. don't stain them. There is not good-quality, readily available clear wood sealer on the market. A clear wood sealer allows the sun's UV rays to break

down the pigment of the stain or finish and is not a long-term solution. I remind my clients who want or require a stain finish that the door will need a new coat of finish every one to two years. You may get a little longer life in other climates, but here in North Texas it is a poor choice.

Paint is the best finish for exterior doors. I usually add two conditions. First, don't paint an exterior door a dark color. The dark color rule is especially true here in Texas. In our hot climate, painting a door a dark color can increase the surface temperature of the door by 20 degrees. As I stated earlier, this change in temperature puts a tremendous amount of stress on a door.

Second, and equally important, make sure any paint you use is highgloss. This is a lesson from experience. We don't use cheap paints, but even with semi-gloss finishes, I sometimes return to a job a couple of years later and see that the paint has started to turn chalky and is breaking down. When the paint surface begins to break down, it allows moisture in, and then your troubles literally can bake in. Our experience is that high-gloss paintsthe best being Fine Paints of Europe in Vermont-create a hard finish or coat that is easy to clean and lasts longer.

While complying with these rules is likely not always possible, especially for historic projects, I hope our guidelines give you your best chance for success.

BRENT HULL, owner and president of Hull Historical Millwork, is a nationally recognized authority on historic design, architecturally correct moldings, and millwork. Brent was trained at the North Bennett Street School in Boston. He is the author of three books, Traditional American Rooms, Historic Millwork, and Building a Timeless House in an Instant Age. He is the recipient of five John Staub Awards for classical architecture in craftsmanship and historic restoration.

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Purpose of Moldings

Beyond their practical use in covering intersections, classical moldings are fundamental to describing structural logic-based on a language that can be learned.

ne of the highlights of my professional world is serving as an instructor for the Institute of Classical Architecture and Art (ICAA), Southern California Chapter. At the beginning of each academic season, I teach the Introduction to the Classical Moldings, a class designed to familiarize students with the rationale and use of architectural moldings. We have been offering this course for many years, and every season I say to myself, "Surely, everyone who wants to take this class has had the chance to take it already. We'll never get enough people this time around." And every year, when I see the classroom fill up to capacity with eager students, I am proven wrong.

Why does this subject have such enduring appeal? An obvious reason is that knowledge about the thoughtful use of moldings is of great practical value to a designer working in traditional styles. And unfortunately, this knowledge is no longer typically taught in contemporary architectural and interior design schools, which is why the curriculum of the ICAA is so valuable and so necessary.

THE LANGUAGE OF **CLASSICAL ARCHITECTURE**

We often hear of architecture referred to as a language. When examined through this useful lens, all of the small parts of a building work together to convey a message. The skilled designer selects and manipulates these parts, carefully crafting the language of the architecture to tell the intended "story." Good architecture speaks to us.

Moldings are the alphabet of the language of classical architecture. They are the smallest bits into which classical architecture can be divided, while retaining definable characteristics. Donald Rattner, in an important article published in Traditional Building in 1993, referred to them as "The atomic units of classical architecture," and that description is very apt. In order to begin a study of classical architecture, it makes sense to begin with the moldings.

What are classical moldings, and what is their purpose? Simply described, they are linearly extruded shapes based on Platonic solids. Pragmatically, moldings are often used to conceal or embellish intersections between adjoining surfaces. But more importantly, they are the building blocks of the language of the classical orders. To the thoughtful classical architect, the moldings are not merely decorative elements applied additively, in a superficial manner. They are the fundamental units from which the basic form of the architecture is built. They provide important finelyscaled detail and visual interest, through the rendering of shade and shadow upon their surfaces. And they are important transmitters of information about tectonics,



or the structural logic of the architecture. The standard alphabet of the classical moldings, the "Periodic Table of the Moldings," is shown in Figure 1.

CLASSIFYING MOLDINGS BY GEOMETRY One method of classifying moldings is to identify them by their shape, or geometry. The first category is the straight moldings, moldings that have no curved elements. These consist of the fascia, the

fillet, and the splay face. Although the fascia and the fillet, as they are straight vertical surfaces, seem quite similar, the distinction is one of scale and hierarchy. The fascia is typically larger and is a dominant molding, and the fillet is typically smaller, and subservient to the moldings around it. Fillets are usually seen as minor surfaces used to separate and give distinction to the major shapes.

The next category is the concave moldings, or







moldings with concave or hollow surfaces. The most important and common of these moldings are the **cavetto**, sometimes called a "cove," and the **scotia**. The cavetto (or "little cave"), which is usually rendered as a quarter circle, is often seen as a crowning element on buildings, cabinetry and furniture. The scotia ("darkness"), with its deep concavity, is particularly useful where a strong shadow is desired, to separate and provide contrast to adjoining shapes. The scotia is a notable



feature in the base moldings of the Ionic and Corinthian columns (*Figure 2*).

Convex moldings distend outward from the prevailing surface. They include the **ovolo** ("egg"), the **torus** ("cushion"), and the **bead**. It is important to note that the relationship of the torus to the bead, both half-round in shape, is the same hierarchical one that we saw between the fascia and the fillet. The torus is a major element, and the bead is a minor, subservient element.

The last geometric category consists of moldings, which combine concave and convex surfaces. We call these **compound moldings.** The most important of these are the **cyma recta** ("upright wave") and the **cyma reversa** ("reversing wave"). In their normal orientation, the cyma recta has the concave part at the top, and the convex part at the bottom. In the cyma reversa, it is the opposite **(Figure 3)**.

SEEING MOLDINGS THROUGH THE LENS OF STRUCTURE

Although categorizing moldings by their shape is useful, it does not help us decide which moldings to employ in different parts of a building, room, or furniture piece. Surely, we can use our own innate aesthetic sense, and test different combinations of moldings, searching for something that "feels right." But this can be a highly subjective and uncertain approach, one that is difficult to repeat or to teach to others. What we really need is a *philosophy of moldings*, to help guide us and provide confirmation for our aesthetic preferences.

In my experience, the most illuminating and helpful philosophy of how to employ moldings is to see them through the lens of structure. Moldings can be understood as *tools the designer uses to show the observer what the building is experiencing at any given point*. Rattner refers to this as "dramatizing gravity." How do they accomplish this? The shapes of the moldings should be viewed as demonstrating how the building would respond to the stresses placed upon it. For example, all of the canonical column bases of all of the classical orders feature large, expressive tori, seemingly bulging out in response to the point load of the column shaft above (*Figure 3*). Conversely, the top of a cyma recta is concave, and it reaches lightly and delicately out into the air, making it a perfect choice for a crowning element (*Figure 4*).

Another way to help the designer visualize how to "dramatize gravity" is to look at the final curve at the top of the molding. If the final curve of the molding is *upward*, as if the molding is pushing vertically to hold up the construction above, such as in the *ovolo* or the *cyma reversa*, then that molding should be considered a *supporting molding*, and is appropriate to be used lower down, below other elements. On the other hand, if the last curve of the molding is outward, as if it were reaching out into the air, as with the *cavetto* or the *cyma recta*, then the molding is most appropriate as a crowning element, to be used at the top *(Figure 5)*.

In this manner, classical buildings can be seen in a new and dazzling light—as vibrant tableaus, as a kind of matrix, with nodes and intersections buzzing with information about the physics the architecture is experiencing. Thus, the classical moldings support the "allegory of structure" which is at the very heart of the language of classical architecture. **BY GORDON H. BOCK**

Great Imposters

We have the latest word on alternative building materials when it comes to roofing, siding, and decks.



hether you call them substitute materials, alternative materials, or simply stand-ins, man-made products crafted to imitate natural substances have a long and complex history among traditional buildings—and one that is changing swiftly. Commonplace for at least 200 years, alternative materials of the past—think cast iron that clones carved stone—were typically driven by a quest for efficiency (quantity reproduction of complex decoration, for example) or economy (cheaper and easier to obtain).

