



2005 PALLADIO AWARDS

Residential Architecture: Restoration & Renovation
Winner: Archer & Buchanan Architecture, Ltd.

Stable R&R



The stable at the 1898 Alan H. Reed estate, in Wayne, PA, was renovated and restored by Archer & Buchanan Architecture, Ltd., of West Chester, PA, to convert what had once been seven horse stalls, carriage bays and hay lofts into a four-bedroom home with spacious formal and informal rooms. All photos by Tom Crane Photography unless otherwise noted

PROJECT: ALAN H. REED ESTATE STABLE, WAYNE, PA

ARCHITECT: ARCHER & BUCHANAN ARCHITECTURE, LTD., WEST CHESTER, PA; PETER C. ARCHER, AIA, PRINCIPAL; MARK AVELLINO, PROJECT MANAGER

GENERAL CONTRACTOR: MYERS PROPERTY MANAGEMENT, HOLLAND, PA; TOM MYERS, PRESIDENT

STRUCTURAL ENGINEER: THE KACHELE GROUP, MONT CLARE PA; ANDREW SCHERER, ASSOCIATE

In 1898, in Wayne, PA, a then newly created suburb of Philadelphia, the Alan H. Reed estate was built on farmland. The estate was originally designed by William L. Price (a well-known architect in the region). Some time in the 1920s, the stable, which stood about 200 ft. from the main house, was subdivided from the house and converted into a residence. In 2002, the former stable was purchased to be renovated into a 4,700-sq.ft. four bedroom, three-and-a-half bath residence by West Chester, PA-based Archer & Buchanan Architecture, Ltd.

“We see an old building that has character, beauty, wonderful details and simple and lasting construction. We ask, what could it become? What can it be used for and how can it be done so that the beauty and character remain intact, or enhanced?” explains Peter C. Archer, AIA, a partner in the firm.

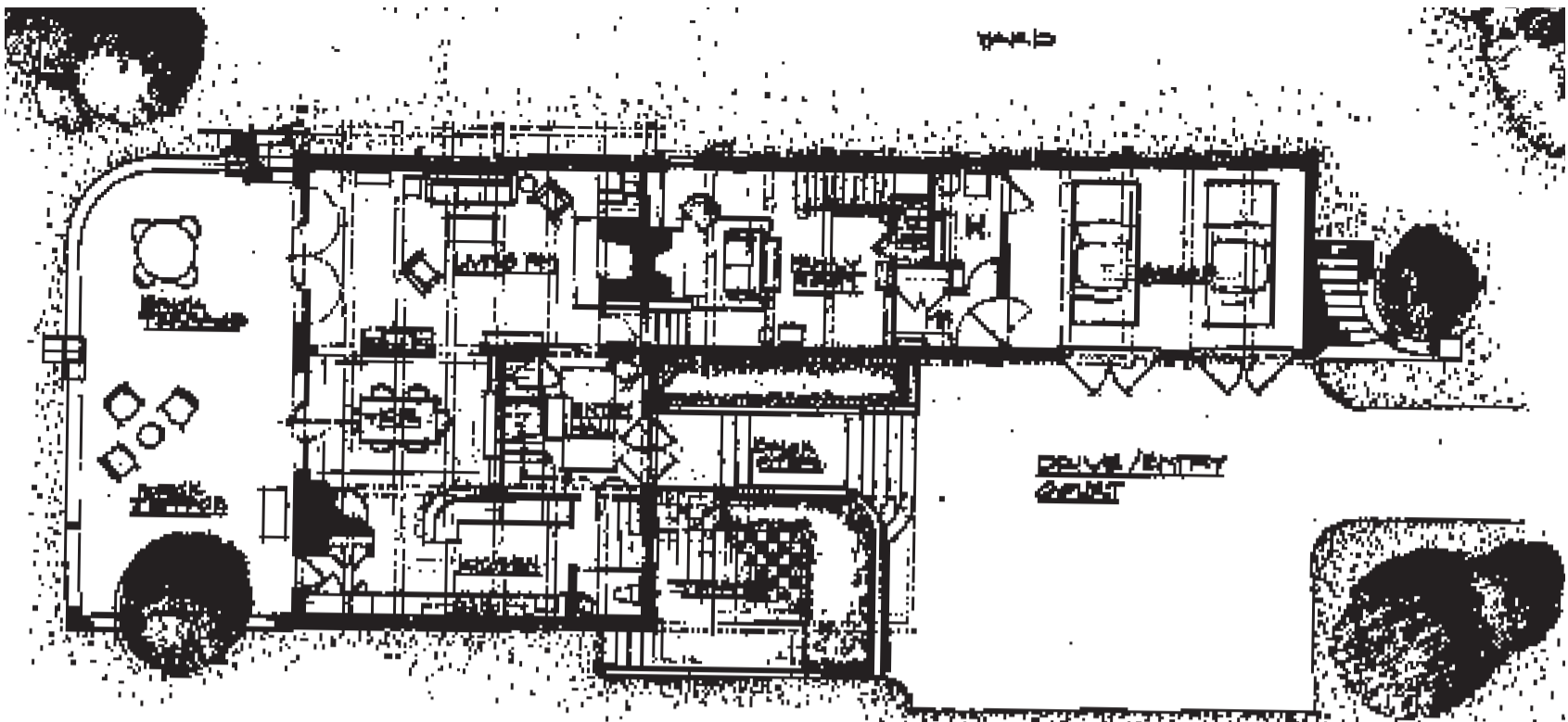
Because it was sited so close to the house, the stable reflected the formal English Renaissance Tudor style design of the house. The goal of the project, therefore, was to “maintain the architectural integrity of the historic structure, while at the same time providing the necessities and comfort of a residence,” says Archer.

