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REPORT ON THE STYLISTIC AND STRUCTURAL INTEGRITY OF THE BOARDING HOUSE OF THE FORMER FRANCESTOWN ACADEMY, AND ON ITS POTENTIAL FOR ADAPTATION TO PRESENT-DAY TOWN NEEDS

This report is based upon a brief inspection of the former academy boarding house (now the Virginia Twombly house) during the early evening of July 16, 1991.

According to information supplied in Cochrane and Wood's and John Schott's histories of Francestown, and in a survey form prepared by Gregory E. Thulander, this building dates from 1846. Built as a dormitory or boarding house for the adjacent academy, the dwelling has been used for a number of purposes over the years. Its predominant use, and the one it still serves, has been that of a private dwelling.

The building is highly unusual in its site and its plan. It is set into a hillside, and therefore originally had entrances at the basement level (somewhat below the present-day road elevation), at a first floor level, and (due to the rise in grade) at a second floor level on the east wall, which faces the former academy building.

The floor plan of the building is highly unusual, and is a rare surviving example of a mid-nineteenth-century academy boarding house. The structure has a central hall on each of its two principal floors, with three rooms arranged on each side of this corridor. The northwest and southeast rooms on the first floor (which is entered by doors on each side of the building) are kitchens, having fireplaces with gudgeons for cranes, and brick ovens. To judge by wear on the floor boards, the southeast kitchen was by far the more heavily used.

The two kitchen chimneys provided thimbles for stoves in the rooms above them. A third chimney, intended only for stove use, provided heat for the southwest rooms on each of the principal floors. A fourth chimney was once suspended from iron rods in the northeast quarter of the house, and may have served only the northeast room on the second floor, which has the most detailed woodwork of any room in the building.

The woodwork of the building is simple, both inside and out. This simplicity is characteristic of the era, which favored plain, flat casings, and simple mouldings based on those used by the ancient Greeks.

All in all, the academy boarding house is an extremely rare building type in New Hampshire. While a number of early academies are known to have had dormitories, these buildings have generally disappeared or have been remodeled beyond recognition. The Francestown boarding house, by contrast, retains a remarkable integrity of plan and detailing, even though it has seen many uses (including that of a harness shop), and has not always had the best of maintenance. While the house may have cosmetic shortcomings, it retains those essential and unique features which make it an important document in the educational and architectural history of New Hampshire.

The purpose of this inspection was to assess the adaptability of the house, primarily for use as a public library. This assessment sought to answer two questions: whether the building *can* be adapted for library use, and whether it *should* be so adapted. The question of whether the house can be adapted is basically a structural one. Library use normally requires an essentially open floor plan, which, in the case of a dwelling, requires the removal of a number of partitions. At the same time, library use imposes very heavy floor loads in those areas where bookstacks are located. The combined removal of partitions and addition of heavy floor loads usually creates problems in buildings which were not designed for such circumstances.

In the case of the boarding house, the essential structural questions focus, first, on the design of the framing system and, second, on the integrity of that system. The framing system of the building, like that of most old houses, is based upon a few major posts placed at intervals around the perimeter walls of the structure, with internal bearing partitions at certain locations within.

The major internal bearing partitions of the boarding house are basically the walls of the central hallway. These walls form two structural planes which can be followed from supports in the cellar all the way up to the principal rafters in the attic. Removal of these walls for library use would be impossible without the substitution of some other means of support—probably columns and/or steel or laminated wood beams below the girders which are now supported by the walls. It would be difficult to add beams in the rooms of the boarding house because of the low ceiling heights. Present ceilings are about seven feet high. The Life Safety Code (NFPA 101), which has been adopted widely, specifies that ceiling heights shall not be less than seven and a half feet, and that any projections from a ceiling (such as a beam) shall be no less than six feet, eight inches from the floor. Thus, in terms of headroom alone, the boarding house poses problems in being adapted for public use.

A second aspect of the building's frame is the method of construction of the floors. To judge from the attic floor framing, the floors are lightly framed by today's standards. Framing beneath the attic floor appears to consist of 2" by 6" joists placed about twenty inches apart. Where observed, these joists run from the outer walls of the house to the hall girders—a span of over thirteen feet. If this kind of framing is typical of all floors in the house, then the floors are too lightly framed for heavy loads, however acceptable they may be for domestic use.

There is also cause to be concerned about the integrity of the frame. There have been leaks around at least two of the four original chimneys: the southwest chimney and the northeast chimney (now removed). While damage from the leak around the southwest chimney may be confined to the upper part of the building, the leak at the northeast chimney appears to have run

down the roof and affected the post at the north side of the entrance door on the east. Damage in this location, especially to the sills of the building, has probably been further advanced by the splashback of roof water from the door step.

Due to moisture in the cellar, some of the 4" by 4" sleepers or joists of the first floor have also suffered some damage and a number have been "sistered" with new joists for added support.

In summary, the frame of the boarding house was not designed in a way that invites the conversion of the dwelling to a library, and the slow and natural deterioration of that frame over the years has still further diminished the strength of the building. Thus, in a strictly structural sense, the question of whether the house *can* be adapted for library use must be answered by saying that such conversion would entail a nearly complete redesigning of the frame. For all practical purposes, the answer to this question is "no."

The second basic question, that of whether the house *should* be adapted for library use if it were otherwise feasible to do so, also should be answered with a "no." As stated above, the house is very important in the educational and architectural history of New Hampshire. The features that make it important are those very elements that would have to be removed during a conversion to library use: the partitions, the chimneys, the interior doors, and the floors. Without these, the house would lose that exceptional integrity that it has somehow preserved over the years. Thus, conversion of the boarding house to library use would be very destructive of an important monument of Francestown's history.

For these reasons, I would recommend that the library trustees seek some other solution to the problem of lack of library space.

On the other hand, the building does remain very important to the town's history, and deserves every effort toward its preservation. The factors that work against the conversion of the house to a library do not detract from other potential uses. The most obvious use for the building is its continuance as a dwelling. Because of its special architectural nature, the house does not adapt easily to multi-family use, nor is it even a traditional dwelling for a single family. Therefore, a logical use for the building at some future time might be a return to some sort of institutional function. Because of its easy accessibility at all levels, its multitude of rooms, its easy circulation through the central corridor as well as from room to room, and its relative intactness of original features, the house could make an excellent historical society headquarters and/or museum. It would offer spaces for displays (even period settings), for storage, for offices or workrooms, and, to a limited extent on the first floor, for meetings.

In any case, it is important that the town be aware of this unusual structure in its midst. If circumstances permit, it would be an act of real public benefit if the future of the building could be ensured through repair and restoration, perhaps under public or non-profit ownership.

Respectfully submitted,
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Architectural Historian