While preservation practice puts

a premium on repairing deteriorated architectural features over replacing them, and when the latter is necessary, stresses "the new material should match the material being replaced in composition, design ... and other visual properties," (NPS Preservation Briefs #16) shifting manufacturing technologies, aging landmark buildings, and an increasingly threatening climate are putting that mandate to the test. In some cases, the major challenges go beyond historical accuracy and architectural legacy to simply where to find new materials that might do the job and how long will they last?

WHAT WOOD IS GOOD?

At ground zero, it turns out, wood is the most natural and universal building material in North America. According to Phil Thomason, principal at the preservation planning firm Thomason and Associates in Nashville, "I think there is a great deal of concern about just how long traditional wood products are lasting these days." He notes that longlived woods are still out there, but at a cost. "You have to weigh two approaches: Do I pay more for wood I know will be durable, or pay less for a product that I think will look like wood, but don't know how long it will last?

In some quarters, "concern" is putting it mildly. "We're a hot, humid climate-constant 90 percent humidity," explains Becky O'Malley Gipson, Operation Comeback Director at the Preservation Resource Center of New Orleans, "and the big thing we've been dealing with is that after Hurricane Katrina in 2005, a lot of building owners replaced old-growth woodwork-features that had been terribly damaged and couldn't be repaired-with newer wood. What we're seeing now in 2018 is that a lot of these new woods are breaking down, cupping and decomposing." As Gipson explains, New Orleans is predominantly a city of





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The New England Chapter of the Institute of Classical Architecture & Art is pleased to announce its Ninth Bulfinch Awards. Named for Boston architect Charles Bulfinch (1763-1844), America's first native-born architect and the designer of the Massachusetts State House, the awards recognize the best work of individuals and firms in the fields of architecture, art, interiors, traditional trades, and landscape design to preserve and advance the classical tradition in New England.

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At Oatlands Plantation in Leesburg, Va., the National Trust for Historic Preservation put acetylated wood to the test for reconstructing the balusters and cap of this weather-prone balustrade. PHOTO: Ashley Wilson.



As part of a three-year, \$7.2 rehabilitation, The National Park Service selected Accoya acetylated wood to replace the wrap-around porch at Sagamore Hill, Theodore Roosevelt's 1885 summer residence in Oyster Bay, N.Y.

wood-frame buildings with wooddetailed trim and wood shutters. "Most commonly we see this deterioration on wood porches and their tongueand-groove decks; wood shutters, both louvered and board-and-batten, architectural trimwork and wooden handrails, which are commonly called for in our historic districts."

A similar alarm echoes from the National Trust for Historic Preservation (NTHP) with 27 sites from Illinois to New Mexico. "At the NTHP we've had to replace much of the in-kind repairs done in the 1980s to 2000s," says Ashley Wilson, AIA, LEED, Graham Gund architect for Historic Sites, "because they were in-kind in name only—not in quality." Wilson, who describes herself as "old-school" about new products versus traditional materials, acknowledges that failures have led to a more practical perspective. "I have fully converted to acetylated wood for exterior carpentry and wet areas because it is the only wood that won't deteriorate and remains stable."

Here she is referring to Radiata pine, a species widely cultivated in temperate zones, that is modified with acetic anhydride (a compound related to vinegar) so it resists moisture and insects.

In fact, insects pose another increasing onslaught, most notoriously Formosan subterranean termites, which began attacking Texas, Louisiana, and South Carolina in the 1960s. Recalls Gipson, "A lot of times,

what I find in rehab projects is that the


Fiber-cement siding is typically much thinner than traditional horizontal wood siding, but many manufacturers offer products that replicate traditional exposure dimensions and details, such as "milled" edges or wood-like surfaces.

termites go after a new addition first with its softer woods like yellow pines. Only when they've decimated the addition will they move into the older, old-growth cypress."

What's more, it's not just Mother Nature that's coming up short. "Many alternative materials have come online only within the last 15 or 20 years," says Thomason, "so we're still assessing their longevity: how long will these materials really hold up?" Gipson agrees. "After Katrina, many local nonprofits used a lot of innovative, sustainable products that unfortunately weren't tested in our climate and, in some cases, just haven't survived. It's tough when you have this much rain; constant humidity takes its toll."

As an example, she says for a long time people were using fiber-cement products or some sort of composite for tongue-and-groove porch floors. "The problem was, these products would still expand and contract here—it gets hot, it gets cold, it's wet—and they would start to buckle and snap up." Notes Thomason, "These were the materials that were supposed to avoid the failures of traditional lumber that we get these days."

As if the challenge of choosing a durable material were not enough, suppose it should be sustainable too? "What we're running up against," says Gipson, "is, for example, shutters need to be made out of wood that stands up to water, today something like Spanish cedar."

The trouble is, a lot of these woods are coming out of the Amazon, with all of its sustainable logging controversies, and there's just less and less of these types of woods available. "So, the question arises, Well, maybe you shouldn't use these types of woods? Then, there's the longevity argument: the longer a material is going to last, the less of a carbon footprint it's going to leave. We wrestle with all these issues."

Wilson too recognizes the complex provenance behind acetylated wood. "The argument against it is that the product is farm grown in New Zealand and shipped here via Europe. So, it has this uncomfortable transportation/ production cycle that is not really as sustainable as you want it to be." While studied for 70 years, acetylated wood only entered the U.S. market in 2007 and is now sold in 47 countries. "I hope somebody starts farming the wood here so it can be a domestic product, but I'm still happy with it because it lasts at least 50 years and that seems worth the trade."

NOT JUST WHAT, BUT WHERE AND HOW?

Thomason, whose firm has completed over 70 design guideline manuals for cities over the past 37 years, sees some trends. "I think a lot of our preservation commissions find themselves wanting to be reasonable about approving and experimenting with alternative materials, all the while recognizing that their life expectancies are pretty unknown." He says lately a lot of historic district commissions he works with have been adding sections in their design guidelines about needing to see sample materials, information on independent testing, or anything else that can give them a comfort level in approving an alternative material. "We're sort of dealing with a Buyer Beware approach until we get a sense of how long these materials are really going to last."



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ABOVE The dimensional qualities of ceramic tiles, such as Ludoslate from Ludowici, make them among the most convincing slate alternatives, and with a 75-year lifespan cost-effective for large buildings.

BELOW Century Shake is an interlocking clay roof tile from Ludowici with a thick profile and rugged surface.



He says he sees language to the effect, "These are our criteria, and it is the responsibility of the property owner to convince us that this is a reasonable material to use." Also, "The architectural review board may request a mock-up of the product installed in the requested location to determine how it will appear on-site."

Indeed, almost as important as appearance is location. "I've seen a lot of commissions consider recycled materials for porch floors on rear elevations," says Thomason, "and there seems to be widespread approval for cementitious wood products in certain situations, including rear elevations." In his 2017 survey of eight cities, he notes that cementitious siding was among the most requested alternative materials in historic districts and, in most of these cities, approved for non-primary elevations (and in some cases primary elevations) if it matches historic dimensions and profiles.

Gipson notes that fiber cement siding and trim has been allowed for a long time in her area if the existing siding is in terrible condition. "Usually, the authority requires that it match in dimensions with historic material. For example, if the exposure on your siding was 5 1/2 inches, the new siding must match as closely as possible." She adds, termites are still an issue, and fiber cement is still popular as a replacement instead of new wood.

This is by no means open season for synthetics, though. "They do have certain products that they allow, but they have to be reviewed first by the Historic District Landmarks Commission plans examiner," says Gipson. "They look at the appearance, scale, and where it is going on the building to determine if it is appropriate for the project." She adds, that for a long time products like fiberglass and PVC were not permitted in historic districts, "but lately I'm seeing them being allowed—

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Majestic Slate from Ecostar has a 20-year history of acceptance on preservation projects, such as the polychrome roof on the 1881 Blair House, the former Washington, Iowa, City Hall.

mostly because the products are getting better, with scale and detail truer to the historic forms and decoration that we see in our city."

