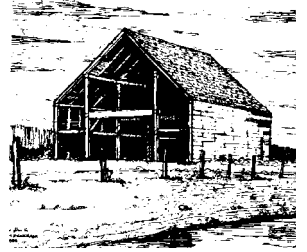


DUTCH BARN PRESERVATION SOCIETY NEWSLETTER



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Side-Wall Wagon-Entry Barns in Monmouth County, New Jersey: Their Genesis and Types

By Greg Huber



Photo 1. The Stevenson Dutch-Anglo barn on Vanderburg Road in Marlboro is an original condition eave-wall entry barn. The exterior walls are covered with modern materials. Barn built about 1830 (Photo by Greg Huber).

Four three-aisle barns in Monmouth County, New Jersey, all built in the eighteenth century, have recently been featured in HVVA Newsletters.¹ All but one of these structures survives at present, the exception being the Hendrickson barn which fell into ruins in the early 1990s. Thirteen others, constructed under the influence of New World Dutch (NWD) building traditions, have been identified in the county. Since August 1991, the author has recorded (to varying degrees) all of these barns. All are side-wall wagon-entry barns, sometimes referred to as hybrid barns. The design of this barn type was a response to economic changes at play in the second decade of the nineteenth century.

Side-wall wagon-entry barns fall into one of two groups: "Dutch-Anglo" or "Anglicized". A barn may be classified as Dutch-Anglo if originally built as a side-wall entry barn which includes structural H-bents. The author has recorded five barns of this type in Monmouth County (Photo 1). A barn is considered to have been Anglicized if it was originally built as a gable-entry NWD three-aisle

or classic barn, and was subsequently altered by the reorientation of its roof ridge and construction of new end bays to replace the original side aisles. The resultant structures had eave-wall wagon entries.

On their exteriors, these buildings look almost identical. The dynamics behind the genesis of the two barn forms are discussed below in greater detail. The author is familiar with seven of the Anglicized barns (Photo 2); three are "Americanized barns," that is, they had basements. Another barn (at Colts Neck) has not been examined on its interior; its type remains unknown.



Photo 2. The Smock Dutch-Anglo eave-wall entry barn on Longbridge Road in Holmdel is on a township owned property. The barn, in excellent condition, was built c.1820 or 1830 (Photo by Greg Huber).

Overview of Existing Literature

Side-wall entry barns have received recognition in a few publications and a basic understanding of their construction techniques has evolved over the last few decades. The first reference to a NWD barn with a converted roof was by John Fitchen in his book *The New World Dutch Barn* (1968). In his checklist of barns, number 9 (in Columbia County, NY) Fitchen identified a

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barn whose roof “has been rebuilt to run transversely, at right angles to its original N-S orientation!”² It has subsequently been determined that no such alteration took place; rather, the barn was built as a side-wall wagon-entry Dutch-Anglo structure with distinctive H-frame construction. The anchorbeams, in classic fashion, have tenons which extend beyond the bent posts.

An article on the rotation of roofs on New Jersey barns was published by the author in 1992; it presented an overview of the roof reconstruction process evident in many three-aisle New Jersey barns.³ In that article, the barns were referred to as Dutch-Anglo structures; today I would refer to them as Anglicized barns.

The next study was published in the spring 1999 issue of *Material Culture*.⁴ This was the first in-depth look at the conversion of three-aisle barns to side-wall wagon-entry barns, and featured examples from a few New Jersey counties. It included a description of the methods used to alter the framing and the agricultural advantages that the roof re-orientations afforded. Reasons given for the roof conversions included alignment of facades, appearance of hay tracks and mechanical reapers, and dairying and stabling.

In the second edition of John Fitchen’s book *The New World Dutch Barn* (2001), it was reiterated that many three-aisle barns underwent transformations in the middle third of the nineteenth century. It was noted that almost all the barns were located in northern New Jersey, and that several hybrid structures formed a majority of the barn population in Rockland County, New York. All forms of side-wall wagon-entry barns, both original ones and non-original ones, were referred to as Dutch-Anglo barns. The term “Anglicized” was not yet used to denote three-aisle barns that underwent roof conversions.

In the spring and fall 2007 issues of this Newsletter, a two-part article on the barns of Bergen County included a discussion on hybrid barns. A distinction was made by this author for the first time between Dutch-Anglo barns and Anglicized barns.

Hybrid Barns

Some observers including the author have, for at least 20 years, referred to these eave-wall wagon-entry structures as hybrid barns. Acculturation was the process that created this barn form; it resulted from a melding of selected English barn building traditions and NWD customs. The exterior of these barns resemble classic English barns in New England and other areas in the northeast.⁵

At least six of the eave-wall entry hybrid barns in Monmouth County have disappeared from the landscape during the past twenty years or so. Another barn in this group exists in a threatened state. Despite these losses, it is clear that they were once fairly common; their high incidence offers some insight into the dynamics of post-1820 NWD barn-building traditions. Barns of this type have been identified in other counties in New Jersey and in New York.

Four Areas of Inquiry

This study focuses on four areas of inquiry. First a general discussion will be presented, describing this hybrid barn classification. The second part will concentrate on the four major steps by which three-aisle barns were altered to side-wall entry barns. Following this is an examination of some of the motivations for the making of these two barn types. The final section will provide descriptions of each of the 13 barns. The summary will review the ideas presented, and introduce a few thoughts about which of the two major side-wall entry barn types might have first appeared on the landscape.

Side-wall Wagon-entry Barns

New Jersey has a plethora of side-wall wagon-entry or hybrid barns, either constructed as Dutch-Anglo barns or converted three-aisle Anglicized barns with re-oriented roofs. A high percentage of the surviving NWD barns in Bergen, Monmouth and Hunterdon counties are hybrid types, and several additional examples can be found in Somerset County.⁶ A look at these barns can provide insight into the manner in which some builders and farmers in New Jersey and specifically in Monmouth County steered away from the construction of pure form three-aisle barns and began to concentrate on different means of adapting to changing farm economies after 1820, when farmers in the region were forced to compete with others from the greater northeast and the mid-west. One strategy was to build the hybrid barn. Several factors appear to have influenced the form of this building type.

It is tragic that little documentation of barns in Monmouth County was undertaken in the first three-quarters of the twentieth century, when greater numbers of NWD type barns existed. Comparisons could have been made between a number of three-aisle barns built in the last third of the eighteenth century and the first decade or two of the following century, with the barns (often of hybrid type) built beginning in the second or third decade of the nineteenth century.

Twelve barns of hybrid type have been identified in Monmouth County since the summer of 1991. An additional example that originated in the county was disassembled and re-erected in Smithville, Ocean County, New Jersey during the 1970s. At least five of the barns with side-wall wagon entries were originally built that way; seven were converted three-aisle barns. It is not known what category the Smock barn in Colts Neck belongs to as its interior has not been examined.

How Three-Aisle Barns Were Anglicized

It is important to know the technical procedures by which three-aisle barns were altered, resulting in side-wall wagon-entry Anglicized barns (Figure 1). Many of these conversions were discussed in an article by the author that appeared in *Material Culture*.⁷ It should be emphasized that these roofs were not simply picked up and

