

“From Gothic Window to Kloosterkozijn.
The Importance of Primary Sources
in Understanding the Material Culture of the Settlers of New Netherland”

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In 1621, the Dutch West India Company (WIC) received its charter from the States General for parts of West Africa, South America, the Caribbean, and a section of North America, to interfere with Spanish interests. Colonization remained a byproduct of this charter but in 1624, the WIC did make its first serious attempts to settle its North American territory, known as New Netherland, to establish the permanent fur trade with the American Indians of the region.

The forty years of Dutch rule of New Netherland ended with the surrender of the colony to the English on September 8, 1664. Regardless of the fact that the English took control of the territory, signs of Netherlandic culture lasted well into the eighteenth century. Its most visible manifestation is the so-called Dutch Colonial architecture.

Previous scholars have imagined the built environment of New Netherland, based largely on their encounters with this Dutch Colonial architecture. The variety of building types labeled Dutch Colonial in North America is extensive. Builders utilized, brick, stone, and frame as building materials, and both gable and gambrel roofs as roof types—both roof types come with or without so-called flared eaves (Figure 1). Most of these

buildings date from late seventeenth and early eighteenth century and survive in rural areas along the Hudson and Mohawk Valleys, from upstate New York to northern New Jersey. Few of these buildings appear to have a clear connection with either the architecture of New Netherland, or with that of the Netherlands.



Figure 1 Four examples of Dutch Colonial Architecture. Top left to bottom right: Zabriskie, Van Alen, Van Schaick, and Wyckoff houses (Image in lower left corner courtesy Historic American Building Survey)

Unfortunately, there are no known surviving buildings from the initial period of settlement (circa 1624-1664), but we can learn a great deal about the architecture from the surviving colonial manuscripts. As the Dutch handed over control to the English in 1664, they also handed over 12,000 legal documents pertaining to the administration of the colony. Miraculously, most of these documents have survived almost three and a half centuries, enduring wars, and fire and water damage (Gehring 1988). Written in seventeenth-century Dutch these documents long remained inaccessible to English-

speaking scholars. The first efforts to translate these documents started in the middle of the nineteenth century. Dr. Charles Gehring, director of the New Netherland Project, in Albany, New York, has continued this task since 1974. Among these records are various documents that refer to the built environment in the colony including a substantial number of building contracts (Figure 2).