Typically, in any preservation situation, she says they're also going to encourage keeping whatever is original, as much as possible. "For example, if you're building an addition onto your property, you might pull the old siding off a part of the building you're demoing and move it to a public side of the building, any elevation you can see from the sidewalk."

ROOFING

Man-made roofing has a long history of imitating other materials, and Thomason reports, "I've seen a number of commissions approve faux slate materials, if the original materials are clearly deteriorated and beyond repair." He notes that the authority might want to first ask about the feasibility of doing some repair work.

Wilson, however, takes a broader view. "In most of our buildings, because roofing is so expensive, there's not enough of a delta between a real tile roof and a fake tile roof." The cost is usually in the labor and flashing, she points out, "so I use historic materials—slate, copper, tile—on our roofs."

Nonetheless, she says there's a place for asphalt shingles, "if it's not in public view, and it's not an important building." As an example, she describes a 1913 shed long roofed in wooden shakes that is now under a grove of trees. "We like it, and we want to keep it, but the pine needles are always dropping and it's just not cost-effective to put on an expensive roof, so we're going to use asphalt shingles."

On the other hand, Thomson says, "I don't see a lot of love for vinyl columns on primary elevations, or for vinyl fences either. I think, commissions feel they always look plastic and do not resemble wood." Wilson concurs. "I find that if it's something tactile, you can tell the difference, especially if it's juxtaposed to something that's historic fabric that we're saving."

She adds that she's mostly repairing old buildings that range from 1750 to 1950, and usually trying to work within that existing historic palette of materials. "Preservation is spiritual," she points out. "Each project has to balance having a building fall apart versus a usable building that might have some changes."

GORDON BOCK *is an architectural historian, instructor with the National Preservation Institute (www.npi.org), and speaker through www.gordonbock.com.*





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DUNHAM COLLEGE

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PROJECT New Residential Colleges at University of Oklahoma
 DESIGN ARCHITECT KWK Architects, St. Louis, MO;
 Paul Wuennenberg, AIA, LEED AP, Principal
 ARCHITECT OF RECORD ADG, P.C., Oklahoma City, OK;
 Javier Esteban, Steve Matthews, AIA

Designed by KWK Architects, Dunham Hall is one of two new residential colleges at the University of Oklahoma at Norman. Both are in the Cherokee Gothic style. (Cobb)

THE CHEROKEE GOTHIC STYLE

KWK Architects designs the new Residential Colleges at University of Oklahoma. BY NANCY A. RUHLING

PHOTOS BY DAVID COBB PHOTOGRAPHY & SIMON HURST PHOTOGRAPHY

The University of Oklahoma at Norman, which put down its roots in prairie land in 1890, is known for its research creds, its football team and its distinctive traditional-style architecture. Early in the 20th century when institutions of higher learning in the United States and Canada were unabashedly embracing the Collegiate Gothic style, the university, now colloquially called OU, opted to go its own way when it rebuilt its campus after a 1903 fire destroyed its only building.

So it seemed only fitting that the resulting maverick signature style—dubbed Cherokee Gothic by Frank Lloyd Wright when he toured the campus—be replicated in its two new ground-breaking residential colleges.

"The red brick and white limestone trim of Cherokee Gothic style create a very animated façade," says Paul Wuennenberg, principal of KWK Architects, the higher-education student housing and dining specialist firm in St. Louis, MO, that designed the buildings. "Because of the color contrasts, Cherokee Gothic looks more light and lacy than Collegiate Gothic, which can be somber. Wright apparently chose the name because it reminded him of the rhythm of the patterns in blankets made by Native Americans who were living in the state."

The design of KWK Architects' residential colleges was influenced by the iconic Cherokee Gothic buildings on the North and South Ovals, the historic centerpiece of the campus, which were designed by an English Professor named Vernon Louis Parrington, whose overarching vision was never implemented.

The co-educational Dunham and Headington Colleges, part of a larger master plan for campus housing formulated by KWK and architect of record ADG, P.C., of Oklahoma City, OK, feature Ivy League-style living/learning spaces that give students a sense of community and identity within the larger university environment. It is, to say the least, an audaciously unusual idea for a public university that has some 30,000 students and 3,000 faculty members.

"In many ways, the residential colleges, which include elements such as libraries, dining halls and gyms, become a microcosm of the campus," says Wuennenberg, AIA, LEED AP.

Among the first residential colleges in the state, Dunham and Headington were the brainchild of then-University President David L. Boren, a graduate of Yale and Oxford Universities who wanted to create a similar old-school experience for Oklahoma students. "They will have a huge impact on student life," he said. "For the first time, we will be able to provide on-campus housing for upperclassmen and upperclasswomen."

The five-story red-brick and limestone buildings, which each house 300 students, are designed to complement each other. While the limestone entrances for each college are very similar, they are not identical (one is on a corner and the other is in the façade's center),







FAR LEFT At Dunham Dining Hall, which features a vaulted trussedbeam ceiling, students eat together, creating stronger bonds. The dining tables were designed by Thos. Moser. (Cobb)

LEFT The main lounge of Dunham College features oak paneling and a mammoth limestone fireplace. (Hurst)

BELOW Dunham College's library features communal tables and period-style artwork. (Hurst)



and the central towers and the insets of tapestry-like herringbone brick patterns are variations on a theme. Dunham also has a historic, softer arch than Headington, which features a pointed, modern arch at the entrance tower element.

"Dunham and Headington hang together visually," Wuennenberg says, "but they differ in their subtle details. Headington, for instance, has less quoining, and the tracery at the top of the towers are different on each. But both have many references to other campus buildings in the Cherokee Gothic style."

Arranged in a horseshoe shape, they

are connected in the front by a pair of lower-level dining halls, separate units that share a chimney. A pair of private courtyards, accessed by student key cards, create a greater sense of community for the residents of each building. Inside, the major architectural elements, notably the limestone fireplaces in the main lounge and the oak paneling of the main floor, continue the twin theme.

Each building contains a main lounge, study rooms, a library, instruction rooms and bedrooms. There also are an apartment for the senior faculty fellow and his or her family and private dining rooms for the instructors. The co-ed residential colleges are for sophomores, juniors and seniors; freshmen are required to live together in a separate, conventional-style dorm.

"They are based on the residential college models of the Ivy League," Wuennenberg says, adding that university stakeholders and members of the design team, Javier Esteban of KWK and Steve Matthews, AIA, of ADG, visited several of Yale's colleges for inspiration. "Each building has its own dining room, with trussed-beamed ceilings. There is a central kitchen, but





ABOVE Headington College complements its sister building, Dunham College. (Cobb)

FAR RIGHT The University of Oklahoma's two new residential colleges, located close to the football stadium, form a horseshoe shape. Passageways from each college lead to separate dining halls that are united under one roof. (Cobb) students at each college get their meals at stations and sit at communal tables. Each year, they come back to the same college."

Sited on a former parking lot, Dunham and Headington are across from the football stadium and adjacent to the players' living quarters. "It was a high-ticket tailgating spot," says Wuennenberg. "It's a prime location, right in the heart of the campus and adjacent to residential housing."

The layout of the public rooms came with a special mandate: for security reasons, they don't face the playing field. "Nobody is allowed to watch the team practice," he says, "because they don't want any spying by opponents."

Bricks and limestone aside, the buildings were designed to create a community of students who work and live together. The bond is enhanced by programming that brings the students together in after-class social learning settings such as museums. "It's all about cross-pollination of interests," Wuennenberg says. And it keeps students on campus. "At OU, about half of the sophomores join fraternities or sororities," he says. "By their junior year, many are living off campus."