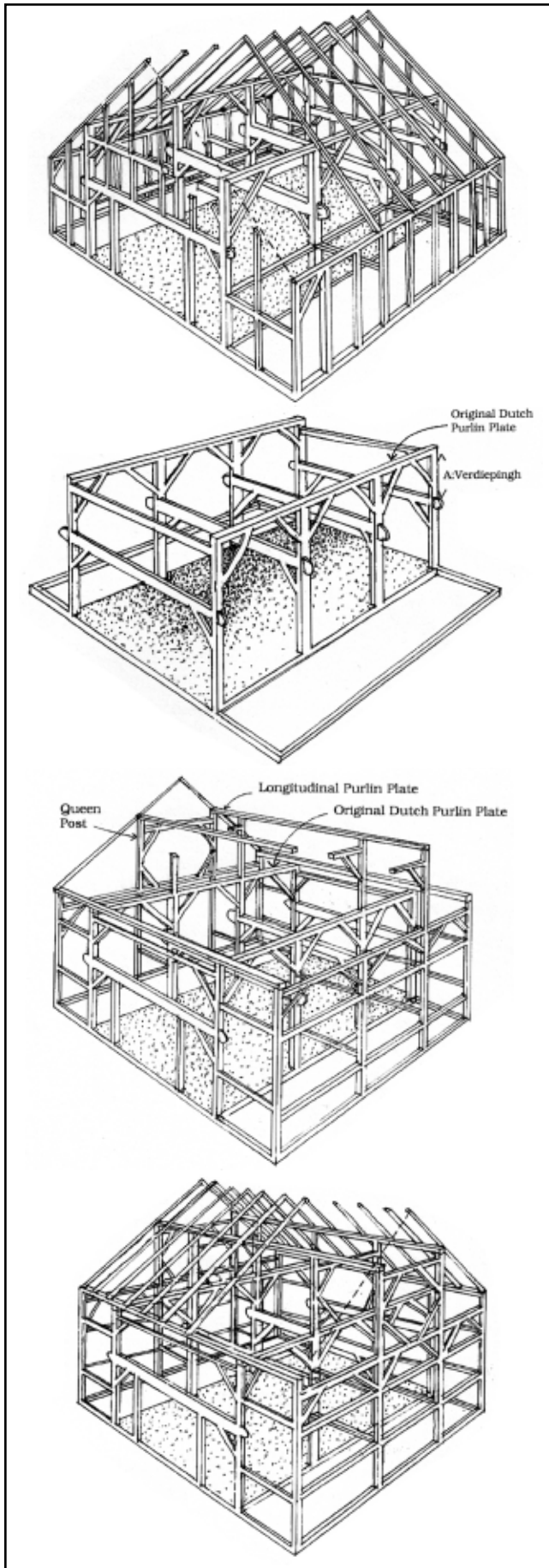


Figure 1. Four steps in the Anglicization of a NWD barn (Illustrations by Peter Sinclair).

rotated ninety degrees and then placed down on newly-constructed structures with side-wall wagon entries; the term “rotated” is a misnomer. A more appropriate word would be “reorientation.”

The conversion of each of these three-aisle barns appears to have followed the following procedure. In all cases the timbers associated with the original middle aisle or nave (their H-frames together with the purlin plates and braces) were retained, unlike the timbers in the side aisles which were often either eliminated or recycled in some manner. First, the entire roof support structure including all rafters was removed. In some examples the (often hewn) rafters were reused in the new hybrid-form barn. This is revealed by the presence of notches about mid-way along their lengths, indicating the location where the rafters had received the purlin plates in their original use. Second, both side aisles with all their attendant timbers were removed, with the possible exception of the sills (at least in certain cases).

The author has seen a few instances where nearly all the timbering of the side-aisles was retained. This was the situation in the Polhemus barn (dismantled in December 1998) in Skillman in Somerset County, New Jersey. The timbers in the one side aisle were maintained in their original position including even its original wall plate in its one end bay. In this case, new timbers were placed at the top of the original side-aisle beams to create the new and larger Anglo side bays. Third, new end bays (at the sides of the original middle aisle) were then constructed so that the heights of the end wall bents were the same height as the original end wall posts along the full length of the barn. Often the timbers of the new end bays were mill-sawn; typically the original timbers in these barns were hewn.

Fourth, a new roof support structure was built. Queen posts were erected above the upper ties of the end bent and above the existing purlin plates of the original Dutch section of the barn. These posts supported the new barn-length purlin plates (Photo 3), on which the rafters were placed. Many of the rafters were recycled from the original barn; new rafters were often mill-sawn. In the original three-aisle barns rafters were parallel to the H-bents, whereas in the converted hybrid or Anglicized barns, the rafters were perpendicular to the H-frames. The location of the wagon doors remained the same relative to the H-frames, but were now located in the side or eave walls of the barn.

In the descriptions of the 13 barns that follow, the lower plates associated with the earlier NWD H-frames are called “Dutch” plates. These plates stretch the full widths of the hybrid barns. The upper plates, called “Anglo” plates here, are those related to the “new” upper roof support structure. These plates run the full length of the barns.

Restructuring of three-aisle barns was not limited to barns in New Jersey. Eight examples of hybrid barns in adjacent Rockland County, New York are known to the author.⁸ Another example was seen by the author in the mid-1990s in northern Ulster County, New York. Yet another was observed in the Mohawk River Valley in Herkimer County, New York. Although encountered in

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Photo 3. The Stevenson Dutch-Anglo Barn on Vanderburg Road in Marlboro; this barn illustrates the use of two levels of purlin plates in eave-wall entry barns. The vertical queen post supporting the "Anglo" purlin plates is supported by the "Dutch" purlin plate seen at the bottom of the photo (Photo by Greg Huber).

other areas, the common appearance of the hybrid form barns throughout most of NWD settled areas in northern New Jersey may be regarded as a distinct regionalism.

Reasons for the Making of Anglicized and Dutch-Anglo Barns

By the first quarter of the nineteenth century much of rural life in the northeast and beyond experienced the initial effects of the Industrial Revolution.⁹ Time-honored traditions were gradually supplanted by methods of mass-assembly. Local systems of farm operations gave way to innovative and wide-spread practices based on progressive and scientific procedures. Factories gradually replaced craftsmen, almost totally supplanting them after the Civil War. Improved roads, canals and railroads altered long-established market transportation methods in nearly all areas of the east. Mobility consequently increased in a number of ways.

One result of all this was the rapid migration of many people, including sons of New Jersey farmers to the Midwest. There they bought land cheaply, established homesteads and sold their agricultural produce at low prices. As a consequence, competitive pressures were felt in almost all areas of the northeast. New Jersey farmers were forced to increase their efficiency, grow and store more crops, and market new products.

NWD farmers who had relied on traditional methods of farming and on the classic three-aisle barn to provide for self-sustained home-based economies were forced to make radical changes. Often their solution was to convert three-aisle barns to hybrid barns. In other cases, Dutch-Anglo barns were constructed. In doing this, farmers acknowledged that the old ways were no longer satisfactory. The major construction era of the classic three-aisle barn had lasted about two centuries, from the 1620s to 1830.¹⁰ Certainly, a number of these barns were built after this timeframe, even into the second

quarter of the nineteenth century but infrequently after that period. Many farmers, beginning at some point in the first quarter of the nineteenth century, found themselves in a do or die situation. They would have to change or perish. Many farmers in the NWD-settled counties of New Jersey found a partial solution by increasing the efficiency of their NWD barns by altering them to a hybrid form. The transference of crops into and out of the large side bays of the new barns was much more efficient than the movement of crops into the quite cramped quarters in the side aisles of relatively low walled three-aisle barns.¹¹ The high end-walled Anglo barns also afforded farmers greater storage capacity than the classic barns. Per unit of time expended, farmers with hybrid barns could "out-perform" those farmers who maintained their farming operations with the age-old classic and "clumsy" three-aisle barns. The bottom line, as it is today, was to make their farms profitable.

Some farmers were likely motivated to alter their three-aisle barns by the invention of the wood hay track.¹² This device was installed just below the roof ridge and started to change barn designs after the late 1840s. The track greatly facilitated the transport of hay and other crops. Classic-form NWD barns with their rather short *verdiepinghs* and consequent low side-walls were often less well suited to hay tracks than were English type barns with their large areas of unobstructed space. Hay tracks made of iron did not come on the scene until the later nineteenth century; most barn conversions had taken place by that time.

The mechanization of reaping is another consideration in understanding the motivations behind the building of side-wall entry barns. Mechanical reapers became available after about 1840. They were great improvements and enormous amounts of crops could be harvested as a result. The standard three-aisle barn was generally too small to accommodate crops in a much-expanded farm economy.

Another reason for the appearance of side-wall entry barns may have involved aesthetics. A manifest visual disruption existed between gable-fronted classic three-aisle barns and side-wall fronted houses. Perhaps symmetrical Georgian and Federal houses with their sense of balance, uniformity and frontality influenced barn design. Early vernacular houses and barns were often oriented by considerations of weather, terrain and exposure to sun. But by 1830, "good taste" had begun to contribute to the picture to a considerable degree. Many buildings were now sited according to the requirements of a visually ordered and regimented culture. The making of many hybrid barns fulfilled these needs. By 1830 or so the rather low-walled gable entry three-aisle barn may have begun to look old fashioned.