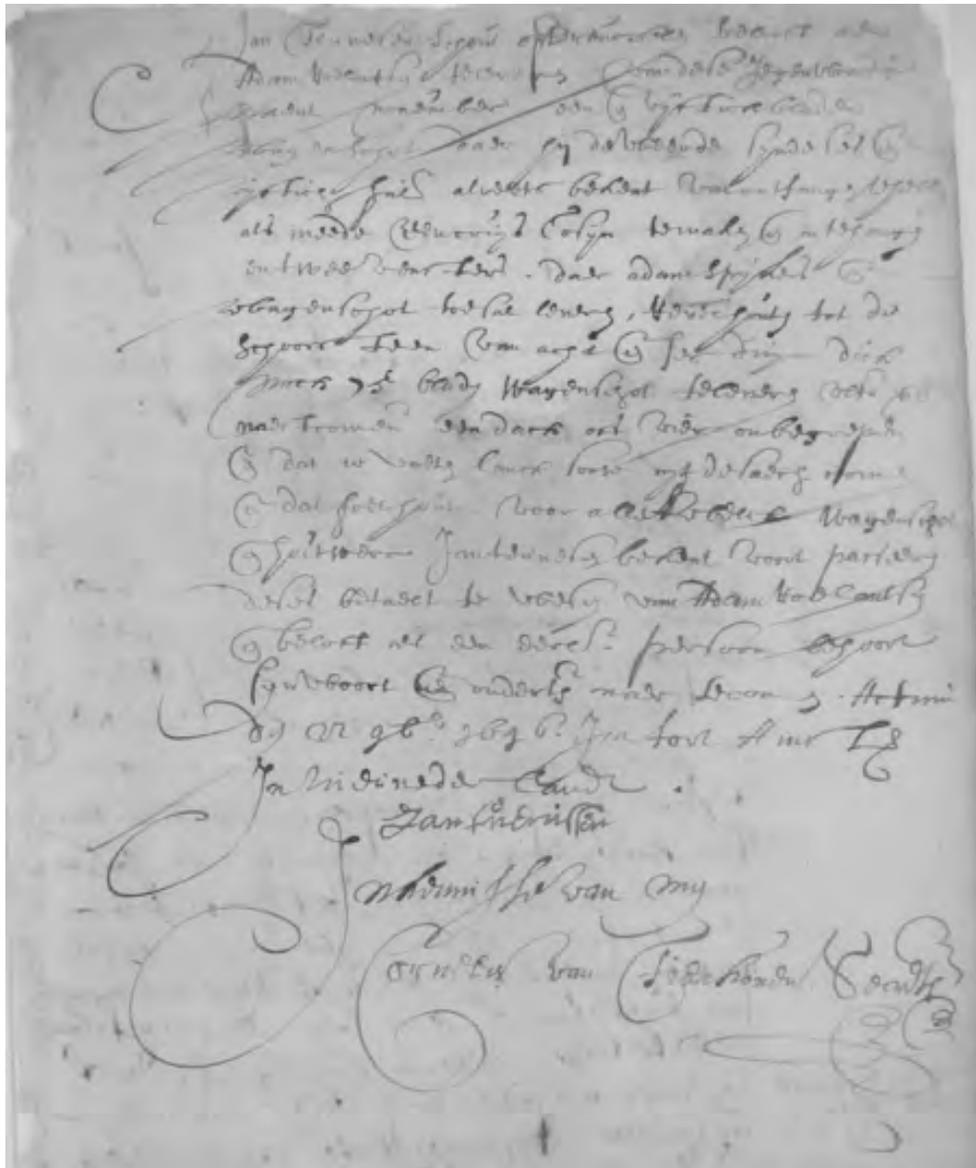


Figure 2. Building contract between Jan Teunissen and Gerrit Douman, November 22, 1646 (New York State Library)

Both in format and in language the surviving colonial contracts resemble those from the seventeenth-century Netherlands. These contracts form the preconditions for the architecture of New Netherland, and are its most direct link with the architecture of the Netherlands. The contracts specified the construction of both dwelling houses and housebarns (Figure 3).

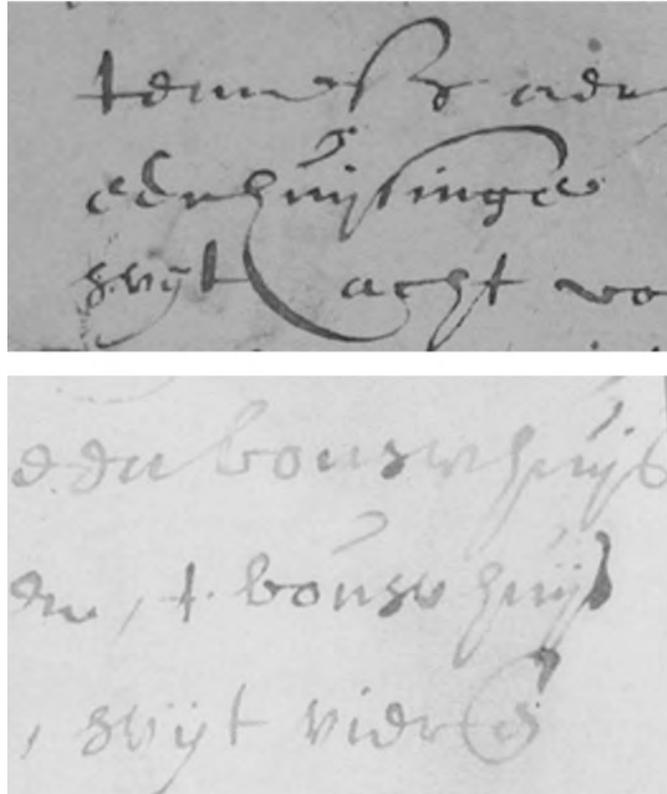


Figure 3. Above the term *huijsinge* (dwelling) and below *bouwhuijs* (housebarn) from the original manuscripts (New York State Library)

The housebarn was a common multipurpose agricultural building in the Netherlands, providing shelter for the farmer and his family, his farmhands and possible servants, his livestock, and storage room for his crops.

