

Clem Labine's Period Homes

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2004 PALLADIO AWARDS

Residential Architecture: Sympathetic Addition

Winner: Peter Zimmerman Architects

Pennsylvania Tudor

PROJECT: RESIDENCE, BRYN MAWR, PA

ARCHITECT: PETER ZIMMERMAN ARCHITECTS, BERWYN, PA; PETER ZIMMERMAN, AIA, PRINCIPAL; JOHN TOATES, AIA, PRINCIPAL/PROJECT ARCHITECT

LANDSCAPE ARCHITECT: CARTER VAN DYKE ASSOCIATES, DOYLESTOWN, PA

GENERAL CONTRACTOR: CHEROKEE CONSTRUCTION, PHILADELPHIA, PA

In the 1920s and '30s, the suburban Philadelphia area commonly referred to as the "Main Line" was developing in eclectic architectural styles. The region embraced a variety of European influences but balanced these with historical materials and also regional architecture that was shaped by the growing number of people moving out of the city and building country estates. As a result, individual houses in the area are often distinct. Around 1935, a house was built in Bryn Mawr, PA, in this vein: Tudor-influenced and constructed of stone, brick and wood.

In late 1996, a growing family purchased the 4,000-sq.-ft. house. Needing to enlarge and reconfigure it, while wishing to keep faith with its original design, the owners hired Berwyn, PA-based Peter Zimmerman Architects. The goal was to incorporate the client's modern family needs without sacrificing any of the scale, proportion, detail or plan relationships found in the original house.



Peter Zimmerman Architects added 3,000 sq.ft. to a ca. 1935 Tudor-influenced residence in Bryn Mawr, PA, in order to accommodate a growing family. The addition comprised a family entry, three-car garage, family dining room and three new bedrooms and baths.

The first phase of the project was completed in 1998 with the interior renovation and redesign of the master suite. A second phase, completed in late 2001, increased the client's living space by nearly 3,000 sq. ft., and also created a new entrance courtyard.

The addition's structure mimics that of the original, with mortise-and-tenoned half timbering in Douglas fir above natural stone. "Tudor houses traditionally have exposed timbers as the physical structure, along with infill for closure. The timbers are not a decorative feature," says John Toates, AIA, principal and project architect with Peter Zimmerman Architects. The addition comprises a family entry, three-car garage, family dining room and three new bedrooms and baths. A complete kitchen renovation was also part of this project. The garage, family entry, powder room and service and storage areas were sited half a level lower than the rest of the house, while the new bedrooms and bathrooms located over the garage are either half a level up or down from the main levels of the house. These variations in level provide a sense of separation and hierarchy, while still allowing accessibility.

The siting of the house on a 1½-acre parcel of land created significant constraints in the design of the approach and also the expansion of the house. In addition, according to the Federal Emergency Management Agency maps for the area, the house was located entirely within a flood plain. "We were prohibited from doing work until we had a full engineering analysis of the property so we could accurately delineate where the flood plain was. This problem fell under local, state and federal government jurisdictions, so various organizations had to review the problem, such as the Corps of Engineers, the Department of Environmental Protection and others," explains Toates. "It took nearly six months just to prepare the detailed hydrological study. Ultimately, the re-delineation of the 100-year flood plain was accepted, allowing the project to proceed."

Another challenge was that the stream that crosses the site isolated the house on a very narrow strip of land along the rear of the property and restricted the driveway location to the extreme edge of one side of the property. While all of the major rooms in the existing house looked out over the stream, the garage doors dominated the visual impression of the house's approaches. The front door was squeezed between the rear property line and the front of the house. Creating a more dramatic entry and approach to the house, while leaving the driveway, was not simple. To address these issues, the architects created a new entrance courtyard, while the addition was angled away from the main house to follow the path of the stream, creating a more expansive approach. "We had to



The brick patterning of the chimney was designed to complement the existing chimneys. (Glen-Gery and Boral Bricks, Inc., provided the brick.) The composition of rooflines was configured to provide a constantly changing play of light and shade on the exterior materials of the house. The custom Ludowici roof tile has yet to gain the mossy patina found on the existing roof.