Another possible contributing influence for the production of hybrid barns was the incongruity of low side-walled classic barns when higher-walled farm structures were built next to them. It made more sense to juxta-

pose buildings end wall to end wall, not eave wall (three aisle barn) to new end-wall barns. If the later method prevailed, then there would be a large unruly “gap” or valley between the adjacent buildings. These valleys would collect rain and snow and create considerable rot where the buildings met. Hybrid barns eliminated the gaps that would have been created. The efficiency of movement was also greater when buildings were positioned end wall to end wall.

Thirteen Hybrid Barns

Descriptions follow of the 13 hybrid barns that have been documented by the author since August 1991. Not all the descriptions are of equal length, this is partially a reflection of variable degrees of accessibility. Varying levels of documentation were undertaken in the end bays, depending on the hybrid barn or in the basement of a two-level banked barn where they occurred. Comments on these portions of the barns are not as detailed as statements made on the Dutch bays.

All the examples of hybrid barns presented here, whether originally built as Dutch-Anglo or Anglicized, had two levels of purlin plates. As mentioned above, the lower level plates or Dutch plates were those associated with the original H-frames. The upper level or Anglo plates extend the length of the barn in the full side-wall entry barn. In the original hybrid barns, it naturally follows that each plate is original to the barn.

It is also important to distinguish Dutch bays from Anglo bays. The term “Dutch bays” refers to the bays in the middle bay (or wagon bay) as the barn presently stands. Only three or four bays are ever seen, depending on the barn, in the Dutch bay. The Anglo bays are the side or end bays at either side of the Dutch bay. Two Anglo bays are (with one exception) present in the barns; one barn has just one side bay. Thus, 12 barns listed below are of three-bay construction consisting of two Anglo bays and one Dutch bay; one barn has two bays.

Hybrid barns are here divided into two major groups: Anglicized barns and Dutch-Anglo barns. A subgroup of the Anglicized barns are called Americanized Barns, for their inclusion of a basement. All of the examples of this last type presented here are no longer extant. In each major group the extant barns are first discussed followed by those which have been razed.

Four Anglicized or Non-original Side-wall Wagon-entry Barns

Schanck Barn

A Civil War-era Anglicized barn is located at the corner of Pleasant Valley Road and Conover Road in Marlboro Township. At the time the barn was measured (on 1 May and 29 November 1993), the Dimeo family had lived at the Schanck homestead for 66 years. The farm consisted of 80 acres with an apple orchard. The Township of Marlboro now owns the barn. The frame house is of two sections, a two-story part and a small wing. This hybrid barn is the only example in New



Photo 4. The Schanck Anglicized barn on Conover Road in Marlboro. This barn has the largest inner bent anchor-beams of any Dutch related barn seen by the author in either New York or New Jersey, one being just shy of 25 inches. The original three-aisle barn was built about 1790 to 1800 and was converted c. 1850 (Photo by Gail Hunton).

Jersey that consists of just two bays (Photo 4). The farmstead is now administered by the township and maintained as open space. The barn is in a reasonable state of repair, but one section of the rear roof slope is deteriorating. The H-frames are still in excellent condition.

The converted barn is constructed of just two bays, the original middle aisle and a “new” end bay. The original three-aisle barn consisted of four bays. When the barn conversion occurred only one end bay was incorporated into the new structure. The plan of the barn is close to square, measuring about 40 feet on each side. All four walls of the barn are sheathed with wood shakes. One of the doors has excellent examples of Dutch style pancake strap hinges (Photo 5). Thirteen pairs of rafters constitute the roof structure. All rafters are hewn and have notches in them for the reception of purlin plates, reflecting their use in the original barn. The inner anchorbeams are among the largest in any NWD barn in either New York or New Jersey; one is just shy of 2’-1” in height. They are fabricated from tulipwood (*Liriodendron tulipifera*). The original three-aisle



Photo 5. Classic Dutch-style hinge with pancake disk at the proximal end of hinge. Pad hinges such as that seen here were used throughout the Dutch-American settled areas (Photo by Gail Hunton).

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barn was likely built about 1790; the barn conversion occurred c. 1850.

Freehold Barn

An Anglicized barn was moved in the 1970s from an unknown location in Freehold to Smithville in Galloway Township in Atlantic County, New Jersey. A visit with John Zerbo of Oradell, New Jersey was made to the southern Jersey shore on 23 July 1996 to document the barn. The transplanted Freehold structure seems to contain in its two end bays a number of timbers in their original locations with respect to the first form as a three-aisle barn. If this observation is correct, the exterior dimensions seen today are the same as those of the original barn.

The exterior of the barn was covered with new materials when the frame was re-erected at the Smithville site. On one wall are horizontal girts so the original barn may have originally had vertical siding. The exterior dimensions of the barn are 48 feet long at each eave wall and 32'-4" at the end walls. Twelve pairs of rafters original to the barn conversion support the roof. The higher-level or Anglo purlin plates support the rafters along the full length of the barn.

The wagon or Dutch bay of the barn is composed of four H-frames. The two inner anchorbeams are arched: their midpoint heights are 1'-8¹/₄" and 1'-9" while at their ends adjacent to the posts are respectively 1¹/₂" and 3¹/₂" less in height. This variation in height is believed to lend a great deal of strength to the anchorbeams. One inner anchorbeam is oak and the other is likely tulipwood and both have two-foot scribe marks. Each anchorbeam-to-post juncture is square shouldered, double pegged and double wedged. The wedges are replacements of the originals. The extensions of the anchorbeam tenons (each about one foot) have squared ends with the commonly seen clipped corners. Anchorbeams adjacent to the eave walls are smaller at their midpoints; one measures 1'-6¹/₂" and the other is 1'-3³/₄". The tenons extend only about one inch. The height from the top of the anchorbeams to the floor measures 12'-6", at the high end for these features. The H-frame posts vary in widths from 1'-1³/₄" to 1'-5¹/₄" and in thickness from 10" to 11¹/₂". The *verdiepingh* is 10'-1¹/₄"; this is by far the longest in any of the Anglicized barns in this study. The purlin braces are mill-sawn and attach to the posts 4'-2" below the Dutch purlin plates. Five of the posts are oak while three are tulipwood. Single raising holes are drilled into each post, and are located 1'-10¹/₂" below the purlin plate. Bent braces are hewn oak and are 7¹/₂" by 5³/₄" and are secured with a single peg at each of their ends.

Frequently encountered in three-aisle barns in central New Jersey are upper ties in the inner H-frames, in addition to the commonly seen ties at end walls. The inner ties in the Freehold barn (retained from the original three-aisle barn) are of fair size at almost one foot in

height. They are close to three feet below the tops of the H-frame posts.

The Anglo end bays have both upper and lower ties that stretch from the H-frame posts to the end wall posts. In a special treatment, the ties are braced at each of their ends. The differential of height of ties between adjacent H-frame posts in one post range as opposed to the other post range is 1'-2". This height difference is indicative of the placement of horses at the one side aisle in the original barn and cattle at the other side aisle.

As the height of the *verdiepingh* is quite long at ten feet, it seems probable that the date of building of the original three-aisle barn was about 1810 to 1820. The barn conversion occurred at about the time of the Civil War.

Gall Barn

The James Gall Anglicized barn on Route 33 in Freehold stood about 195 feet to the rear of the home-stand house and 480 feet from the main road. The house and barn were in in-direct alignment. The barn was in good condition when documentation occurred on 8 October 1991. The New Jersey Barn Company dismantled it, and it was re-erected in Bridgeway, Colorado.

The barn had exterior dimensions of 48'-8" on each side wall and 36'-6" on each end wall. The end wall dimension was the original length of the side wall of the three-aisle barn. The height of the side-wall was 12'-8". Workmen had already removed the exterior cladding when the barn was recorded.

Ten rafters constituted the roof support structure. Most of the timbers of the barn were oak except one upper tie beam of one end bent was chestnut and there were two softwood Dutch purlin plates. Softwood timbers in any other Dutch related barn in New Jersey are virtually unknown.