Among the register of the provincial secretary and that of a public notary in New Amsterdam are eighteen building contracts that give detailed descriptions of several dwelling houses and a few housebarns (Figure 4). Combined with other occasional entries, and various laws and ordinances referring to building practices and regulations, this information forms an invaluable starting point for me to reconstruct the built environment of New Netherland.

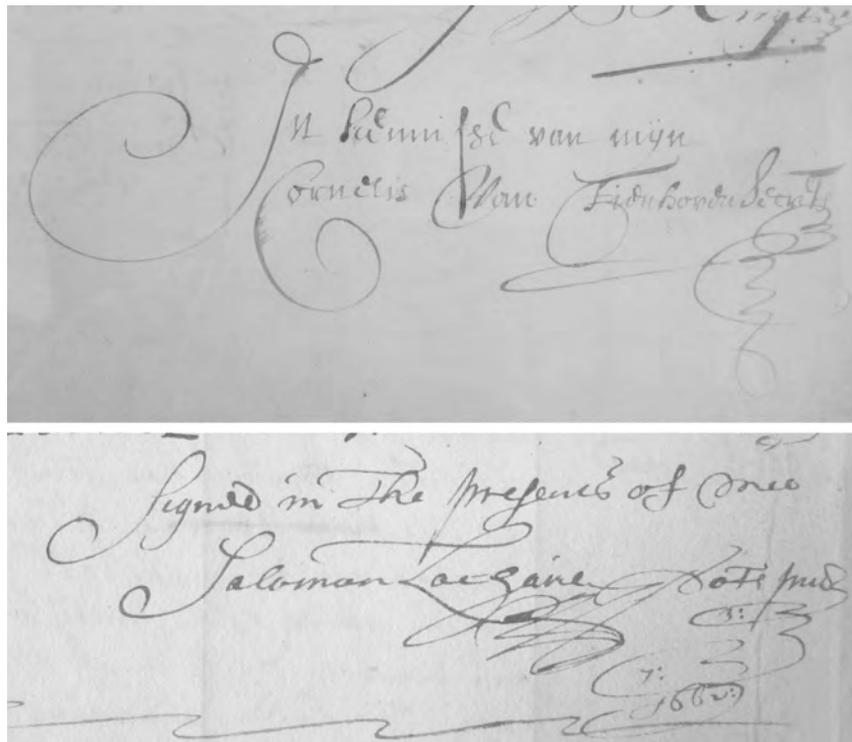


Figure 4. Above the signature of Cornelis van Tienhoven, Secretary, (New York State Library), below that of Salomon Lachaire, Public Notary (New York City Municipal Archives)

The tripartite structure of the contracts identifies the parties involved, the particulars of the building, and the payment. The second section not only provides us with crucial information about dimensions and framing, but also about exterior and interior finishes. It is here that I found clear references to the intended buildings. The terminology used gives an indication of the architecture, which was lost over the

following centuries. It is, furthermore, this terminology, which provides the most unambiguous link between the architecture of New Netherland and that of the Netherlands. I will illustrate this by looking at some of the key architectural features mentioned in the contracts.

The bent system played a pivotal role in Netherlandic framing. Each bent consists of two principal posts connected by a girder, or tie beam. A brace, or *korbeel*, as the Dutch know them, reinforces the joint between each of the principal posts and the girder, to prevent racking (Figure 5). The Dutch utilized two different types of bents. One created a Π -shape and the other an H-shape.