KWK Architects, which was founded in 2013 by Wuennenberg and four other architects, has completed more than \$1 billion in construction-valued projects, including ones for Washington University in St. Louis, the University of Minnesota and the University of Colorado.

Wuennenberg says the \$82-million University of Oklahoma commission was unique. "I really do like Collegiate Gothic architecture, and I've done lots of work in that style," he says. "A project of this size at a well-respected institution offered a wonderful nexus of opportunities to work within the Collegiate Gothic vocabulary, which I adore and which early in my career I co-authored a book about."

The colleges opened for the fall 2017 semester to the praise of students and faculty. "Building the buildings was only the beginning," said Wuennenberg. "The challenge for any residential college is continuing the commitment to ongoing programs by the senior faculty fellows."

It was an honor, he says, to help Boren, who retired shortly after Dunham and Headington Colleges opened, realize his dream. "This is his legacy," he says. At the ribbon-cutting ceremony, the pleased president declared that Dunham and Headington Colleges are "two of the finest buildings on campus."



LEFT Headington College's library encourages students to study together. (Hurst) **BELOW** Signature Gothic Revival arches define the library at Headington College. (Hurst)



KEY SUPPLIERS

CONTRACTOR JE Dunn, Oklahoma City, OK FINANCIAL/MASTER PLANNING Brailsford & Dunlavey, Chicago, IL STRUCTURAL ENGINEER Wallace Engineering, Oklahoma City, OK CIVIL ENGINEER AND INTERIORS ADG, P.C., Oklahoma City, OK FURNITURE MA+ Architects, Oklahoma City, OK MEP ENGINEER Alvine Engineering, Oklahoma City, OK



THE SAME but better

Voith & Mactavish Architects has created a hidden surprise for the Millbrook School.

BY MARTHA MCDONALD | PHOTOGRAPHY BY JEFFREY TOTARO

PROJECT: Millbrook School Dining Hall, Millbrook, NY DESIGN ARCHITECT: Voith & Mactavish Architects LLP, Philadelphia, Pa.: Daniela Holt Voith, FAIA, LEED AP, Partner; Sennah Loftus, LEED AP, Associate Principal

19191



Millbrook, a co-ed boarding school 90 miles north of New York City, and you won't see the dining hall. It sits quietly in the northeast corner of the campus, and unless you remembered dining in the old Prum Hall, you wouldn't know that it is a new building.

That was the goal that the Head of School and Trustees had in mind when they brought in Voith & Mactavish Architects to design a new dining hall. Built in 1934, Prum Hall, while quaint, was no longer large enough. The entire student body couldn't fit into it at one time and it had become dark and noisy.

The new 15,000-square-foot facility includes a large, 60 by 80-foot double-height dining room that seats 400, plus a kitchen and servery and a sunlit north-south corridor connecting the existing, now restored Prum Hall, with the new dining hall. It is sited to create a new courtyard and to provide views to both the courtyard and the adjacent farm that serves the kitchen.

"You cannot see the dining hall when you enter the campus," says Daniela Holt Voith, FAIA, partner. "It's a hidden surprise. All of the buildings we have built there feature the architecture of discovery. They look smaller than they are, and they feel like they fit with the original architecture."

And VMA has had quite an impact on the campus, starting with the new Holbrook Arts Center, followed by the renovations of both Abbott Hall dormitory and the iconic Barn Student Center, then the new Hamilton Math & Science Center, new Koenigsberger Hall dormitory for girls, and now the new dining hall.

"One of the design imperatives from the trustees and head of school was they always wanted the school to feel the same," Voith adds. "They want the alums to come back and say the school looks just the same but better."

The primary goal with this project was to have a dining room that could accommodate the student body. "One of the biggest drivers was that the existing Prum dining room didn't accommodate the entire school; they couldn't meet as a community during mealtimes. And at Millbrook, they all eat in the same room three times a day," says Sennah Loftus. "They wanted the new dining room to feel familiar but be able to accommodate a much larger group—400 students and faculty and families."

With those goals in mind, quite a bit of time was spent in the planning stage. "There was a lot of thinking on this project," says Voith. In addition, before construction started, a facilities building and old garages had to be demolished. The area that is now the courtyard had been a parking area.

The new dining room is large enough to seat the entire student body of 310 plus faculty and guests and it is often used for special events and announcements. Double-height (22 feet) at the center with lower

LEFT The new dining room is double height at the center with lower ceilings on the side aisles. The chairs, tables, and lighting were all custom designed.



ABOVE A view of the servery and open kitchen, located just off the farm area.

RIGHT The new dining hall on the left is connected to the existing, now restored Prum Hall, via a sunlit corridor with a 40-foot cupola at the center.

FAR RIGHT The 12 foot 6 inches wide corridor connecting Prum Hall to the new dining room is lined with windows to provide sunlight and views. The terrazzo flooring was selected for its durability and elegance.



KEY SUPPLIERS

GENERAL CONTRACTOR AND CUSTOM MILLWORK Consigli Construction Management, Pleasant Valley, NY

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CUSTOM FURNISHINGS Thos. Moser, Auburn, ME CUSTOM CHAIRS Eustis Chair, Ashburnham, MA CUSTOM TERRAZZO Yorie Tile & Terrazzo, Inc., Allentown, PA MASON James McGowan & Sons Masonry, Inc., Kingston, NY DOORS, WINDOWS & HARDWARE Sanford & Hawley, Inc., Unionville, CT FLOORING Flooring Solutions of New York, Inc., Nanuet, NY CORK FLOORING Expanko, Exton, PA SLATE FLOORING Buckingham Slate Company, Arvonia, VA WINDOWS AND DOORS Marvin Windows and Doors, Warroad, MN METAL ROOFING Englert, Perth Amboy, NJ SLATE ROOFING Evergreen Slate Co., Inc., Middle Granville, NY BRICK Watsontown Brick Co., Watsontown, PA

height side aisles, it is lit by windows on both sides and large (approximately 5 feet in diameter) LED custom chandeliers and some hidden uplighting.

Every effort was made to create a quiet, comfortable environment. The floor is made of 1/2-inch thick cork and the walls and ceiling are paneled with acoustic materials. In addition, the chairs feature glides so they can be moved without scraping noises. Meanwhile terrazzo and slate flooring were selected for the servery and entry corridor for durability and elegance.

The dining room furniture, the tables and chairs, were custom designed by the VMA team, working with the suppliers. "We spent a lot of time thinking about the tables," says Loftus. "Should they be round or oval or rectangular. Further, what is the right amount of people at each table-6 or 8 or 10?" Ultimately, they settled on 9 by 3-foot rectangular tables. What's different about these is that the tops can be tilted up, the legs can be lifted onto skateboards and then rolled out, to then allow for nesting of the tables while the dining room is used for other functions. These tables are now known as the Daniela table and are available from the manufacturer."

Also custom designed, the chairs feature the Millbrook School seal and are stackable so they can also be removed and stored as needed. Similarly, this chair is called The Millbrook Chair, and it too is available from the manufacturer. The corridor features the second tallest tower on the campus, with an interior ceiling height of 40 feet. The window lined cupola serves as a focal point and where the multiple entries into the dining hall converge. The chapel has the tallest tower on the campus. "They felt this building was the single most important space after the chapel," says Voith. "It's where they all come together, where they build community. The cupola is a response to the context of the campus and the importance of the dining hall."

The custom chandelier in the cupola coordinates with those in the dining room, and is quite large, approximately 6 feet in height.

On the exterior, the design team took great pains to match the brick to the original brick in Prum Hall. "We studied the existing brick and detailing of Prum Hall because the new building runs right into it. We did a lot to match the brick color, coursing, and specific details like the quoining and water table. Ultimately we used a compilation of brick lines," adds Loftus.