The goal of the addition (right) was to incorporate the client's modern family needs without sacrificing any of the scale, proportion, detail or plan relationships found in the original house (above).



lengthen the house and expand the perception of space along the front of the house to get a suitable approach," says Toates. "Moving the approach away from the house allowed the rhythms of the rooflines of the original and addition to become apparent and appreciated." Work continues on the property to "retrieve" the island of land isolated from the house by the stream. As the first phase of this project, two arched timber footbridges have been installed over the stream and the area is being re-landscaped.

On the exterior, the decorative brickwork, half-timbering, moldings and stone work were all designed and constructed to exactly reproduce the existing work. "The unique and creative accents that were introduced by the original craftspeople in the existing house were surveyed and recorded digitally to allow the faithful replication in the addition," explains Toates. "Through the active participation of highly skilled modern craftspeople, the details of the project were permitted to grow beyond the limitations of each individual trade, and exhibit the subtle variations that make the details so expressive." Peter Zimmerman, principal with the firm, adds, "In the Tudor tradition, there was less of a separation between artisan and architects, so that details done for the brickwork, for instance, would have been thought up by the mason – staying faithful to the original patterns therefore takes on another dimension."

The design of the multitude of brick patterns within the half-timbering were a significant challenge, says Toates, with "every single infill panel assigned a specific and different pattern." A base set of 12 patterns was derived from the existing house and each was "mirrored, bordered, rotated and tweaked" to fit into each of the panels. A blend of three different bricks was used and each of the six faces of the brick was exposed in differing combinations to get the subtle texture and color variation already on the house. "The detailed construction drawings and extensive dialogue and communications that were held with the mason gave a very clear directive as to the importance of the design intent while allowing flexibility for adjustment in the field," says Toates. "This allowed the craft and creative skills of the masons to emerge and blend seamlessly with that of their predecessors."

The half-timbering was a combination of full-thickness structural Douglas fir members and 1-in.-thick boards fastened to concealed pressure-treated members in order to accommodate the full-thickness brick veneer. "The timbers were specially resawn to match the radial saw marks that were found on the original house," explains Toates, "and special attention was paid to articulating accurate joints, connections and flashing details between the timbers and other materials."

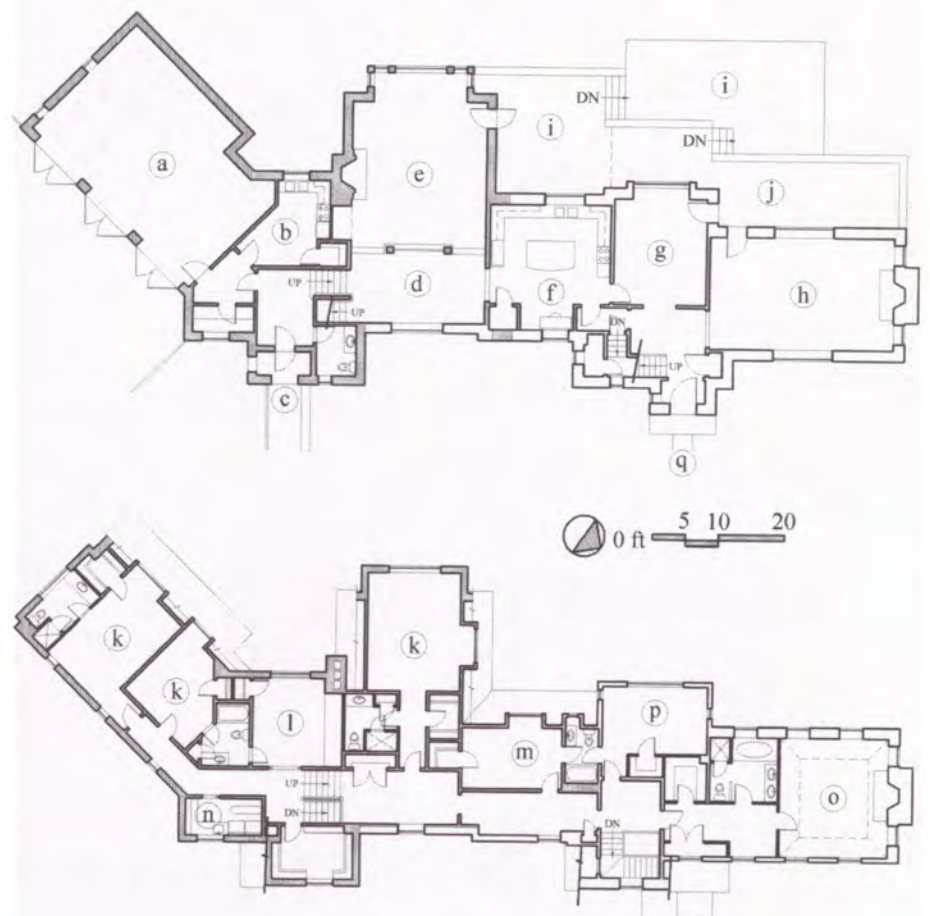
The stone veneer was hand selected from a local quarry that was still harvesting the regionally specific Wissahickon schist from which the original house was made. Oversized stones were obtained and shaped by hand on-site to match window header and eave details. A complicated blend of sands, aggregates and cements was needed to achieve a matching mortar color and surface texture. "Many samples, application techniques and aging techniques were required before an acceptable blend was reached," says Toates. The approved mortar sample was then left to age for an additional six months to ensure the proper development of the patina before the stonework was pointed.