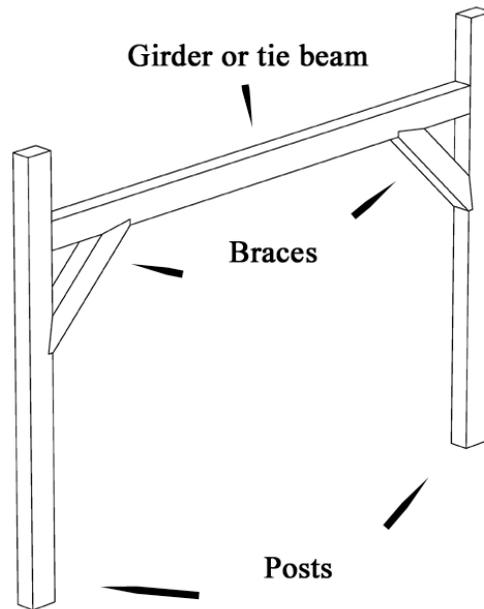


Figure 5. Schematic of an H-bent

To create the a []-shape bent the carpenter would either simply place a girder on top of the posts—called a *dekbalkgebint*—or trench the girder into the top of the posts—called a *kopbalkgebint* (Figure 6).

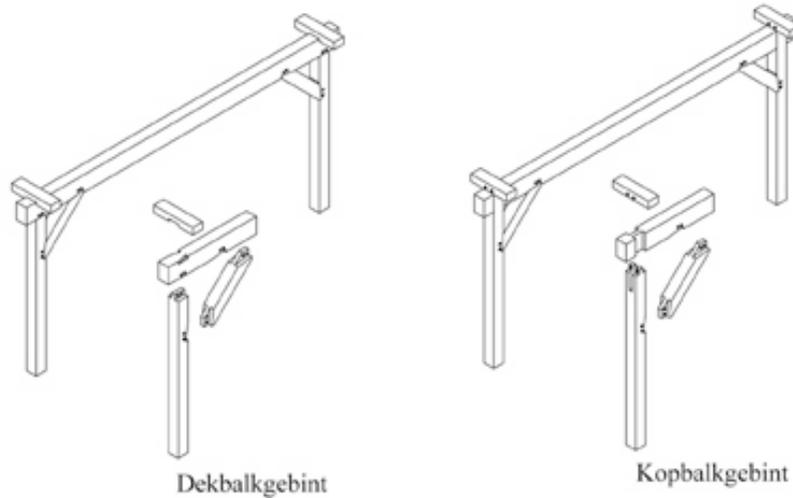


Figure 6. *Dekbalkgebint* and *Kopbalkgebint* ([]-shaped bents)

To create the second type, the so-called H-bent, the carpenter would place a girder in between the posts, several feet down from the top. The quicker solution was to mortise and tenon the girder into the principal posts—called a *tussenbalkgebint*. The second and more labor-intensive type is the so-called anchor-beam bent—or *ankerbalkgebint*. Here the carpenter would tenon the girder through the principal posts creating protruding tongues at either side (Figure 7).

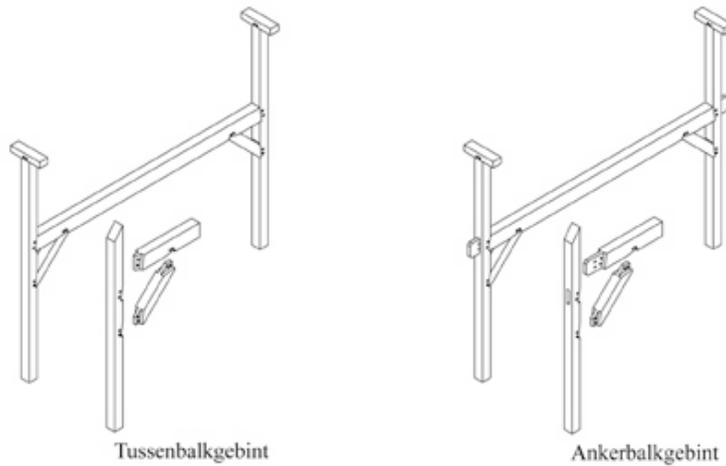


Figure 7. *Tussenbalkgebint* and *Ankerbalkgebint* (H-shaped bents)

None of the contracts mention any of these specifically, but from information found scattered throughout the records we can deduce that the carpenters in New Netherland used both the Π -shaped and the H-shaped bents.