Completed in the fall of 2016 at a cost of \$9.7 million, the new facility has been a great success. Describing the first lunch in the new dining room, the Headmaster noted, "We had the first seated lunch in over 40 years at Millbrook School today. 312 students and 60 faculty sat at one time and the space worked exactly as we intended. It was elegant, functional and quiet Yes, quiet."



The new dining room is located to the north of Prum Hall in what had been open fields. The addition of the dining hall and connecting corridor created a new courtyard for the campus. Plan: Voith & Mactavish



Garden Stewards

The Trustees of Reservations strive to preserve historic gardens in Massachusetts.

BY VICTORIA ABBOTT RICCARDI

n the same way that important buildings need to be preserved, so do landscapes-and The Trustees of Reservations has been doing both for nearly 130 years. Founded in 1891 by Boston-based landscape architect, Charles Eliot to "hold in trust" and care for special places of scenic, cultural, and natural significance throughout Massachusetts, The Trustees of Reservations is the world's first land preservation nonprofit and the Commonwealth's largest conservation and preservation organization. To date, they own and manage 117 "reservations" ranging from notable homes and structures to mountains and island coasts.

Beyond simply saving "special places" from development, The Trustees' mission includes protecting and caring for each property's historic, cultural, scenic, and natural treasures, like landscapes and gardens.

Gross & Daley Photography

"We have designed landscapes, cultural landscapes, and public gardens," says Lucinda Brockway, program director for Cultural Resources at The Trustees. "Cultural landscapes are those shaped by the utilitarian needs or ethnic traditions of the owner or settler of the property. Designed landscapes are those that either had a very good amateur gardener or professional landscape architect, who designed the space. Gardens and public gardens can be developed by an amateur or professional but have a rich horticultural focus. They tend to make us feel very intimate and small when we're in them because the plant materials play a major role, as opposed to landscapes, where you can feel these open, wide spaces."

In spring 2015, The Trustees kicked off a \$26.6 million campaign to reinvest, restore, and celebrate its cultural sites, collections, and archives. This included identifying 11 gardens they deemed worthy of refurbishment because the garden's designer or owner was an important figure, and/or the garden was unique, and/or it had national or regional significance, and/or upon investment the garden could more fully engage the public and increase their enjoyment.

"We inherited some gardens that were in incredible shape and others that were wildering a bit," says Brockway. Over the years, "we tried to maintain them as best as our budget and labor staff allowed, along with the volunteers that came to help us, but every garden, once it reaches 75 or 100 years old needs an infusion of investment to enable the flywheel to start again and create those, 'Oh, wow' experiences."

One of the eleven gardens that topped the list is Castle Hill on the Crane Estate in Ipswich, Massachusetts, a designated National Historic Landmark. Chicago plumbing magnate Richard T. Crane, Jr. began purchasing the property in 1910 and hired some of America's most prominent architects and landscape designers, including Ernest Bowditch, Frederick Law Olmsted, horticulturist Robert Cameron, and Arthur Shurcliff, to design the structure of and create plantings around his opulent, Gilded-Age, summer get-away, one of the last surviving, intact American estates from the Country Place Era. To complement the Italian Renaissance Revival villa (designed by Boston's Shepley, Rutan and Coolidge and later replaced with architect David Adler's 59-room, Stuart-style mansion, which remains today), Crane hired The Olmsted Brothers to build an Italian Garden with formal perennial beds, a water fountain, and teahouses all

enclosed by tall columnar trees.

"Like all Olmsted designs, the garden plans were at the Frederick-Law Olmsted National Historic Site in Brookline and the correspondence [between the Cranes and the Olmsted Brothers] was in the Library of Congress," says Bob Murray, project director for Structures and Landscapes at The Trustees. "There also were hundreds of photos that captured the garden as it peaked and turned into a mature landscape and this wealth of information helped inform our preservation plans." Beyond restoring concrete walls and grass ramps, The Trustees replaced the pergola at the end of the garden, fixed the fountain and added back two perennial borders composed of thousands of pink, white, and blue flowers inspired by those that Florence Crane had originally chosen.

Also renovated was the Grand Allée, an undulating ribbon of lawn that spills into the Atlantic Ocean, designed by Arthur Shurcliff, famous for reinterpreting colonial American landscapes. The Trustees removed over 700 overgrown and deteriorating Norway spruce, cedar, and white pine trees lining both sides of the lawn (most of the wood was



Beyond simply saving "special places" from development, The Trustees' mission includes protecting and caring for each property's historic, cultural, scenic, and natural treasures, like landscapes and gardens.

The Grand Allée at Castle Hill on the Crane Estate in Ipswich, Massachusetts was designed for by the United States most prominent landscape architects, including Fredrick Law Olmsted and Arthur Shurcliff.



repurposed) and planted new ones. They also repaired the underground cistern that Crane had installed to collect rainwater and sustainably irrigate the lawn (remember, he was in the plumbing business). The white classical figure statues dotting the length of the lawn were cleaned and repaired, and the Casino Complex, composed of two pavilions (one housing a bachelor quarters and the other a ballroom and billiard room) bookending a saltwater pool and located halfway down the allée, was restored. The pool, which Florence Crane had filled in with grass, received new sod, a new drainage system, and marble coping.

Another garden landscape The Trustees has restored is Naumkeag in Stockbridge, Massachusetts, a National Historic Landmark. The 44-room "cottage" was designed by renown architects McKim, Mead & White in 1885 for New York attorney Joseph Choate as a Berkshire summer retreat.

"Naumkeag is about eight acres of designed landscape," says Mark Wilson, Curator of Collections, West Region at The Trustees, who was involved in the restorations. "Nathan Franklin Barrett was the original landscape architect for the property from 1886 to 1891 and he took this interesting hillside setting, terraced it and laid out a couple of allées. There was a formal garden, but basically, it was a fairly open landscape with a lot of contouring and a few fountains. With the next generation of the family, Mabel Choate, the daughter hired Fletcher Steele out of Boston [in 1926], who was becoming one of the first true American modern landscape architects." Over the next 30 years, Choate and Steele created a series of 12 outdoor garden "rooms," five of which The Trustees brought back to their original glory, referencing their large archive of Steele's plans, drawings, photographs, invoices for plants and garden materials, letters and notes.

For Steele's famous "Blue Steps," comprised of series of four ramps and cinder block steps featuring several pools, restorations included planting 60 new birch trees, pachysandra and yew hedges that flanked both side of the steps, repainting the faded baby blue pools the original cobalt blue, and restoring the flow of water through the pools.

Also refurbished was the Chinese Temple Garden, a stone wall and brick moon gate enclosing a blue-topped interior temple, devil's screen, water runnels, terraces of tree peonies, carved stone lanterns, and rock gardens. In addition to repointing the outer stone wall, all the plantings were replaced and many of the garden's decorative elements, such as scrolls and Chinese porcelain drum stools, were either taken out of storage, repurchased, or recrafted to match the originals. Naumkeag also received seventy new Linden trees along its tree-lined Linden Allée and the Afternoon Garden was enhanced by repairing the retaining wall and fountain and replacing the broken, rotting Venetian gondola poles, which marked the garden's edges.

"We worked with Skylight Studios in Woburn to replace the gondola poles, says Wilson. "When I explained to [President and Sculptor] Bob Shure, that Arcangelo Cascieri was the original carver (and an internationally acclaimed designer and sculptor from Boston), Bob said, 'He's the guy who trained me!"" Thus, referencing Steele's original drawings, along with actual pieces of the original poles, Shure carved new poles with the same floral motifs and painted and gold leafed them to match the originals. Other restorations included sprucing up several lawns around Naumkeag and replanting all the original flowers in the Cutting Garden, which had been sodded over in the 1970's. Lastly, the property's original wooden greenhouse that had collapsed in a snowstorm in 1972, was





replaced. Following modern building codes, the structure was fabricated as close to the original style as possible, from metal with insulated glass panels and made handicapped accessible.