The Dutch or middle bay was 25'-8" wide and the end bays were each about 11'-6" wide. The inner anchorbeams of the H-frames were 1'-5¹/₄" in height and their tenons, all square ended, extended 12 to 15 inches. One tenon, at 3¹/₂" thick, rivaled those of the massively timbered Holmdel Road barn in Holmdel. The anchorbeam-to-post junctures were each double pegged and double wedged and had diminished haunched shoulders. The large H-frame posts measured 1'-2³/₄" by 1'-1". No raising holes were present. The *verdiepingh* was eight feet. Inner H-frame braces were remarkable, measuring a massive 10¹/₄" by 12". Of all bent braces in all barns in New Jersey, the Gall barn braces were the largest, sized in excess of need. In contrast, the end bent braces (unmeasured) were of quite small size.

Both Dutch purlin plates, each measuring 11¹/₂" by 8³/₄" and of softwood, were single lengths of timbers. Purlin braces were joined 2'-6" above the tops of the anchorbeams. All braces were hewn except in one bay at

one side of the barn where the two braces were mill-sawn. Because of the relatively low height of the eave wall, the barn only had lower transverse side aisle ties, measuring 9" by 6½" each. All the longitudinal head-height ties had been removed.

It seems that the barn's original construction date was about 1800. The date of the Dutch-Anglo conversion could not be determined, as the timbers of the two end bays were not examined.

Vanderveer Barn

The Vanderveer Anglicized barn, on Boundary Road in Marlboro, was documented on 4 July 1992 and 29 November 1998. The barn no longer stands at the old homestead. It was located 71 feet from the road and in direct alignment with the two-section frame house. The two structures stood 171'-6" apart and their roof ridges were parallel. The side wall of the barn faced four degrees east of south.

Exterior dimensions of the barn were 48'-3" at the eave walls and the end walls 36'-2½" long. Side-walls were 19'-6" high, and the roof peak measured 28'-9". In November 1998 some apparently original exterior wall wood shakes remained and were exposed between 10½" and 11¼" to the weather. Three walls were covered with wood shakes and the front wall had narrow horizontal siding at that time. On the west end wall a "peanut" stone (a local term) foundation was seen.

The original three-aisle barn had three bays, varying between 11'-6" and 12'-6" in width. The original middle aisle was 23'-10½" wide; the end bays in the Anglo form were each 12 feet wide. Fifteen pairs of rafters constituted the roof structure. Most rafters were hewn and were recycled, witnessed by the notches that formerly acted as attachment points to the Dutch purlin plates. Pegs secured the rafters to the plates, a detail that is something of a regionalism in Monmouth County. The rafters were fish-tailed to the wall plates. Most roof support timbers introduced at the time of the conversion (including the purlin plates, queen posts and associated braces) were mill-sawn.

The two inner anchorbeams were quite large and thickened in their midsections. They were each about 1'-8" inches in height at their mid-points and 11½" in width. One anchorbeam might have been walnut. The tenons were square ended and extended between 12 and 15 inches. The anchorbeam-to-post junctures were double pegged and had angled cuts. The H-frame posts were between 14½" and 15" in width by 9½" in thickness and the *verdiepingh* was 6'-0". Each post had a single raising hole located 9" below the purlin plate. All eight H-frame posts had the Monmouth County trait of wide notches at their bottom ends. Seven of the posts were oak and the eighth one had a diffuse and smoother grain than oak. The H-frame braces, large at 9¾" by 6¾", were hewn and oak. The purlin braces, all hewn, had bottom ends ten inches above the tops of the anchorbeams. The wagon door posts at the north wall were flared at their bottom three feet. The flared area was slotted for the insertion of boards, ostensibly for the

exclusion of farm animals (especially chickens) when the wagon doors were left open. The barn in its original classic form was likely built c.1800 and the barn conversion took place about 1850.

Three Americanized Side-wall Entry Barns

Schenck Barn

Despite the fact that this barn with a basement was an Americanized hybrid construction, it was one of the most distinguished barn structures in the entire NWD cultural hearth. A brief article on the barn was published in the June 1992 issue of *Timber Framing* "Mammoth in Monmouth County".¹³ The barn frame made use of the largest timbers seen in any barn in New York or New Jersey seen by this author. It was first visited in August 1991 and extensively documented on 4 July 1992. The barn was unfortunately lost in a fire in the fall of 1998 (Photos 6 and 7).

The homestead is generally known as the Chrineyonce Schenck farm, and is located on Holmdel Road in Holmdel. Schenck was born in Pleasant Valley on 29 December 1760 and died 15 March 1840. One



Photo 6. Array of barn structures at the Schenck homestead. Main Americanized barn with basement is seen in the middle; frame additions at each side (Photo by Gail Hunton).



Photo 7. The Schenck Americanized eave-wall entry barn on Holmdel Road in Holmdel. This structure had the largest timbers the author has seen among Dutch related barns in either New York or New Jersey. The middle bay with its H-frames was part of three-aisle barn built circa 1780; the barn was converted c. 1850. It was lost in a fire in the fall of 1998 (Photo by Gail Hunton).

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of his grandmothers was Sara Van Kouwenhoven. She was born in December 1674 in Kings County, New York. Her grandfather was Gerret Wolfertse Van Couwenhoven who was born 1610 in Amersfoort, Utrecht in the Netherlands. The family has been traced back to 1495 in Schoonhoven in Utrecht. The homestead was, at one time, supposedly part of the "underground railroad." The property was later owned by John Holmes, until 1809.

The exterior dimensions of this four-bay two-level structure were 45'-6" wide at each end wall and 57'-6" along the eave walls. A close examination of the structure of the barn and the various connections among the timbers associated with its end bays, indicated that the eave walls may have been the gable ends of a three-aisle barn as first built. If true, the barn in Holmdel had the greatest width of any Dutch type barn anywhere. Other dimensions in the Schenck barn included a side-wall height of 21'-2" and an estimated roof peak height of 40 to 42 feet. The exterior siding was wood shakes on all four walls. The rear wall wagon doors were the swinging type and may have been original to the barn conversion.

The notches in the Dutch purlin plates indicated that the original three-aisle barn had twelve rafter pairs. In its later hybrid form, 24 rafter pairs defined the roof structure. The width of the Dutch middle aisle was just over 32 feet. This measurement is at the pinnacle of nave widths in any type Dutch barn. Each Anglo side aisle was 12'-7" in width.

Two of the inner anchorbeams measured 1'-10" in height at their midpoints. Unfortunately, approximately 40% of the middle anchorbeam was cut off; its height was 2'-0¹/₂" at the cut. An extrapolation of the anchorbeam height was made from measurements of the other inner anchorbeams; the midpoint of the middle beam probably measured just shy of 2'-2" in height (Photo 7). If accurate, this height surpasses the height of all other anchorbeams in the nearly 700 barns seen by various observers in the past half century. No two-foot scribe marks were seen on any of the anchorbeams. The extended tenons measured an unprecedented 4" thick (Photo 8). Most tenons in other barns are 2" to 3" in thickness. The tenons were each double wedged; one was an amazing 29 inches in length. Tenon wedges do not normally exceed 18 to 20 inches. The anchorbeam-to-post junctures were triple pegged. This condition is infrequently seen on other barns in New Jersey but is common in pre-1790 barns in New York State¹⁴.

In conformation to the great size of the inner anchorbeams, the middle H-frame posts were of large size, measuring in width 1'-8¹/₄" and 1'-7³/₄" at their tops, and 1'-8" and 1'-8¹/₄" respectively at their bottoms. The widths of H-frame posts in most other Dutch barns are 11 to 13 inches. No other H-frame post in any other barn comes to within about four inches of this measurement.¹⁵ No raising holes were seen in any of the posts.

The H-frame braces were also of large size, measuring 1'-0" by 8". The widths of the shoulders cut into the posts to accept the anchorbeams were 2¹/₂" wide, also large; the normal range of shoulders in barns is 1¹/₄" to 1³/₄". The Dutch purlin plates were large at 1'-1¹/₂" by 7¹/₂" and the purlin braces measured 7¹/₂" by 5". The bottoms of the braces were attached to the H-frame posts only 5¹/₂" above the tops of the anchorbeams. The lower transverse side aisle ties were truly massive at 1'-1" by 9" (Photo 9), larger than the anchorbeams in some barns.