The braces had both a structural and an aesthetic function in Netherlandic architecture. The aesthetic function was similar to that of the summer beam in Anglo-American colonial architecture with its variety of decorative chamfers and chamfer stops. The braces remained visible within the living spaces of the house and in the Netherlands carpenters often shaped them in an S-curve (*zwanenhals korbeel*) or added a carved corbel piece (*sleutelstuk*) to ornament them (Figure 8).



Figure 8. Left a brace with a carved corbel piece (*sleutelstuk*), right an S-curved brace (*zwanenhals korbeel*)

Another important feature in the contracts are the types and numbers of windows required for each building. Fifteen out of the eighteen contracts from New Netherland refer to some type of window, three of which have a clear Netherlandic ancestry and the others are variations of these types. The most used type is a crossbar window known as a *kruiskozijn*, which thirteen of the fifteen contracts mention. It consists of two shuttered frames topped by two glazed frames. The second type is a two-light frame known as a *bolkozijn* and four of the fifteen contracts mention it. It consists of an equally sized glazed half and a shuttered half placed side by side. The third type is also a two-light frame known as a *kloosterkozijn*. Here the glazed half, creating a long rectangular shape, tops the shuttered half. Only two of the contracts mention it (Figure 9).

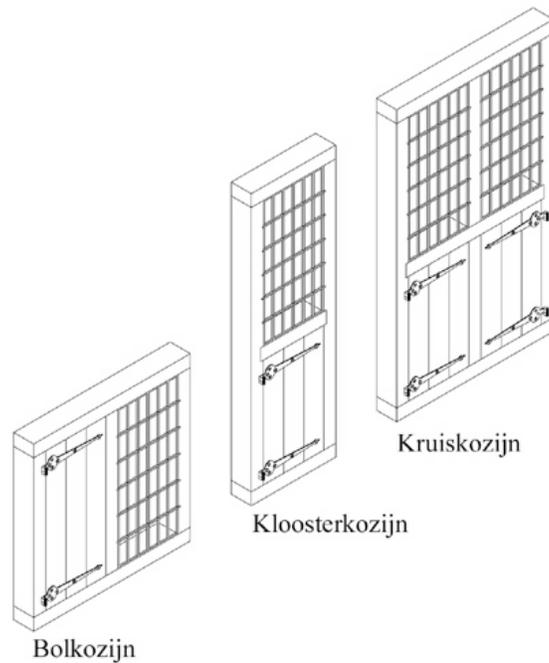


Figure 9. *Bolkozijn, Kloosterkozijn, Kruiskozijn*

The contracts are not very specific about the siding of a building. Only seven of the eighteen contracts mention siding, two of which only refer to it indirectly stating that the carpenter should enclose the building all around. The others mention clapboard (*clabborden*), planks, or boards as siding. None of the contracts referred to brick as a siding material.

Structurally speaking the roof was the finishing element on a building. Similar to other structural elements, the surviving contracts of New Netherland do not always provide information on the construction of the roof in great detail. Most roofs would have been gabled common rafter roofs consisting of hewn or split rafters.

Three contracts called for a more specific roof construction. The contract for the house of the Company's secretary, Cornelis van Tienhoven, and that for the dwelling of

Egbert van Borsum on Long Island called for a so-called *fliering* or *worm*. The housebarn Juriaen Hendricksen was to build for Jan Damen required so-called *vlierbinten* (*Flier* and *vlier* are alternate spellings of the same element) (Figure 10).