A third restored garden landscape The Trustees restored is The Stevens-Coolidge Place in North Andover, Massachusetts, listed on the National Register of Historic Places. The Stevens family first acquired the property, named Ashdale Farm, in 1729. Generations later Helen Stevens inherited the farm, which became her summer home when she married John Gardner Coolidge, a descendent of Thomas Jefferson and the nephew of Isabella Stewart Gardner. The couple hired preservation architect, Joseph Chandler, to modernize their home and design the landscape, which came to include a rose garden, kitchen and cutting-flower garden, perennial garden and French-inspired vegetable garden.

"When The Trustees acquired the property in 1962, they grassed over the beds of French Garden because it was too high maintenance and we didn't have the staff at the time," says Kevin Block, The Trustees' Superintendent, Andover/ North Andover Management Unit at The Stevens-Coolidge Place. "But one of our long-time volunteers and property committee chair, Laura Bibler, was doing a master's thesis for landscape architecture and decided restoring the French garden would be her focus." Thus, with Bibler's help and using the garden's original 1931 blueprint, The Trustees replanted the garden's four quadrants (each composed of 15 beds) with all the original vegetables, herbs, and flowers-from sweet peppers and Brussels sprouts, to lavender and lemon balm, to heliotrope and zinnias. The garden's serpentine wall, which was erected to pay homage to Thomas Jefferson's Monticello and the University

of Virginia, was restored, as was the small perennial garden border in front of it.

Other work included replanting the Rose Garden with the heirloom roses that would have been in trade at the time in the Coolidge's favorite colors of pink, yellow, and white, since neither one of them liked red roses. Bibler also helped spearhead restoration of the large Perennial Garden, consulting the original 1907 garden blueprint and nursery slips dating back to 1911.

"We literally dug up the entire garden and started over following the plans," says Block. "We put in steel edging to the original footprint and searched for the original plants still in trade. The Trustees also reinstalled the Cutting Garden, which they had abandoned upon acquisition, and restored the greenhouse.

For the eleven gardens The Trustees plans to invest in, restorations include creating more ways to engage visitors. To wit, most of the properties' flower gardens will display early and lateblooming perennials, so visitors will always see something in bloom, versus just the summer blossoms homeowners, like the Cranes and Coolidges, planted to enjoy during their June through August sojourns. Garden entrances will be installed where need, better parking areas will be built, and onsite cafes and gift shops will enable visitors to extend their stays through lunch. Finally, each property will offer more ways for the public to interact with these gardens, whether it's attending an outdoor concert at Castle Hill overlooking the Grand Allée, taking a yoga class in Naumkeag's Afternoon Garden, arranging flowers from the Cutting Garden at The Stevens-Coolidge Place-or simply taking a memorable family photo in these enchanting, flowerfilled oases.

www.thetrustees.org/







FAR LEFT The Rose Garden at The Stevens Coolidge Place in North Andover, Massachusetts.

CENTER A view of Naumkeag.

LEFT The Afternoon Garden at Naumkeag in Stockbridge, Massachusetts.

ABOVE Naumkeag in Stockbridge has a garden adorned with Venetian mooring poles.

PROJECT: Urban Palladian-style Villa DESIGN ARCHITECT: Ken Tate Architect, New Orleans, LA

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Italian Renaissance

Architect Ken Tate is inspired by Palladio's Basilica and work in the Veneto for this urban villa in New Orleans.

BY NANCY A. RUHLING | PHOTOGRAPHY BY FRED LICHT AND TIMOTHY DUNFORD

The rear loggia designed for large gatherings as well as intimate family gatherings, features steel doors that lead to the interior of the villa.





Under the expansive branches of an immense, age-old Live Oak on New Orleans' historical and charming St. Charles Avenue, a Palladian-style villa shades itself.

Traditional and timeless, the residence, designed by architect Ken Tate of New Orleans, is a superb complement to its history-rich neighbors in Uptown, which was settled during the late 19th and early 20th Centuries, when the Colonial Revival was in vogue. "My task was to design a house that looked like it was a part of that era, but it couldn't be a mere replica of a classical style; it had to be different because the homes in Uptown are some of the most creative architecture in the city," Tate says. "I had to think like that, too. I had to get into the mindset of the long-ago architects of the other houses."

After touring the neighborhood with his clients, a newly married philanthropic couple, Tate suggested that an estate referencing the Portico of Palladio's Basilica in Vicenza and the Mediterranean Revival style would be the ideal place not only to raise a family as well as funds for favorite charities but also to house their vast collection of contemporary art.

As a self-styled "intuitive classicist," Tate felt these styles would give him the architectural freedom he needed. "The clients originally wanted a French style," he says. "But French is sacred in New Orleans because the city has a lot of French architecture and influence; anything I did that was not a literal interpretation would cause comment. Besides which, 1920s Italian Renaissance is a good vehicle for creative design, which makes it a good fit for the neighborhood."

He chose to clad the structure in stucco over masonry with limestone architectural details because "it's more human and friendly than a completely limestone house—it's a house, I didn't want it to look like a public library."

While Tate was "dreaming the house," he looked not only to Palladio's Basilica but also to his work in the Veneto. Francis Burrall Hoffman's Vizcaya in Miami came to mind as did Addison Mizner's and Maurice Fatio's mansions in Palm Beach and Wallace Neff's and George Washington Smith's Mediterranean Revival villas in California.

The project, which would take five years to complete and generated some 380 design documents, almost didn't get off the ground.

For some four decades, there had

OPPOSITE The view from the entrance hall through the open front doors to the front gates and St. Charles Avenue beyond. The stone paving has a pattern of black onyx cabochons.

CENTER The entrance hall has two stone arched niches and four stone arched openings that lead to adjoining rooms.

ABOVE The sculpture and vegetable garden with a view of the apartments beyond and across St. Charles Avenue.





ABOVE A view from the front steps of the portico through the open front doors and on through the house to the rear loggia and garden beyond.

CENTER The living room's stone mantle is an exact hand-carved copy of a Palladio mantle in the Veneto. Old growth antique white oak beams with hand carved wooden brackets were used for the ceiling above.

FAR RIGHT A hand forged iron and cast bronze rail adds open air delicacy to the central cut-stone stair. been a moratorium on new building on St. Charles Avenue in Uptown, and before Tate's project could proceed, approvals from numerous preservation groups and neighborhood associations had to be secured so the original dwelling, a homely 1930s bungalow that had been converted to an apartment house, could be demolished.

"The house is on a corner," Tate says, "so I had to get approvals from the rreservation groups that set the rules for each street. It was not an easy process, and it meant that I had to present a complete schematic design before we could do any working drawings. I hired an architect who lived on the side street, and who was familiar with the process, to facilitate. It still took six months."

In keeping with the Uptown style, Tate's two-story, 12,800-square-foot urban villa, which has two single-story wings, presents a formal front façade on the St. Charles side and a more relaxed Mediterranean Revival architectural face on the side street. The landscaping, too, follows this public-private format from front to back. The front portico, a prominent and remarked-upon feature of the home, rises a single story (and without pediment) in defiance of Palladio's villas. "This was both an intuitive and rational decision," Tate says. "By making it lower than the rest of the front façade, you get an unobstructed view of it when you drive by. The second story is obscured somewhat by the Live Oak's massive crown."The second-story terrace, he adds, offers the perfect vantage point for watching the parades that pass by.

On the side street, Tate allowed himself to get a bit more exuberant: He added a romantic three-story tower, which was inspired by those in the Mediterranean homes of Palm Beach, Coral Gables, Bel Air and Santa Barbara. Clad inside with colorful, textured tiles, it is an exotic oasis, or as Tate calls it, "a nest."