Despite the barn's exterior dimensions and its massive timbers, the *verdiepingh* measured only 6'-1" in height. This short dimension, together with the disposition of the purlin braces and the lack of two-foot scribe marks on the anchorbeams confirms a probable last third of the eighteenth century date of construction for the barn in its original three-aisle form.

The three-aisle barn was converted to a side-wall wagon-entry structure sometime between about 1840 and 1870. In the process of remodeling it, information about the nature of the roof support structure and the height of the eave walls was lost. It is unfortunate that



Photo 8. A second view of the Schenck Americanized barn, the "Mammoth in Monmouth County", with view of part of three inner H-frames. One H-frame post was over 20 inches in width, making it the largest post in any Dutch related barn known to this author. Inner anchorbeams were each over 20 inches in height (Photo by Gail Hunton).



Photo 9. The Schenck barn, view of first inner H-bent. Two horizontal beams at the right side of the photo joined to the middle anchor-beam, thought to have been about 26 inches in height at its midpoint (Photo by Gail Hunton).



Photo 10. One of the end bays in the Schenck barn. Note the very large lower transverse end bay tie that may have been original to the three-aisle barn. The tie was 13 inches in height (Photo by Gail Hunton).

timbers, but such an exercise would be futile. If a building can ever be called pre-eminent, then the Holmdel Road barn was near the top of the list. A few remnants were saved after the fire, and may someday be dendrodated. The author took about twelve photos of the barn; Gail Hunton of the Monmouth County Park System took a number of others in the early 1980s (Photo 10).

Hendrickson Barn

While not as big-timbered as the Holmdel Road barn, the Hendrickson two-level Americanized bank barn on Holland Road in Holmdel was an impressive structure nonetheless. A detailed report by the author on this barn and a few of the other out-buildings at the old homestead was given to the New Jersey Agricultural Museum in 1992. The exterior dimensions of the main barn, dismantled c. 1993, were close to those of the Holmdel Road barn; they may still be in storage. The barn was documented on 16 January and 23 May 1992. Rosalie Fellows Bailey discussed the homestead where the barn was located, which is known as the Hendrick Hendrickson home.¹⁶ The barn was located about 375 feet to the rear of the eighteenth-century NWD frame house and about the same distance from the main road.

The exterior dimensions of the barn were 55'-1" along the eave walls and 41'-10" on the end walls (the original eave walls). The roof peak topped out at close to 35 feet and the height of the eave walls was 22 feet. The exterior siding consisted of wood shakes, a common feature of Monmouth County barns.

The barn had 20 pairs of hewn rafters. The presence of sawn-off pegs on several of the rafters indicates that they were likely recycled from the original roof configuration. The original purlin plates each had eleven notches to receive as many rafter pairs in the three-aisle barn. At the time of the barn conversion, the new end

photos of the notches in the Dutch purlin plates (to receive the original rafters) were not taken, these would have facilitated a determination of the angle of the rafters. The angle together with the widths of the side aisles could have yielded the approximate height of the eave walls. The basement was not documented.

We could speculate why the builder of the Schenck barn used such large

bays were constructed with mill-sawn timbers, rather than recycled elements. This is frequently found to be the case in barn conversions, and results in the loss of information regarding the original side aisles.

The original three-aisle barn was a four-bay structure. The nave measured 28'-5" wide; a barn with a nave width of more than 28 feet is often indicative of an eighteenth century date of construction. The widths of the side aisles are not known. The width of each of the first three Dutch bays was ten feet; the last bay measured 11'-2" in width (with the full width of end wall H-frame posts). In its remodeled form, one end bay had a width of 12'-2¹/₂" while the opposite end bay was 14'-3¹/₂" wide.

Five H-frames in the Dutch middle bay defined the four-bay construction. All three inner anchorbeams were arched. Two of three inner anchorbeams were 1'-6" at their midpoints and about 1'-3" to 1'-4" in height next to their attachments to the posts. One inner anchorbeam was 1'-8" in height at its midpoint. All anchorbeam-to-post connections were double wedged and double pegged. They all had diminished haunches or angled connections. Most anchorbeam tenon extensions were 1'-2" to 1'-3" while one was an exceptional 1'-9¹/₂". About one-half of one side-wall anchorbeam was removed and replaced with newer wood. No two-foot scribe marks were found on any of the anchorbeams.

The H-frame posts were just 12" by 9" in size, and they contained no raising holes. The *verdiepingh* measured 4'-11" in height. Marriage marks were used at the anchorbeam-to-post junctures. Posts had notches at their bottom ends, common in the region. H-bent braces were quite large, measuring 9" by 7". Unique for a New Jersey barn, the braces in the three inner bents were joined at their lower ends to the H-frame posts with triple pegs. A number of barns in New York State, especially pre 1790 ones, share this detail. The upper ends of the braces were joined to the anchorbeams with just two pegs. The Dutch purlin plates were each single length timbers and measured 9" by 7". The purlin braces were hewn and rather small at 5¹/₂" by 4". The bottoms of the braces were just 4¹/₂" above the anchorbeams.

One feature of this barn was so unusual when first seen that the author thought it might be an "internal hay barrack" of some sort. It was later learned that this feature, commonly encountered in Pennsylvania fore-bay barns, is known as a "hay hole" (Photo 11). In the Hendrickson barn it extended from the floor of the second story level to the roof peak and consisted of three six-inch diameter sapling poles, plus an H-frame post, assembled to form a four-sided structure. Each side had a variable number of horizontal spars; one side had 15. At the bottom of this was an opening in the floor. Compared with the hundreds of examples of this feature that the author has since seen in Pennsylvania barns, the Hendrickson barn hay hole was the largest. Its dimensions were 5'-6" by almost six feet; most of these struc-

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Side-Wall Wagon-Entry Barns (continued from page 9)



Photo 11. Hay hole in the Hendrickson barn (Photo by Greg Huber).

tures found in Pennsylvania barns are about 3'-6" square. The structure acted as a funnel or shoot for the dropping of farm crops from the upper levels of the barn within one end bay down to the basement level so that farm stock could be fed. It is not known why the farmer included such a massive sized "hay hole" structure in his barn. He may have copied other area barns, but not likely Dutch related ones.

This barn had two other special features on its upper floor level. One was apparently a granary with an unusual series of narrow sapling poles on its ceiling. Another one was located in a separate room; it was a "fly wheel" contraption that functioned in some unknown way.

The first floor joists differed in size under two of the bays. Five joists below one end bay were each about 5" by 9". At the opposite end bay were three joists that were similarly sized. Under the middle aisle in the original three-aisle barn were nine quite large joists left mostly in the round. One joist measured 1'-1" across. One summer beam was seen in the basement and was about 9" by 11½" in size. The brick foundation walls were about one foot thick.

The original three-aisle barn was likely built about 1790. Due to the lack of two-foot scribe marks on the anchorbeams, it may have been earlier. The alteration into a hybrid form with basement occurred post-1840 or so.

Van Dorn-Couvenhoven Barn

The Van Dorn-Couvenhoven Americanized barn with basement on Route 520 in Marlboro stood about 170 feet from the farmhouse and 215 feet from the main road. Barn and house were not in alignment. The barn was only in fair condition when it was documented on 4 January 1992 and was dismantled in the late 1990s.

The main wagon doors faced north, away from the main road. The eave walls measured 56'-3" long and the end walls were 44'-2" in length. The height of the

eave walls was about 20'-6" and that of the roof peak about 36 feet. The exterior wall cladding was wood shakes. The original three-aisle barn was constructed with four bays; each averaged about eleven feet in width. The middle aisle was 28'-0" in width; wide by any NWD barn standard. When converted, one Anglo end bay was 14'-0" wide; the other measured 14'-3" in width.

Inner anchorbeams averaged 1'-4" in height by 11" in thickness at their midpoints. One anchorbeam had a great deal of wane or bark edge on it. Only the middle anchorbeam appeared to have two-foot scribe marks. The extended tenons ranged from 10" to 12" in length and each tenon was double wedged. The H-frame posts were not large, being only about 11" by 8"; the *verdiepingh* measured just 5'-3½", strongly suggestive of a possible pre-1800 date of construction. No raising holes were present which is not surprising due to the quite short *verdiepingh*. The bottom ends of the purlin braces joined to the H-frame posts just two feet above the anchorbeam tops. One purlin brace was probably pit sawn.