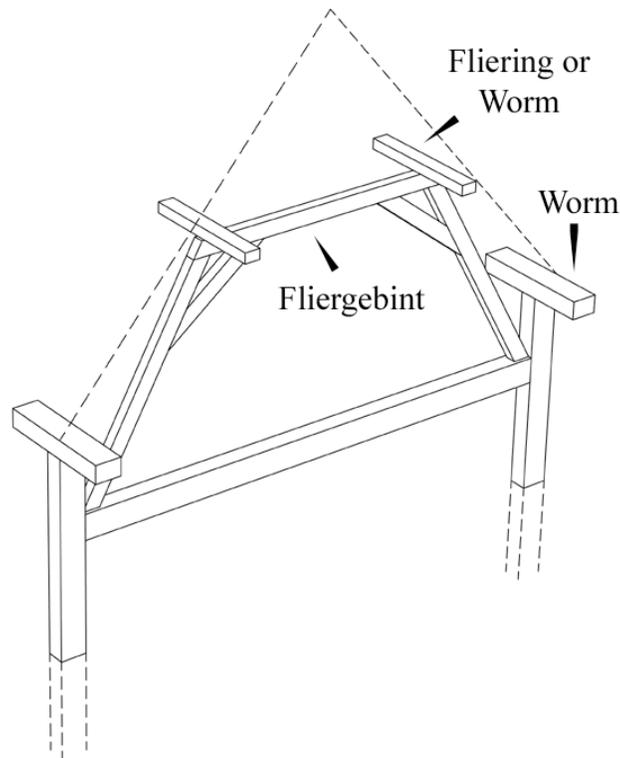


Figure 10. *Bolkozijn, Kloosterkozijn, Kruiskozijn*

This housebarn and the one at Achter Col also required a typical Netherlandic roof type. The one for Jan Damen required a “*dwars gevel*” and the one at Achter Col a “*halff wolff*” both indicating a jerkinhead. This type of roof was a common feature on many seventeenth-century Netherlandic housebarns (Figure 11).



Figure 11. Housebarn from the Netherlands with a jerkinhead roof

The contracts also provide us with information about interior finishes and some of the spatial configurations of the buildings. Eight of the 18 contracts mention a partition or *middelschot*. The contracts leave it open to speculation as to its exact position within the building and the material the contractor needs to use. The fact that partition walls had no real structural function meant that the owner could easily have them replaced or moved. Thus, the contract between Paulus Leendersen van den Grift and Symon Root and Reinier Somensen called for three partition walls “as happens to be most convenient” (*drie middelschotten soo alst valt*).

The existence of a *voorhuis*, literally front house, is a logical assumption following the reference to a partition wall in the contracts. However, out of the eight contracts that mention a partition wall only one also mentions a *voorhuis*. This is in the contract for the housebarn at Otterspoor, stating that the *voorhuis* should be 50 feet long

and 24 wide. Three other contracts from New Netherland also mention a *voorhuis*. The *voorhuis* served many purposes. It was a very public place with direct access from the street or the yard.

Another space mentioned in the contracts is a *boven kamer* or *opkamer* (that is an upper chamber). This room was part of the *voorhuis*, and located several steps above grade. Ceiling heights up to, 13 to 16 feet not only allowed sufficient light to enter the dwelling but also enabled the patron/contractor to raise parts of the floor if needed.

The existence of an *opkamer* also usually indicates the presence of a cellar underneath, which was the main reason for this room to be several feet above grade. Despite the high groundwater table in the Netherlands, the Dutch used various types of cellars, for domestic purposes such as for storing dairy products, as a cellar kitchen, or even a separate dwelling (*woonkelder*), or for commercial purposes to store merchandise or to ply a trade in (*ambachtskelder*).

Cellars could be small and located in various places throughout the dwelling, sometimes underneath a side room or even underneath a cupboard bed. To let air and light in to cellars they were often partially above ground, also in areas with a high groundwater table it would be logical to construct them partially above ground.

The two contracts that called for an upper chamber also mentioned a cellar. Six out of the eighteen contracts for New Netherland mention a cellar (*kelder*). Two of which specify a cellar kitchen (*kelder keuken*).