"The clients weren't keen on the idea in the beginning, but now they love it," he says. Like Palladio's villas, Tate's urban villa is built along a central main axis, but in Tate's more flexible design, it had to be shifted to create a second one for the back of the house so he could center the classical swimming pool and its loggia. He chose to do this in the rear gallery, which provides lateral circulation to the side areas of the house as well as the rear wings.

"The tower, which can be seen from the rear courtyard, helped facilitate the shift without announcing it," he says. "There's a bit of high-design gamesmanship going on at the rear façade/tower/ central pediment/wings that makes this shift meaningful. I basically exploited this necessary 'problem' into a high-art composition."

The home's interior walls were styled as a neutral palette for colorful, contemporary artworks, allowing the ceilings to rise to the occasion with groin and barrel vaults, antique wood beams and plaster coves.

One of the more elaborate ceiling treatments is in the living room, where reclaimed oak beams are supported by classically carved brackets. In the kitchen, heart-pine beams, cracked by time, become a counterpoint to the contempo-







ARCHITECT Ken Tate, New Orleans, LA

GENERAL CONTRACTOR Leonard Isacks, Isacks Construction, Metairie, LA

INTERIOR DESIGNER Gerrie Bremermann, Bremermann Designs, New Orleans, LA (now retired)

LANDSCAPE ARCHITECT Gavin Duke, Page/Duke Landscape Architects, Nashville, TN

MASTER WOOD CARVER Frederick C. Wilbur, Lovingston, VA (now retired)

CUT LIMESTONE SUPPLIER Rob Teel, Continental Stones Co., Florence, TX

MASTER MASON David Williams, Williams Masonry, Fate, TX

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TILE & MARBLE Peggy Stafford, Stafford Tile & Stone, New Orleans, LA

rary white cabinetry, and in the master bath, which is modeled after a Roman bath, a coved ceiling, painted white, tames the zebra stripes of the marble.

When asked about favorite rooms, Tate talks instead of favorite "moments." "I like experiential things," he says. "For me, the loggia is a big moment because it's the heart of the house. So is the back courtyard because even though you're in the middle of a dense city, it's sited and landscaped so that you don't see any other houses."

For Tate, designing the urban villa on St. Charles Avenue, which is known as The Jewel of America's Grand Avenues, was the opportunity of a lifetime.

"I've been working all over the South my entire career, but this is my first project in New Orleans because there's no land left to build on," he says. "I doubt that the neighborhood will allow another new house to be built for quite a while."









FAR LEFT Salvaged beams grace the ceiling in the breakfast room while steel windows frame the view of the loggia.

LEFT Inspired by Palladio's Basilica in Vicenza, the front facade features a single story portico with a cutstone arcade and balustrade terrace above.

CENTER A modern Italian kitchen juxtaposes the old beams and smooth plaster walls in the kitchen.

ABOVE The courtyard view reveals the second floor pediment loggia with Doric columns surmounting the first floor loggia with an iconic Palladian opening.



ANGLOPHILE VOCABULARY

Author and architect Phillip Dodd draws inspiration from his background and beyond to design breathtaking houses. BY PHILLIP DODD

When I was growing up in England, one of the prime time TV shows was Through the Keyhole, hosted by Sir David Frost-of the Nixon interview fame. The premise of the show was that a colleague of Frost would walk through the home of a celebrity, without revealing whose home it was. Back in studio a celebrity panel would ask Frost questions that he could only answer with a yes or no, in an attempt to guess the owner of the home. The notion being that a house is a reflection of the personality of those that live there-or as Sir Winston Churchill put it, "We shape our homes and thereafter they shape us."

Why do I note this? Well, if you were to visit my office you'd find hanging on the wall a 12-plate print of the Nolli Plan of Rome, alongside photos of Roger Moore and Michael Caine. And nestled amongst architectural samples and machetes, you'll find biographies on Richard Burton and Cubby Broccoli, Everton Football Club and James Bond memorabilia, psychedelic photos of the Beatles, and a portrait of the Queen. You'll not find a similar office anywhere else—just like you won't find a similar version on me—nor would you want to! Five minutes in my office and you'll know all you need to about me.

Part of my marketing is my personality—why I differ from others. Note that I didn't say why that I'm better than others. I dislike the way politicians and society, in general, encourages us to one-up each other in order to engender popularity. I don't try to appeal to everyone—as by doing that you are diluting oneself. I feel that we live in a time where the goal more often than not is to fit in, rather than to stand out. I'm not advocating that our designs be garish and loud in order to stand out for the sake of standing out but they do need a sense of identity. This identity comes from the location of the home—its style and use of materials—as well as the personality of the homeowner and the designer. If a client has done their homework, then they've hired an architect or designer whose work and language they like. But more importantly, they've hired someone that they will enjoy working with, and someone that has a process that appeals to them.

The beginning of any project is like Christmas Day for a designer. However, I try to resist the urge to jump into any design. Instead I press the pause button, and work on two preliminary studies that I present to the clients. The first is a property and zoning review where I analyze the municipal restrictions on the site—setbacks, height planes, wetlands, stories, height, and square footage limitations. It's always amazed me that every town and city in America has different zoning codes, and its essential to make sure that anything you show the homeowner can actually be built. You'd think that this is common sense, but many years ago I realized how few people actually had any common sense, and rather than being the norm it was actually a skill set!

The second study is a pattern book comprised of historic and contemporary images. For example, for a recent project in Palm Beach, I divided the presentation into sections such as windows and doors, loggias, cloisters, courtyards, and towers. As I showed these images to the clients, I carefully noted which images they responded to-and more importantly which ones they didn't. You'd be surprised what you learn about each client during this pictorial review, and then know what not to include in your design. With these two studies behind me, I'm then able to hit the ground running. You only get the one first reveal, and these

"I don't try to appeal to everyone—as by doing that you are diluting oneself. I feel that we live in a time where the goal more often than not is to fit in, rather than to stand out. I'm not advocating that our designs be garish and loud in order to stand out for the sake of standing out—but they do need a sense of identity."

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IDEAL COLLABORATION

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PHILLIP DODD





Architect Phillip Dodd surrounds himself with items in his office that define him from Beatles memorabilia to a Nolli Plan of Rome.



studies more often than not allow me to hit a lead-off home-run.

When I was a student in England. and interned in architectural firms there, we drafted with ink on velum. My tools were Rotring pens with different nib sizes, a blade and easer to scratch off and burnish any mistakes, and a hair dryer to dry the ink. When I came to the States, these tools were replaced by clutch pencils, a brush, and proportional dividers. The drawing table remained the same, as did the parallel bar, t-square, and the act of rolling up my shirt sleeves so not to smudge anything. I still do the latter-it's part of the uniform, as are the requisite eyeglasses. But most importantly, I was still hand drafting.

Why is a background in hand drafting important? This is where I upset half the readers: It's not a case of improving ones artistic skills. If at any time an architect or designer becomes preoccupied with creating beautiful drawings rather than creating beautiful homes, then they need to change profession and become an artist. Drawings are merely a tool to present the design to the client and to get a home built.

Instead hand drafting allows one to compose a drawing. It's that eye to brain to hand coordination. When hand drafting, you soon learn to include only the relevant information—no repetition, no useless information. It forces one to self-edit.

Alas, I don't really hand draft anymore. Instead all project start off with a quick sketch-more often than not a doodle on a napkin in a bar or restaurant. Then my mind works in overdrive as I hand draft in my head, going directly to AutoCAD. That being said, I use an old version of AutoCAD-not because I'm too cheap to purchase a more recent version, but rather because it's the closest thing I can find to hand drafting. But I'm still drafting rather than assembling, which is, in essence, what the newer versions of AutoCAD do. Just like hand drafting there is conscious thought behind every single line drawn and committed to paper. Nothing is mindless-no cut and paste.