In an unusual treatment, two H-frame posts each had both sawn and hewn surfaces; the two sawn and two hewn sides were on opposing faces. The anchorbeam-to-post connections had angled cuts. H-frame braces were hewn and rather large at 7" by 8½". All H-frame timbers, except the braces, were oak. In similar fashion to the two H-frame posts mentioned above, both purlin plates had both sawn and hewn surfaces. Only lower transverse side-aisle ties were present in the original classic barn. No features in the basement of the barn were recorded. It seems likely that the original classic barn was built 1790-1800 and the barn conversion occurred c.1840. The fate of the timbers from this barn is not known.

Dutch-Anglo Side-wall Entry Barns

The second major category of side-wall entry barns is comprised of those structures that were originally built as such. They are identified as Dutch-Anglo barns. Five such barns qualify for inclusion here. It is important to know that educated guesses were not used to determine the original form of these barns. Rather, despite the fact that an examination of the timbers in the end bay did not disclose if they had been altered, other evidence in the barn was clear, and was found in the extension of the eave wall H-frame posts above the level of the Dutch purlin plates. These posts have the same heights as the other side-wall non H-frame posts. The "extra" height of the eave wall H-frame posts was not an afterthought or a later accommodation on the part of any builder. The height of the posts came from an original design concept. These posts had a greater height than the "inner" H-frame posts because that construction technique was stronger than having the Dutch purlin plates at the same height as the end wall posts. The builders of all five original Dutch-Anglo barns thus presented to the future barn

observer an easy means of knowing the original form of these barns.

Incidentally, this effect of heightening the eave wall H-frame posts was not strictly limited to a few Monmouth County barns. This framing technique was evident in at least one barn in New York State in Columbia County, Barn Number 9 in John Fitch's *New World Dutch Barn* book¹⁷. The barn together with its roof was originally built in the same manner as the five Monmouth County barns presented here.

Of course, other traits in the end bays in the barns may also indicate in general the barn type, but none of them are as obvious as the "heightened" eave wall H-frame posts. Timber and joinery techniques, and similarities in marriage marks in the end bays can also offer possibilities of the originality of the barns. The use of hewn versus sawn timbers, type of timber and perhaps consistency of the usage of wood species when compared to corresponding traits found in the Dutch bay of these barns may also be utilized. None of the barns have (had) basements.

Dutch-Anglo Side-wall Entry Barns

Smock Barn

Several hundred feet from Longbridge Road in Holmdel sits the Smock three-bay Dutch-Anglo barn. The Township of Holmdel owns the barn together with a number of acres of land. The barn stands about 195 feet from a NWD frame house. The house and barn are in direct alignment. The barn was documented on 4 January 1992 (Photo 12).



Photo 12. The Smock Dutch-Anglo eave-wall entry barn. Framed farm structures appear at each side of the main barn (Photo by Gail Hunton).

The end walls of the barn measure 36'-4" wide and it is 46'-6" in length at each side-wall. The eave wall is about 20 feet high and the roof peak measures 32 feet from the ground. The exterior cladding consists of wood shakes. The slope of the roof is moderate and the foundation consists of local "peanut" stones and brick. The wagon doors are the swinging type (Photo 13).

The nave is a rather narrow 22'-1" and side aisles are of uneven widths, measuring 13'-0" and 11'-0". The size of the nave is generally indicative of a first third of



Photo 13. The Smock Dutch-Anglo barn; a close-up view of the sidewall wagon doors with flanking human door at the left side. The barn has a pentice roof projection that protects the doors from the weather (Photo by Gail Hunton).

nineteenth century construction date. The timbers of the H-frames, except one anchorbeam, are all of oak. The inner anchorbeams average about 1'-5" in height and are only 7 1/2" in thickness at their midpoints. The square-ended tenons extend only 7" to 8". Two wedges and two pegs secure each anchorbeam-to-post connection. The timber unions are square shouldered. The inner anchorbeams have two-foot scribe marks. The H-frame posts are 12" by 7"; rather small by most NWD barn standards. The inner bents all have single raising holes on each post, placed about 8" to 9" below the purlin plates. The *verdiepingh* is six feet high (Photo 14). The H-bent braces are mill-sawn and only 6 1/2" by 3 3/4". Each purlin plate is comprised of a single length of timber and the purlin braces are 4 1/2" by 3 3/4". Their bottoms are 2'-6" feet above the tops of the anchorbeams.

This original Dutch-Anglo barn was built circa 1825. Most of the timbers in the end bays and the majority of the rafters are mill-sawn. The rafters may not be original as barns built in the first third of the nineteenth century in northern New Jersey typically have hewn rafters.

Williamson-Sickles Barn

The Williamson-Sickles Dutch-Anglo barn on School Road East in Colts Neck was documented on 4

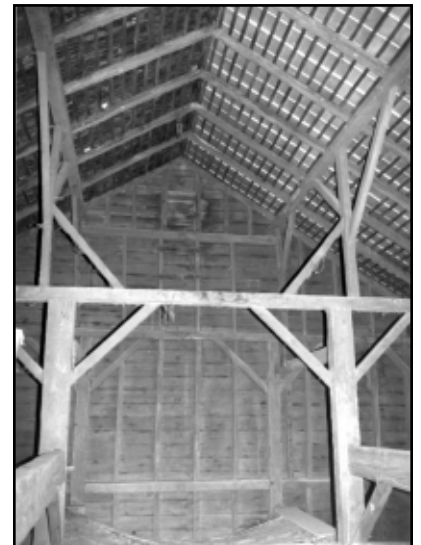


Photo 14. View in the Smock barn; the "Dutch" purlin plate at the top of the H-frames in middle of photo. Vertical queen posts are supported by these plates, and in turn support the upper purlin plates seen at the sides in the upper half of the photo (Photo by Gail Hunton).

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Side-Wall Wagon-Entry Barns (continued from page 11)

January 1992. It remains in good condition. A sign at the foot of the driveway says that the former homestead was established in 1750. The barn, located about 230 feet from the house, is close to one-half mile from the main road. (Recent construction of a housing development has considerably shortened this distance.) The front eave wall faces two degrees south of west. The roof ridgelines of the house and barn are about perpendicular to each other.

Exterior dimensions of the barn are 48'-5" (eave walls) by 36'-2" (end walls). The height of the eave walls is about 20 feet and the height of the roof peak is about 29 feet. The exterior cladding is wood shakes but these cover older horizontal weatherboarding (Photo 15).



Photo 15. The Williamson-Sickles Dutch-Anglo barn on School Road East in Colt's Neck has three "Dutch" bays in the middle bay of this three-bay barn. This barn was likely built c. 1830 (Photo by Greg Huber).

The barn has three Dutch bays. The middle aisle or nave is 24'-7" wide; the average width of each Dutch bay is about 12 feet. One Anglo end bay is 10'-8" wide while the other is 12'-8" in width. Eighteen pairs of rafters define the roof structure.

Both inner anchorbeams are 15 inches in height at their midpoints. The tenons extend only about 3 1/2" and of necessity no tenon wedges are present. H-frame posts are 9 1/2" by 10" in size. The unions between anchorbeams and H-frame posts are square shouldered. Upper H-frame post extension or *verdiepingh* is 6'-1 1/2" in height. The bottoms of the H-frame posts on the nave side of the post have the Monmouth County regional notches. The bottom ends of purlin braces join to H-frame posts 2'-1" above the tops of the anchorbeams. The H-frame braces are hewn and are 4 3/4" by 5 1/4" or almost square. All the H-frame timbers are oak.

The Anglo purlin plates are each single-length timbers and appear to be mill-sawn. Eave wall H-frame posts extend above the lower purlin plates by about one foot. Only lower transverse end bay ties were ever present. The full nave width wagon floor planks are likely old but

it is not known if they are original. Planks are two inches thick. The barn was likely built circa 1820.