This example of the Tudor style is marked by “half-timber construction,” says Archer, or the use of wood timbers with pebble-dash stucco infill on



Far left: Before the renovation, the house was severely deteriorated, with 25% of the roof tile failing, damaged brick and rotted woodwork.

Left: The original stable, around the time of its completion, and the main house were sited close enough together to ensure that the stable was designed in a similar, formal fashion. Photo courtesy of Collection of the Philadelphia Athenium



The garage and family room of the first floor make use of what was originally a stable and carriage storage. The opening of the plan of the main body of the house allows views and daylight to be shared by all spaces. Flow is optimized as one space spills into the next.

the top half, and patterned brick walls at the ground level, with a “rhythm of brick arch windows along the length of the original horse stalls.” Exposed timbers project at the second-floor line, and are carried through to the interior in the exposed timbers of the ceiling. An octagonal cupola, which required extensive reconstruction, had “suffered severe weather and environmental damage,” says Archer. Twenty-five percent of the woodwork was replaced to match the original.

The house is believed to have been last renovated in the 1950s, although not much was done at that time – the second floor remained partially unfinished since the original construction. “One third of the building was still barn-like when we started,” says Archer. “Our goal was to create a dialog and dynamic tension between the original structure and a modern day home.”

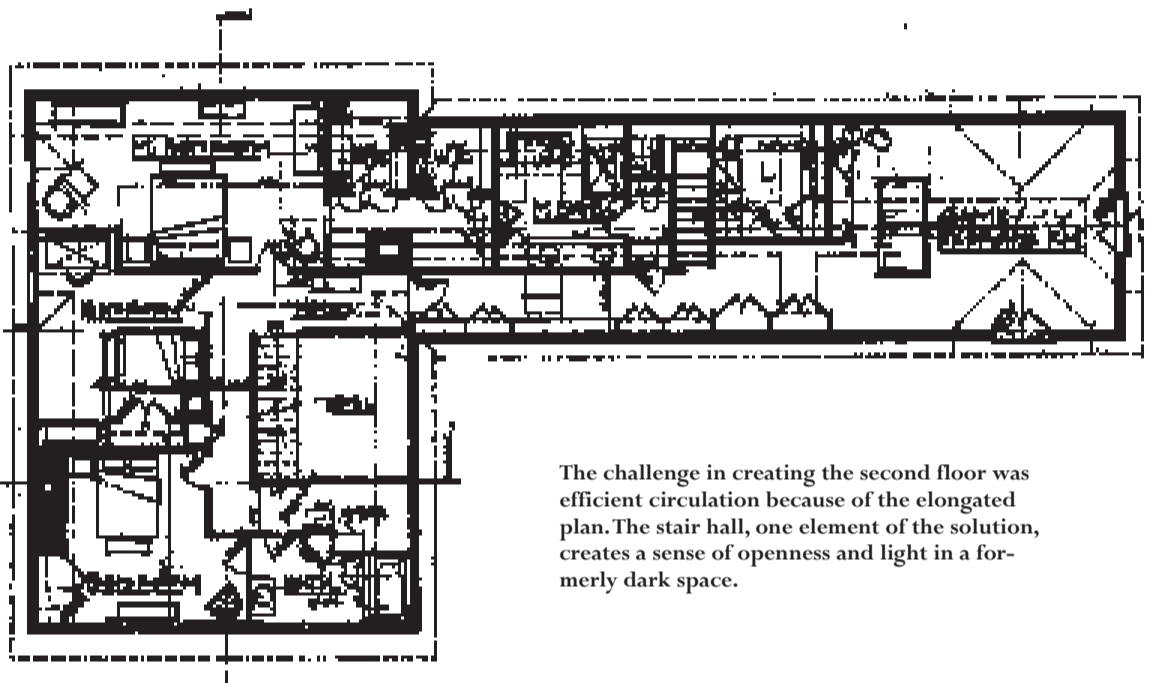
The first step in the process was to stabilize the structure. The timber-frame section along one wall was out of plumb by 4 or 5 in., but instead of pulling it back in, the architects stabilized it where it was. “We wanted the building to look its age, to maintain its character” explains Archer, “and not necessarily try to make it look new again.” To do so, the walls were plumbed with new stud-framed walls on the interior face, “so a dense wall was created that tied the walls back to the roof,” he says. “Similarly, while the chimney was leaning, the decision was made to stabilize it without correcting the lean, and thus not having to reconstruct it.”

