The reproductions were built as exact replicas of existing pieces in major collections in the United States of America: the Smithsonian Institution, the Metropolitan Museum of Art, the Museum of the City of New York, and Colonial Williamsburg.

1. The first challenge was the limited time available to examine the furniture: we had only four to twelve hours on-site with each piece to measure and photograph them, after which they were reproduced at Fallon & Wilkinson, LLC's studio in Baltic, CT. The Louis XVI suite of chairs was the only exception: fortunately, we had the chairs side by side in our facility while the originals were treated for conservation and the reproductions were being manufactured.

2. The second challenge was the very short deadline: all 28 pieces had to be completed within 1.5 years.

Mechanical Challenge

Like many cylinder desks, the Hamilton desk had a mechanism that rolled back the cylinder when the writing surface was pulled out. Having little access for accurate measurements of the mechanism, it turned out to be quite a puzzle to find the correct location of four pivoting points, one of which stationary, and the correct length of the three arms, one of which L-shaped. There proved to be only one configuration that allowed for all elements to work: i.e. the writing surface to be pulled out to the maximum length, the cylinder to be rolled back completely, and the movement to be able to go backwards and forwards in its semi-circular track without binding.

The desk further featured a lock in the drawer directly binding. The mechanism that rolled back the cylinder when the writing surface was pulled out was retained, providing lock and key.

Upholstery Challenge

Much of the under upholstery on the original chairs of the Louis XVI Hains suite was retained, providing abundant evidence of the correct shape and loft. Further research revealed information on the historically accurate type of show cover. Slight differences in the side and armchairs led to an expanded comparison between eleven attributed chairs and sofas in seven different collections, comparing upholstery shapes, techniques, and materials, as well as differences between the frames. Through our research of frames and upholstery, we were able to help the curator argue successfully for additional funding to upholster the five original chairs and the five reproductions in a much more accurate way. A historically correct custom woven show cover of 100% silk damask with a large repeat and a French style upholstery shape with brass nailing and trim was applied.

The original chairs were upholstered with minimally intrusive techniques on Nomex® sewing strips.

Design Challenge

The reproduction of the Louis XVI sofa was a challenge of different proportions. The presumed original sofa at the Museum of the City of New York (MCNY) was severely altered in the 19th C., when all the legs were taken off and an Empire style base with crotch mahogany was put on it. Fortunately, we were able to briefly inspect one of two other Hains sofas in Historic New England’s (HNE) collection. The dimensions and main features of the sofas were very close, although there were quite a few minor differences. We were able to use the layout of the MCNY sofa from the seat rail up, and apply the design of the HNE sofa legs, which matched the legs of the side chairs, for the base of the reproduction sofa.

28 Reproductions for Hamilton Grange in New York City

In 2010, Fallon & Wilkinson, LLC was awarded two contracts: one to build 28 pieces of Federal Furniture, and the second to conserve five of the original Louis XVI chairs that would also be reproduced. Both contracts were for Hamilton Grange National Memorial, the one-time residence of Founding Father Alexander Hamilton, located in New York City. The contracts were part of the much larger project of moving the mansion to a new location and reimbiriting the period rooms. Several of the reproduction pieces posed interesting challenges.

Mechanics

Time Challenge

The reproductions were built as exact replicas of existing pieces in major collections in the United States of America: the Smithsonian Institution, the Metropolitan Museum of Art, the Museum of the City of New York, and Colonial Williamsburg.

1. The first challenge was the limited time available to examine the furniture: we had only four to twelve hours on-site with each piece to measure and photograph them, after which they were reproduced at Fallon & Wilkinson, LLC's studio in Baltic, CT. The Louis XVI suite of chairs was the only exception: fortunately, we had the chairs side by side in our facility while the originals were treated for conservation and the reproductions were being manufactured.

2. The second challenge was the very short deadline: all 28 pieces had to be completed within 1.5 years.

Cabinetmaking Challenge

The Louis XV side and armchairs were very complex pieces to build because of compound angles, round shapes, and limited accessibility with the upholstery on them. The rear stiles featured an angled orientation within the seat plan, and a big off-center turning (15") diameter to allow a rise for the lower as well as the upper part of the stiles. Because of these features, the mortise and tenon joints of the rear stall, stay rail, and crest rail were all at a different (compound) angle with the rear stiles. It was very important to get both the lower and the upper rakes of the rear stiles and the angle within the seat plan exactly right. If any of the angles were off, the width of the crest rail and stay rail, length of the arms, and slipp of the legs would not be correct. Most of the carving on the chair was fairly straightforward, although time consuming. The arms, however, did pose an interesting carving challenge. They were very three-dimensional with a double curve going up and out and fluting that continued up into the rear stiles.

Inlay Challenge

The main challenge of the shield back chairs was the sheer quantity of the billflowers, which totaled 1472 individual pieces for the sixteen chairs. The vine pattern on the center splat, with leaves, lines, and dots, was complex and very time consuming to execute. In addition, part of the inlay of the back could only be done after assembly of the chair, further complicating the project. All pieces were hand-cut, laid out on the surface, after which the cavities were incised, routed out, chiseled to a perfect fit before inlaying the pieces. Finally, the inlaid flowers and leaves were engraved and inked to give the effect of shading. Hundreds of billflowers were inlaid in similar fashion on the sideboard.

The contour and negative space of the center splat were cut out with a high pressure water jet to save time, after which they were finished by hand.

Design

Inlay

Timing

Cabinet Making

Mechanics

Upholstery

N.B.

Part of this project was presented at the 2011 Annual Meeting of the American Institute for Conservation and will be published in the Wooden Artifacts Group (WAG) Postprints under the title "Reproductions for Hamilton Grange: What Legs Do We Have To Stand On?"