Stevenson Barn

The Vanderburg Road barn in Marlboro is another Dutch-Anglo side-wall entry barn. It is a three-bay barn with four H-frames in the Dutch or middle bay. At the time of the documentation on 5 March 1995 and 26 September 1998, the Stevenson family had lived at the homestead for more than three and a half decades. They bought 30 acres in 1962. The barn was then in excellent condition. The barn that has no basement is about 120 feet from the two-section NWD frame house. Linford Stevenson raised soybeans, wheat, rye and corn at the farm. At one time Linford supposedly cultivated an amazing 2,700 acres of farmland in the area with only the aid of his wife and one daughter. The family is still in ownership of the property.

Exterior dimensions of the barn are 48' at each eave wall and 36'-4 1/2" at each end wall. Side wall height measures 19'-6". One side wall faces southwest. This barn was likely originally sheathed with wood shakes as all four walls have horizontal slats to serve as nailers. Some "peanut" stones are seen in the masonry foundation.

The roof support structure consists of 18 pairs of hewn rafters. Hewn vertical eight-foot-long queen posts supported by the transverse Dutch purlin plates in turn support the Anglo barn-length purlin plates. Both queen posts and upper Anglo plates are hewn. As is typical for the all Dutch-Anglo barns, the H-frame posts adjacent to the eave walls extend about one foot above the Dutch purlin plates. The middle or Dutch bay is 21 feet wide. The side-wall wagon doors are flared at their bottoms for insertion of boards into slots to exclude farm animals from entering the middle bay. The bays within the Dutch bay average about 11'-9" in width.

The two oak inner anchorbeams average about 14" in height at their midpoints. All the H-frame anchorbeam tenons, including those of the bents adjacent to the eave walls, extend about seven to eight inches and are double wedged. The tenons are, curiously, rounded at their projecting ends; most often, anchorbeams of oak have extended tenons with squared ends. On the vertical side faces of the anchorbeams are slots for insertion of sapling poles to support crops stored above. H-frames posts that average 10 1/2 by 8 1/2 inches are unusual in that they are mill-sawn. Single raising holes are located 2'-6 1/2" down from the tops of the posts of the inner Dutch bents. The raising holes are located only about six inches from the posts' tops at the end bents. This disparity of raising hole placement is not unusual. The *verdiepingh* is 6'-11" in height. Mill-sawn purlin braces are quite small at only 4" by 3 1/2" and H-frame braces that are each about 6 1/2" by 4 1/2" are mill-sawn. In the great majority of NWD barns these braces are hewn (Photo 16).



Photo 16. View of the Dutch-Anglo barn on Vanderburg Road in Marlboro with heightened eave-wall H-bent post that rises above the level of the "Dutch" purlin plate seen at the upper right. This feature proves that the barn was originally built as a Dutch-Anglo barn. Note horizontal slats where exterior wood shakes were originally nailed (Photo by Greg Huber).

Anglo end bays at each side of the Dutch bay are 13'-0" and 14'-0" wide. The end bays have both upper and lower ties that unite the H-frame posts with end wall posts. Both upper and lower ties have two-foot scribe marks. This feature, far more common on anchorbeams, is not always seen on ties in side aisles in three-aisle barns or apparently in the end bays in original Dutch-Anglo hybrid type barns. All four corner posts in the Stevenson barn have raising holes. All four walls have vertical wall studs two feet on centers. The barn appears to have been built about 1830. The presence of mill-sawn H-frame braces indicates in general that the barn was not built early in the nineteenth century, according to this author's experience, this despite the fact that the barn has two-foot scribe marks.

Smock Barn on Route 34

The barn that was formerly located on the Smock homestead on Route 34 in Holmdel was a Dutch-Anglo side-wall entry barn. The barn is illustrated and discussed in the book *Dutch Vernacular Architecture in North America, 1640-1830* by John Stevens.¹⁸ Stevens calls the structure a "turned roof" barn. The barn was, however, originally constructed with its wagon doors on the side-wall. The author documented the Smock barn on 5 March 1995 when it was in reasonably good condition. It was dismantled c. 2005.

Exterior dimensions were not taken but according to drawings in Stevens' book the barn was approximately 44'-0" in length on its eave walls and had 31'-0" wide end walls.

Its side-wall height was about 17 feet and the roof peak was about 28 feet high. In March 1995, three sides of the barn were covered with vertical siding while one end wall was clad with nineteenth century wood shakes.

The Smock barn had a Dutch bay that consisted of four H-frames. The roof support structure was com-

posed of fifteen pairs of rafters, all hewn. Vertical queen posts were supported on the Dutch purlin plates.

The Dutch bay was 20 feet wide. The anchorbeams were small; one was just 12¹/₄" in height, measured near the H-frame post. One inner anchorbeam was close to 14¹/₂" in height near its mid-point. The anchorbeams' tenons extended about 6¹/₄", were double wedged and were clipped at their corners. The anchorbeams had two-foot scribe marks. The H-frame posts were also small, measuring 11¹/₂" by 8" and the *verdiepingh* of the posts was just four feet in height. The single raising holes on each post were placed one foot below the purlin plate. Only one peg united each anchorbeam to H-frame post. With two or three exceptions, all other joints of this type in NWD barns have either two or three pegs. The Polhemus barn (mentioned above) had no pegs at all at these junctures although the tenon wedges were quite large. Anchorbeam-to-post unions in the Smock barn was square shouldered. The H-frame braces measured 5" by 4" and were either hewn or sawn; one brace was formed using both techniques. All timbers of the H-frames were oak. The barn was probably constructed during the third decade of the nineteenth century. The presence of a more than average number of mill-sawn braces might indicate a date closer to 1830.

Vanderveer Barn

Vanderveer Dutch-Anglo barn was on Bucks Lane in Marlboro Township. It was within about one quarter mile of the Vanderburg Road barn. The barn was located, more or less, in the middle of a field. It was in derelict condition but retained structural integrity when partly documented on 5 March 1995. Potatoes and straw were stored in the barn. Tractors and trucks were also kept there. The barn no longer stands; a housing development necessitated its removal.

The exterior measured about 36 feet at each end wall and about 50 feet long at the eave walls. Only about half the hewn roof rafters remained. Hewn queen posts were supported by the "Dutch" purlin plates; the "Anglo" plates supported the rafters.

Two of the anchorbeams measured about 1'-4" by 9¹/₂" at their midpoints. At least one of the anchorbeams was arched, having a greater height (by a few inches) in its middle than at the attachment points to the H-frame posts. The anchorbeams had two-foot scribe marks. The anchorbeam-to-post junctures had square-shouldered connections and the tenons extended about seven inches and had clipped corners. Joints were secured with double pegs and the extended tenons had no wedges at the eave wall bents. The inner anchorbeam-to-post connections had just one peg. This trait duplicates the condition at the Smock Route 34 barn. The distance from the top of the anchorbeams to the floor was twelve feet. This measurement, within three to six inches on either side of twelve feet, is consistent with 90% of NWD barns known to this author.

The H-frame posts were 1'-1³/₄" by 9" in size and the *verdiepingh* was 5'-7" in height—quite short. The inner

Side-Wall Wagon-Entry Barns (continued from page 13)

H-frame posts had single raising holes located one foot below the purlin plates. The posts had the Monmouth County notches at their bottom ends. The H-frame braces were mill-sawn and were 7³/₄" by 5³/₄". All the H-frame timbers were oak.

The wagon bay had some original floor planks; one was 18" wide and another measured 17¹/₂" in width. Each inner H-frame post had upper and lower end bay ties which stretched from the posts to posts at the end walls. The lower ties were quite large at 11¹/₄" by 7¹/₄" in cross section. This was another barn built in the 1820s. The fate of the barn is not known.

An Unknown Type of Side-wall Entry Barn

Smock Barn on Hillsdale Road

Only a few details of the Smock barn on Hillsdale Road in Colt's Neck could be recorded on 4 January 1992. Entry to the barn was not then possible but some of its interior traits could be discerned. The barn, which has no basement, appeared to be in good condition at that time. The place is now known as Four JG's Vineyards (Photo 17).



Photo 17. The Smock barn on Hillsdale Road in Colt's Neck is a previously unknown eave-wall entry barn type. The layout of its H-bents suggests a construction date of c. 1800 (Photo by Greg Huber).