I start off with the plans and if I've done my homework correctly, I can limit the amount of subsequent iterations. Plans are functional while exterior elevations are aesthetic—and although it's essential that our homes look great, the primary concern must always be that they work for the particular idiosyncrasies of each homeowner.

I personally love as many comments as possible during the design process. Mostly, I pay no attention to these comments, but occasionally something will resonate with me. That's when I stop designing and jump back onto one my writing projects (I'm currently working on a book on the Beaux Arts Architecture of New York City during the Gilded Age). So much of design involves emotions, and this separation allows me to return with a clear mind. More often than not the solution initially suggested to me is flawed-but they have hit onto something that needs my attention. Plenty of designers hate comments or suggestions-but how can anyone ever get better without input from others?

I'll always give my opinion—whether the clients want it or not—but in the end if a client insists on something, I've done my due diligence, and after all, it's their home not mine. One has to remember that although we are design professionals, first and foremost we are in the service industry.

I then move on to the exterior elevations and building sections. For the most part these are for my own coordinate purposes, as it's unrealistic to expect homeowners to fully understand and digest two-dimensional drawings. I then use these drawings to create 3D computer renderings as well as a physical model that I present to the homeowner. That's when the project comes alive in the eyes of the homeowner.

Physical models may not be particularly technologically advanced by today's standards, but nothing better represents a three-dimensional version of a design. If the budget allows, I work with a great modelmaker in upstate New York who creates wonderfully detailed miniature versions of the design. This is where I should quote a line from Zoolander! But more often than not I will make the models myself. I find this fabrication process to be incredibly informativeand therapeutic. It's like playing Lego for grownups-and on occasion it makes me pause and reconsider a particular aspect of the design.

Presentation computer renderings represent the culmination of the initial design process. I entered the design profession because I loved to draw, but I've learned to put away my own ego and urges to pick up a paint brush, as my artistic skills can't compete with the computer renderings that I commission. On more than one occasion, these renderings have fooled people into thinking that the home is already built. More importantly, they really are the best way to present a finished design to a homeowner—which is the goal of any drawing.

Then I start on the interior—but that's a tale for another article.

PHILLIP JAMES DODD is an expert on classical architecture and interiors. His residential designs can be found in Greenwich, New York and Palm Beach. He is also the author of The Art of Classical Details and An Ideal Collaboration.

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TUESDAY, NOVEMBER 27, 2018 2 PM ET **STORM WINDOWS 2.0: FORM, FUNCTION AND FIT** 1 AIA HSW Learning Unit

Presenter: David Martin, President, Allied Window

Exterior storm windows are a valuable architectural element; they protect primary window sash that is often historic; improve building users' comfort and reduce heating bills; and they reduce noise. This webinar will feature several case studies to illustrate the process of measuring and selecting storm windows, the installation process and results to be expected for energy savings and noise reduction.



TUESDAY, DECEMBER 4, 2018 2 PM, ET PAST, PRESENT AND FUTURE USES **OF EXTERIOR SHUTTERS**

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Speaker: Harry Rembert, Vice President, New Horizon Shutters

This course will describe the historical evolution of exterior shutters including use, materials, and construction methods and explore historic and contemporary designs that incorporate exterior shutters. Information on different materials and their best applications in shutter design and performance will be reviewed.



TUESDAY, DECEMBER 11, 2018 2 PM ET **TERRA COTTA TILE: COLOR SELECTION AND MATCHING**

1 AIA HSW Learning Unit

Presenter: Alicia Cordle, Ceramic Engineer, Ludowici

Whether matching tiles for an historic preservation project or building anew with a specific color in mind, terra cotta tile can be produced in a number of custom colors. This webinar will address new roofs, new roofs designed to replicate all or part of an original roof, or matching small areas of roofs for selective replacement. Special attention will be give to matching for historic preservation projects.

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ON DEMAND TRADITIONAL PLASTER 101 1 AIA HSW Learning Unit

Speaker: Patrick Webb, The Center for Traditional Craft



ON DEMAND WINDOW RETROFITS FOR OCCUPANT COMFORT AND ENERGY EFFICIENCY 1 AIA HSW Learning Unit

Speakers: Russ Eisenberg, Vice President, Sales, Indow



ON DEMAND APPLYING BUILDING CODES TO HISTORIC BUILDINGS 1.5 AIA HSW Learning Unit

Speaker: Theodore Vedock, AIA, Hammel Associates Architects



ON DEMAND AN INTRODUCTION TO ORNAMENTAL METALS, DISTANCE EDUCATION VERSION 1 AIA HSW Learning Unit

> **Speaker:** Douglas Bracken, Wiemann Metalcraft



ON DEMAND TRADITIONAL WINDOWS & HISTORIC SETTINGS: DETAILS DETAILS DETAILS 1 AIA HSW Learning Unit

Speaker: Steve Lien, CSI, AIA, Marvin Windows and Doors



And HSW Learning Unic Storm Windows have been a traditional energy saver since the 19th centry. They endure as an option for histor primary windows. This session will provide a comadditional benefits in and of when the additional benefits in and of when the



primary end protection to and increase the performance of the primary window. This session window could be comprehensive discussion of what storm windows can do; when they are betaid, what the and the sense of the performance of the second preservation are; and how to calculate the cost benefit analysis of using them.





ON DEMAND DESIGNING SECURITY AND SWING: LOCKS, HINGES AND THEIR APPLICATIONS 1 AIA HSW Learning Unit; .1 IDCEC CEU

Speaker: Betsy O'Day, Business Development Manager, Nostalgic Warehouse



~ UPCOMING ~ DATE & OTHER DETAILS TO BE ANNOUNCED

WINDOWS AND HISTORIC HOMES: REPAIR, REPLACE AND NEW ADDITIONS 1 AIA HSW Learning Unit

Speaker: Charles, "Chick" McBrien, Marvin Windows and Doors **REVIEWED BY DANIELA HOLT VOITH**



One of many illustrations by Stephen Harby: the façade of the 1644 Palazzo di Propaganda Fide in Rome designed by Gian Lorenzo Bernini. Graphite and monochrome wash on paper.



Robert Venturi's Rome BY FREDERICK FISHER AND STEPHEN HARBY ORO Editions, 2017 112 pages, softcover \$24.95

THIS DENSE LITTLE BOOK is a

serious investigation, by two architects, of Venturi's seminal post-modernist volume *Complexity and Contradiction*—a critical reading of one of the most important architectural credos of the mid-20th century. Tracking the original book's chapters while illustrating Venturi's Roman case studies in rich sepia wash, it also serves as a guidebook to Rome for those with similar interests.

I asked authors Stephen Harby and Fred Fisher about their 10-year book project. Fisher, Harby, and Venturi each were Rome Prize recipients; Venturi's book was largely written during his time at the American Academy in Rome. Almost 50 years later during his Rome Prize stay, Fisher was studying midcentury museum additions, but thought to draw Rome's monuments as selected by Venturi, subsequently displaying the drawings during his open studio. Harby, an inveterate traveler, architectural watercolorist, and Rome scholar, taught the Yale School of Architecture's Rome studio for many years. Their friendship allowed them to collaborate, with both contributing to the writing and the drawing.

Fisher says that he is "interested in drawing as an analysis of the abstract ideas of a building, drawing what can't be seen but rather inferred," while Harby's inspiration is of the play of light and shadow on architectural forms. Harby found that by painting each building he gained a deeper insight into Venturi's illustrations. One of his favorite examples is the facade of Bernini's Palazzo di Propoganda Fide. He found that "the pilasters lean in as they rise, indicating that Bernini thought of them as part of the facade, not applied to volume as Venturi's willful double reading of the facade suggested."

Such astute dialog and illustration fills Robert Venturi's Rome and makes it a rare pleasure. I can't wait to visit Rome, book in hand, and retrace the discoveries of these three architects for myself.

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