Because of the age, lack of maintenance and the condition of the house, many materials and details needed to be replaced or reconstructed. On the roof, about 75% of the red clay tile was salvageable, with the remainder lost due to breakage or cracking. “We removed the tile, replaced the sheathing and copper flashings and reinstalled the tile,” says Archer. Samples of the tile were matched and split in to blend the new with the old. Wood exterior trim and dormers that had rotted were replaced with mahogany and painted. The brick was repointed, matching the salmon color of the original mortar. Salvaged brick from newly created openings was used in places where the brick had to be replaced. Except for those in the arched openings, the windows were all replaced. “The windows were damaged and not of great quality,” he says. “Several had been replaced since the original construction.”

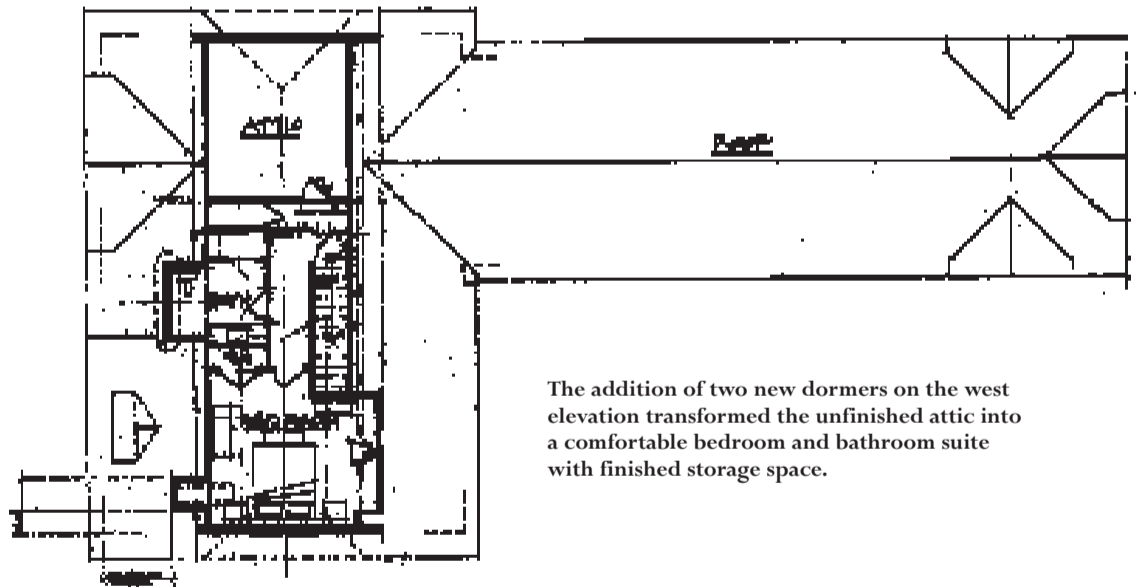
The architects also added two new dormers to the back of the building to create light for a new third floor. “Windows had been added throughout the years,” explains Archer, “so we took that cue and designed the new openings in ways to fit in with the structure, without copying the originals.” Two new carriage garage doors were designed, based on some of the original doors within the house. The garage and the family room occupy what were the original stalls and carriage storage. Where horse-drawn carriages once passed through, brick entry steps and a terrace with planting beds were rebuilt to create a “welcoming entry and reception space,” he says.