The contracts also refer to chimneys and mantelpieces (*schoorsteen* and *schoorsteen mantel*). Two of the nine contracts, which mention either a chimney or a mantelpiece, specified a double chimney. The chimneys would be located against the

partition wall and most of them were made of wood and plaster. Similar to the thatched roofs and clapboard siding this raised serious concerns with the Director General Petrus Stuyvesant and Council of New Netherland about conflagrations. The Council tried to ban all wooden chimneys from New Amsterdam, starting as early as 1648 (O'Callaghan 1868). Penalties were installed of up to 100 guilders, to phase them out of the city. Director Kieft was already aware of these dangers in 1642, and requested Juriaen Hendricksen make a double chimney and partition wall out of brick for his housebarn at Otterspoor (*een middelschot en dubbelde schoorsteen 't welcke alle van steen sal sijn*).

The partition wall was also the most likely location where a stair would be located. This location was in keeping with Netherlandic traditions. Most of these consisted of a straight stair to get up to the attic. However, the contract for the dwelling house for Annete Dircx, called for a "winding staircase to go to the upper story" (*een wenteltrap om na boven te gaen*). The contract for the housebarn for Jan Damen also called for a winding stair "so one could get from the cellar to the attic" (*een wentel trap dat men gaen can uijt kelder opt solder*).

Besides cellars and attics, a side aisle (*uijtlaet*) could also provide additional space in both dwelling houses and housebarns. Side aisles had been part of the prehistoric aisled house (*hallenhuis*), and were a common feature with its direct descendent, the housebarn. In the development of the townhouse, however, side aisles had gradually disappeared. The development of the structural bent and the lot restrictions found in urban settings aided their disappearance. In the contracts from New Netherland, eight call for one or more side aisles. The three contracts for a housebarn all require two side aisles. In the case of a housebarn these side aisles would allow for either a passageway behind

the cattle, in the stable section of the building, to give the farmer easier access to the animals or additional room for the threshing floor or space to store his equipment in the middle. This feature was in keeping with Netherlandic agricultural practices.

Five of the dwelling house contracts in New Netherland call for a single side aisle. This was not an uncommon feature in rural areas in the Netherlands either, especially in the frame architecture of the region north of Amsterdam, where it allowed owners to expand their floor space without having to add an extra story (Figure 12).



Figure 12. Frame dwelling house with a single side-aisle from the *Zaan* region north of Amsterdam

The contracts from New Netherland also mention another distinct Netherlandic feature, namely the cupboard bed, or bedstead (*bedsteede*). Six contracts call for cupboard beds, one of which specifies its location as in the side aisle. A storage space to

go side-by-side with a cupboard bed was the pantry (*spijskamer*). Four of the eighteen contracts from New Netherland call for a pantry, and three of the four also required a cupboard bed. The need for a cupboard bed and pantry are usually mentioned in the same sentence, and the contract for Egbert van Borsum's dwelling even specifically stated that the pantry had to be at the end of the cupboard bed.

I have given you just some of the bits and pieces that tell us about the architecture of the early settlers, but we can take one of these contracts as an example and try to reconstruct a dwelling that no longer survives and get an impression of the architecture of the early settlers.

On January 31, 1661, Thomas Jansen Mingael, a house carpenter in New Amsterdam, agreed to build a dwelling measuring thirty feet long and eighteen feet wide for Jonas Bartelsen (O'Callaghan 1978, pp. 4-5). The structural framework of the house had to consist of seven bents. The principal posts were to be thirteen feet long with the girder placed two feet down from the top creating an H-bent. The contract called for seven bents, only three of which required braces (Figure 13).