The new clay roof tile was custom made by New Lexington, OH-based Ludowici Roof Tile, the same company that manufactured the original tile, to match its size, coloration and surface texture. "The humps and flares that were originally built into the roof surface with the use of shims and wedges under the narrow-board roof sheathing were translated to work with the use of plywood sheathing," says Toates. "This saved a significant amount of money versus the use of narrow boards, and the end result is indistinguishable from the original." The custom overhead garage doors were designed and fabricated to emulate out-swing-style carriage doors with hand-forged decorative iron strap hinges that complete the appearance. A customized low-clearance overhead track assembly was required in order to achieve the proper door proportions. "We were looking to have carriage out-swing garage doors for authenticity," explains Toates. "We had to switch to overhead, but we designed them to look as close to out-swing as we could."

The exterior lighting features handmade iron fixtures with mica shades. Above the garage the fixtures are round, while the ones on the path are square. "The lights were designed to look like lights that were hung on hooks," says Zimmerman.

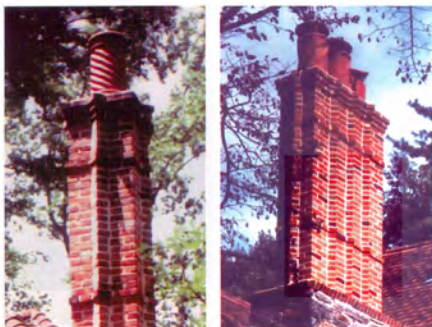


The site plan illustrates how the angled addition responds to the stream and flood plain. New footbridges link the grounds of the main house to the wooded landscape opposite the stream.



The addition includes a family entry, three-car garage, family dining room and three new bedrooms and baths.

Room Key	
A GARAGE	J EXISTING TERRACE
B CATERING KITCHEN	K NEW BEDROOM
C FAMILY ENTRY	L PLAYROOM/FUTURE BEDROOM
D FAMILY DINING ROOM	M OFFICE/EXISTING BEDROOM
E FAMILY ROOM	N LAUNDRY ROOM
F KITCHEN	O MASTER SUITE
G EXISTING DINING ROOM	P EXISTING BEDROOM
H EXISTING LIVING ROOM	Q EXISTING FORMAL ENTRY
I NEW TERRACE	



The addition drew from the original design but also had its own unique touches, so that the new chimney (second from left) is larger, while the new dormer (far right) is simpler. The steel windows are from Glendale, NY-based A&S Windows.

The original steel casement windows were retained and restored in the first phase of the project, and new custom matching units were installed for the addition. The windows were "a challenge to fabricate and install," says Toates, "but the end result is a seamless transition from the new portions of the house to the old. In critical areas, original windows that were removed as part of the demolition process were reinstalled in the new locations."

For the interior, the client originally wanted rooms close together around the center of the house. "Instead, we had to lengthen the house to fit with the architectural style and proportions of the original house and the site constraints. The client was willing to sacrifice this portion of their programmatic needs in order to achieve a better and more responsive design," says Toates. The family dining space links the new back stairs and family entry area with the renovated kitchen, while providing an elevated view into the adjacent family room. "The interrelationship and shared use of the spaces permit the family to experience all of the different areas of the house on a daily basis and still maintain a level of privacy," explains Toates.