The L-shaped structure also included a larger, taller section, which was restructured to create the third floor. “We changed the structure inside, but the exterior remained very much the same,” Archer says.

The house is in the Tudor style, which features half timbers with pebble-dash stucco infill on the top half and x-patterned brick walls on the bottom. The site was regraded, which helped to transform the muddy rear yard into an elegant terrace.



The challenge in creating the second floor was efficient circulation because of the elongated plan. The stair hall, one element of the solution, creates a sense of openness and light in a formerly dark space.



The addition of two new dormers on the west elevation transformed the unfinished attic into a comfortable bedroom and bathroom suite with finished storage space.





The repetitive arched window theme is reflected in other parts of the house, such as the custom muntin pattern of new French doors, manufactured by Pella Windows & Doors of Pella, IA. The removal of a second-floor window (added ca. 1960) under the main gable restored the original symmetry of the façade.



Two new dormers were added for extra light. They were designed to fit into the style without mimicking the originals. The cupola required extensive reconstruction – 25% of the woodwork was replaced and then painted to match what remained.

The entire interior of the house was gutted, “leaving only the heavy-timber structure and thick floor decking,” explains Archer. “The new interiors were designed with great regard for the structure, with the utilities carefully and thoughtfully integrated. We expect it will last for the next 100 years.”

The interior is now more reflective of the exterior, with the simple structure with which it was built. “The new elements were designed to create a feeling that this was once a barn but is now a house,” says Archer. The entry remained where the stable entry had been. Two of the 12x12 chamfered long-leaf yellow pine beams that “create a rhythm of structure” along the entire length of the house were removed in order to create a two-story entry hall and stair. A new triple casement window, centered above the new mahogany panel front doors, provides natural light into the stair hall.

Two 20-in.-deep exposed iron beams span 30 ft. and support the wood beams across the original center isle. The main living, kitchen and dining areas feature framed openings from one space to the next, made with chamfered 6x6 posts. The space extends to the exterior and to a new brick terrace at the rear of the house. “The open plan expresses the structure and makes the smaller footprint of the house seem larger,” says Archer.

Also on the first floor, a fireplace “had been built sometime in the house’s history,” says Archer, so the architects rebuilt it and extended the chimney. A second fireplace lies behind the first in the family room, utilizing the same chimney. Flooring on this level was fabricated from antique re-salvaged oak. Interior woodwork, including mantels, paneling and other elements, is primarily quartersawn white oak. In addition, many of the interior light fixtures are antique salvaged period pieces, ca. 1920s and ’30s.

A new back stair leads up to the second floor, which has three bedrooms, of which one is the master bedroom with bath and dressing room. The second and third bedrooms share a bath. Much of the flooring, which was originally fabricated from pine, was refinished, not replaced. Elements in the stairway and hallway on the second floor are oak. “We designed new details, such as deep chamfers and tapered balusters, to carry through the character of the house without mimicking what was already there,” explains Archer. The stair hall was meant to create a sense of openness and to provide light in what was formerly dark space. By including a back stair at the end of the original stable block, along with the main stair, the architects were able to create a comfortable

arrangement of rooms and efficient circulation in the elongated plan on the second floor. A family/recreation room is also on this level. The original doors that led to a hay storage loft were pinned open, and the architects put custom-designed French doors and wood railings in the openings. On the third floor, another bedroom and bath were built.

By restoring the exterior, and renovating the interior, of this late-19th-century structure, Archer & Buchanan has saved part of Pennsylvania’s built past. “It is not often one comes across an incredible piece of architecture, and a client who desires to give it new life while maintaining the architectural integrity of the original work,” says Archer. — Marieke Cassia Gartner



Left: Tapered balusters on the staircase, designed by Archer & Buchanan and manufactured by Saienni Stair & Millwork of Newark, DE, complement the style of the original structure.

Right: The stair was fabricated from paneled quartersawn white oak, and the random-width and -length floors, from West Chester, PA-based Mansueto Flooring, from antique salvaged oak. Radiant heat in the floors was provided by Apple Valley, MN-based Wirsbo.

Far right: Wood columns were designed to complement the timber-frame structure and help frame each room while keeping the circulation open. The lighting was provided by Philadelphia, PA-based OLC and by Vintage Lighting, Malvern, PA.