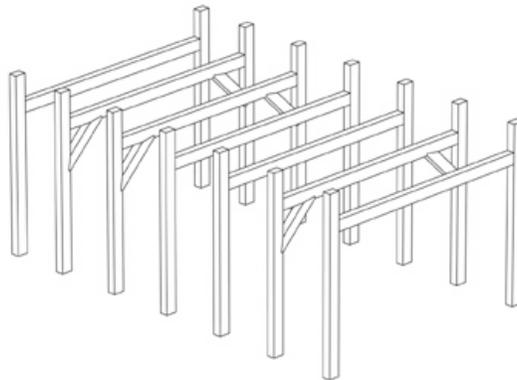


Figure 13. Isometric drawing of the “skeleton” of Jonas Bartelsen's dwelling

The contract also called for several typical Netherlandic window types in the front and back gables. Mingael had to copy the façade of Gerrit Hendrix’s house, the weigh-house master of New Amsterdam. He had to make a three-light with a crossbar frame (*een drie light met een kruijskosijn*), a doorframe, and a crossbar frame in the upper gable end. For the rear, the contract specified a crossbar frame and a doorframe in the lower elevation and a shuttered frame (*venster*) in the upper gable end (Figure 14).

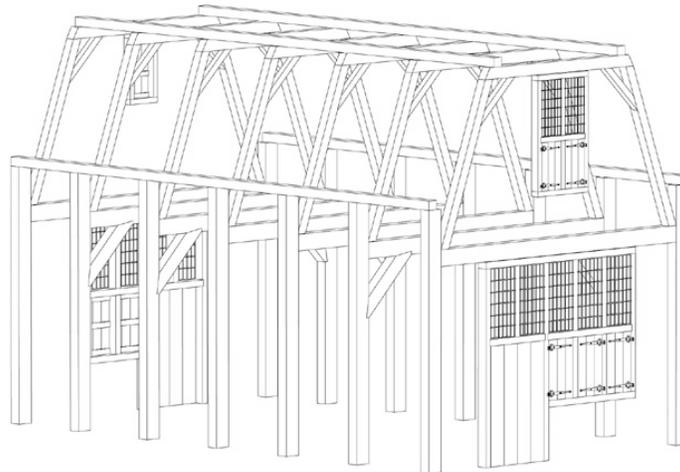


Figure 14. Isometric reconstruction of Jonas Bartelsen’s dwelling showing location of windows, and possible roof truss (*fliergebint*)

Mingael was also required to cover the exterior walls and the roof with planks and clapboards. Putting all the information together from the contract between Mingael and Bartelsen, combined with other typical features mentioned in the other surviving contracts, gives us a one-and-half story frame dwelling, with a two-room plan, a central chimney, and a steeply pitched roof (Figure 15).



Figure 15. Reconstruction of the 1661 contract (left). Frame dwelling at the *Zaanse Schans*, c.1625 (right)

This type of dwelling is not only very similar to the frame architecture of the *Zaan* region, but also to that depicted on early seventeenth-century views of the skyline of New Amsterdam. However, we need to be cautious in interpreting these images as completely factual. We need to be aware of who created them and for which purpose. Any resemblance between the buildings of the *Zaan* region and those seen in the skyline of New Amsterdam maybe part of the artistic freedom of the draftsman.

This is where we sort of come full circle. It is important to examine these contracts in their original language since so much is lost in translation. An important example is Van Laer's translation of a *kloosterkozijn* as a "Gothic window." We can forgive Van Laer the mistake since *klooster* is the Dutch word for a convent or monastery, and one could perhaps expect Gothic windows in such a building, but it

significantly changes the appearance of the windows for our understanding (Figure 16). Many of the early translations have suffered from a lack of knowledge of the correct architectural terminology on the part of the translator.



Figure 16. Gothic (revival) window of the left and a *kloosterkozijn* on the right

To sum up, the architecture of New Netherland has not yet received the same attention, as has, for instance, the architecture of New England. Abbott Lowell Cummings, for instance, has done a comprehensive study of the architecture of the Massachusetts Bay colony, tracing its origins and evolution, and scholarship on the architectural history of the southern colonies is vast (Cummings 1979). Understanding the original intent of its early European settlers by analyzing the building contracts from New Netherland provides a better foundation for evaluating the remaining architecture of the Hudson Valley. It can help determine which of the surviving elements originated in

the Netherlands and which stem from other old world traditions, or which are the product of a new world synthesis. The use of the built environment as well as the original records, I hope will contribute to a better understanding of the architecture's true origins and its evolution after 1664.

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