It is not known if this barn was constructed as a Dutch-Anglo barn or an Anglicized version of the hybrid barn form. The main side-wall entrance faces five degrees west of south. House and barn are almost in direct alignment and the barn is about 212 feet from the house. The distance from barn to the main road is roughly 750 feet. The barn was covered with metal siding about 1990. Its exterior dimensions are 34'-6" at each end wall and 44'-10" along the eave walls. The height of the eave walls is about 18 feet; that of the height of roof peak is estimated to be approximately 29'-6". Judging from the end wall length (and if it was originally of three-aisle form), it is likely that the barn was of three-bay construction.

The two inner anchorbeams appear to have had a midpoint height between 1'-3" and 1'-4". Their tenons extend about 8 to 10 inches and appear to have been wedged. The *verdiepingh* is about five feet. The H-frame posts have raising holes and the purlin braces are positioned about half way between the purlin plate and the anchorbeam. The posts presently rest on concrete piers.

The original construction date of the barn, as well as the date of its surmised conversion could not be determined. The size of the anchorbeams suggests the original barn could date from the early part of the nineteenth century or perhaps the late eighteenth century.

Corncribs with H-frames with Extended Anchorbeam Tenons

A number of corncribs in Monmouth County make use of H-frames in their construction. At least three examples are known of H-frames of diminutive size with anchorbeams or crossties that have extended tenons. One example is the large corncrib at the Longstreet Farm in Holmdel. A second is a 6-bay corncrib at the Balmer place on Middletown Road in Holmdel. The tenons extend a full 6 to 7 inches and are wedged (in peg form). The corncrib now exists in a precarious state as the land may be developed. It is almost a sure bet that many other homesteads in the county had corncribs with anchorbeams possessing tenons that extended outside the confines of the building.

The New Jersey Barn Company

The New Jersey Barn Company has been a major force in the past 35 years in taking down barns in many areas of New Jersey. They have re-erected many of them. Alex Greenwood, the co-owner of the company, told the author that they have dismantled several hybrid barns in Monmouth County during that period. Attempts to verify the identification of these barns, and to confirm whether or not they are among those presented in this survey, have proved difficult. Differences in the names used to refer to farmsteads contributes to this. Two of the barns Alex mentioned were unknown to the author: the Quakenbush barn on Newman Springs Road in Marlboro and the Wyncoop-Dubois barn in Manalapan. The former barn was taken down in the early 1980s and measured 36' by 48'. It was re-erected along the eastern shore of the Wye River in Maryland. The second barn was of the same outside dimensions and was taken down in the Manalapan (Lenape for "land of good bread") area off Route 9 and re-erected in Martha's Vineyard.

Summary

NWD barn-building traditions in Monmouth County, New Jersey can be divided into two periods. The first extends from about 1675 to 1810. It is likely that three-aisle gable-entry barns represented the majority of barns built at that time. Examples of side-wall entry barns may have also been built, but the three-aisle form was promi-

ment and it functioned admirably in the pre-Industrial Revolution era. It answered the demands of home-based economies at many homesteads in the county.

But change forever dogs the steps of mankind. The conditions that prevailed for agricultural economies in the eighteenth century were severely challenged starting about 1810 in many areas in the east. The classic three-aisle barn could not easily adapt itself to a new age. The limited storage capacity, especially for pre-1780 barns, resulted in severely cramped working conditions. For the loading and unloading of farm crops it must have been nightmarish. The old “made by hand” mentality of the eighteenth century graduated to the “mass production” world view of the following century. Barns had to function as components of this new environment, if they were to succeed.

Barns built in the early nineteenth century needed to offer improvements in two areas: increased storage area and greater efficiency; the side-wall entry barn was one response. The basic mechanism underlying all this was discussed in detail in an article in the spring 2012 issue of the Newsletter.¹⁹ The swing beam barn, in most cases, was also a response to a new economic environment after 1810. Note that this barn type and the barns featured in this article have one important thing in common—they have side-wall wagon entrances. There is a good reason for this; they worked far better than classic three-aisle barns after 1810.

Some scholars may regard these eave-wall entry barns to be little more than a dilution of the classic barn of three-aisle format; in one sense that may be true. But the inclusion of H-frames in post 1850 barns, no matter what their origin may have been, indicates that the basic framing technology left an almost indelible mark on the minds of farmers and builders far beyond its first employment by generations of Dutch people in the New World in the seventeenth century. The axiom “if it ain’t broke, don’t fix it” seems to have ruled the roost well beyond the turn of the nineteenth century. If it hadn’t, eave-wall entry barns with a series of H-frames might well have never entered the cultural scene as strongly as they did, at least in certain areas of New Jersey.

Two Important Unanswered Questions

After reviewing the dynamics that influenced the transition from classic three-aisle barns to the widespread use of the side-wall entry barn, one important question remains: Which side-wall barn type first appeared in Monmouth County, the Dutch-Anglo original barn or the Anglicized altered barn type? This is an arduous task, potentially involving the dendro-dating of timbers from a number of barns. That being unrealistic, where can we turn for an answer, even a tentative one?

What seems definite is that some farmers who owned NWD barns became familiar with the English based side-wall wagon-entry barn type and its function, and wanted to have a barn built just like it. The most natural thing was to have a builder simply duplicate the barn type they thought would make their farming operations more efficient and therefore more profitable. It seems

less natural that the idea would occur to farmers and builders to transform the barns they already had to create side-wall entry barns. Once farmers saw that Dutch-Anglo barns were being built, it was perhaps then that they started to modify their existing three-aisle barns and duplicate the Dutch-Anglo barns. The only way we may exactly know when the two side-wall entry barn types first appeared is to employ the science of dendrochronology. It may turn out that both side-wall entry barn types appeared on the rural scene in Monmouth County at about the same time.

Extending our interest in the appearance of eave-wall entry barns in central New Jersey to nearby Somerset County, we can appreciate the existence of the dated 1837 original Dutch-Anglo side-wall entry Christus barn²⁰. Located in Branchburg in western Somerset County, it is the only dated barn of the type in the entire state. Another original Dutch-Anglo side entry barn and about 20 non-original side-wall entry barns exist in the county. Some of these Anglicized barns must have been constructed before 1837; by that date the Industrial Revolution was well underway.

Why did some farmers convert their three-aisle barns to Anglicized structures, while other farmers chose to let their original barns stand as they always had? The farmers who continued to use their NWD barns chose to maintain the status quo of the eighteenth century. The choice to change classic barns at other homesteads may have been related to a farmer’s age and health, to the farmer’s wealth, or to the passing of the farm from one owner to another. A relatively young farmer with great industry and need to expand an established farm may have enlarged his three-aisle barn by hybridizing it while his older neighbor was content with what he had. Perhaps farms of above average fertility prompted some farmers to expand their barns because of greater expected harvests in a rapidly developing economy after 1830 or so. As can be clearly seen, a host of potential factors existed that could have influenced farmers to either maintain or convert their original barns.

Two fundamental observations may be made in the study of Monmouth County barns constructed after about 1810. First, starting in the first quarter of the nineteenth century, Monmouth County (and beyond) experienced tremendous economic changes. The second is that the answer to those changing times involved a number of farmers who championed the production of two types of side-wall entry barns in the county to respond to their changing needs.

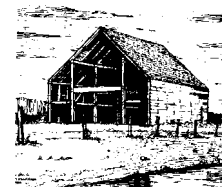
Acknowledgement: The author would like to thank Gail Hunton of the Monmouth County Park System for supplying a number of photos used here, and information on several of the barns discussed in this article.

¹ See a series of articles published by the author in the *Hudson Valley Vernacular Architecture Newsletter*, “Monmouth County, New Jersey & its Three-Aisle Barns: The First of Four Barns, Longstreet Farm” 14:7-9 (July-September 2011), 9-13; “Monmouth County, New Jersey and Its Three-Aisle Barns: Schenck Barn, Dated 1788” 15:1-3 (January-March 2012), 7-9; “Monmouth County, New Jersey and Its Three-Aisle Barns: Couvenhoven Barn” 15:10-12 (October-December 2012), 6-8;

Side-Wall Wagon-Entry Barns (continued from page 15)

- "Monmouth County, New Jersey & Its Three-Aisle Barns: Hendrickson Barn" 16:7-9 (July-October 2013), 6-9.
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