The kitchen remained in its original location, but was enlarged by incorporating the adjacent original pantry spaces into a single room. The kitchen was designed to be the "heart of the home," says Toates, and was made easily accessible for this purpose. However, it is buffered from a direct view of the family entry, front door and formal living room. "The kitchen was meant to be a little more unfitted in style," explains Toates. "We didn't wrap every surface with cabinetry, and we wanted to use a fair amount of handmade plaster molding, which appears on the tops of the cabinets." The stove hood is reminiscent of the limestone and wood detailing in

the family room and the existing living room, "providing consistency within the house."

On the second level, a hallway "links the entire house together like a spine," says Toates, with bedrooms running along the side — the master suite is at the far end. Linen closets and laundry are also on this level. The flooring on the second level, keeping consistent with what was existing, is made from 4-in. white oak boards.

Exact copies of existing white oak moldings and millwork were hand crafted and carved with traditional decorations. The beams and columns that separate the new family room from the family dining area were hand carved and textured to be exact copies of the beams found in the original living room. "The hand-hewn white oak timbers of these elements carry on the idea and sense that there is a timber structure," says Toates. Zimmerman adds, "The same timbers from the structure are some of those seen on the interior." The centerpiece of the new family room is a custom hand-carved limestone fireplace surround that anchors the room "without overwhelming the space," says Toates. "The fireplace features Roman fire brick in the back in a herringbone pattern, not stacked, which is reminiscent of the Tudor period. These simple construction materials, through their expression in the construction, became decorative in their own right," says Zimmerman. The hand-carved Gothic rose in the mantelpiece echoes details found in other areas in the existing house. "The rose is a repetitive design element influenced by other decorations in the house and also what would have been appropriate for a house in terms of the period," says Zimmerman. The hand-pegged, wide-plank, random-width white oak floor was carefully selected and patinated to match the flooring



The oblique siting of the new garage hides the garage doors — by Artisan Custom Doorworks of Bristol, PA — from immediate view and opens the approach into the new entrance courtyard. The ironwood trees at the corner of the garage were protected during construction and give a sense of scale to the landscape; the azaleas were removed and replanted after construction.



Above: The garage elevation reveals the individual brick nogging panels between half timbers.

Right: The forged-iron strap hinges by Michael Coldren of North East Maryland were applied to the surface of the custom overhead garage doors to emulate authentic out-swing carriage-style doors. Steven Handleman Studios of Santa Barbara, CA, fabricated the handmade iron and mica wall sconces. The subtle copper work of Keller, TX-based CopperCraft's gutters and the dormer roof blend with the palette of exterior materials.

on the rest of the first floor. Door designs, hardware and plaster surface finishes were all matched as well.

"The house was made to look like nothing was machine produced. The plaster is not absolutely perfectly smooth, the brickwork is not perfectly laid, the timbers have texture to them," says Toates. The result is a casual, but at the same time formal, house, with an addition to match. "The overlapping of the new work with the original helps to blur the transition line of old to new both inside and outside, resulting in a seamless overall composition." — Marieke Cassia Gartner

Founded in 1982, Peter Zimmerman Architects is devoted exclusively to comprehensive residential architectural design and site/landscaping planning services. Many of the firm's projects are on sensitive sites, constrained by conservation easements, historic review boards, historic façade easements and sensitive wildlife habitats. Whether the final style is a Pennsylvania stone farmhouse, a Palm Beach estate or a Nantucket "cottage," each project is committed to the excellence of architecture that is integrated with its built and natural environment, faithful to its historic roots and sensitive to its contemporary cultural context.



The kitchen, although part of the original house, was completely renovated. It remained in its original location, but was enlarged by incorporating the adjacent original pantry spaces. Custom limestone brackets by Havertown, PA-based Vickery Stone support a hand-carved oak beam and overmantel, which disguise the exhaust hood for the commercial range. Other appliances are concealed behind the cabinet panels, which were made by Coventry Kitchens of Frazer, PA.

Hand-carved oak columns, beam and railing by Parkesburg, PA-based Summerbeam Woodworking separate the family room from the dining area. The hand-carved limestone mantel and hearth create a focal center along the wall.