

To Close, or Not to Close – that is the Question

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Abstract:

In September 2016, the Beinecke Rare Book and Manuscript Library at Yale University (New Haven, Connecticut, United States) officially completed an 18-month renovation project, which replaced the building's HVAC system, upgraded lighting and removed asbestos in stacks areas, and doubled the building's classroom space. The library remained open to the public during most of the renovation, and provided access to all but a small portion of its collections, thanks to a combination of careful scheduling with researchers, off-site storage, and shifting materials within the building in coordination with the construction schedule. Using the Beinecke renovation as a case study, Ms. Hatcher and Ms. Sciarini will address planning for a move, provision of access during construction, and "recovery" after project is completed.

Keywords: construction, renovation, planning, preservation, access

The Beinecke Library, part of the Yale University Library in New Haven, Connecticut in the US is one of the largest libraries in the world devoted entirely to rare books and manuscripts. The library is Yale's principal repository for literary papers and for early manuscripts and rare books in the fields of literature, theology, history, and the natural sciences. In addition to its general collection of rare books and manuscripts, the library houses the Yale Collection of American Literature, the Yale Collection of German Literature, the Yale Collection of Western Americana, and the Osborn Collection. The building itself is also iconic, designed by Gordon Bunshaft of Skidmore, Owings & Merrill and completed in 1963.

It's always difficult to describe the physical extent of materials in special collections libraries, and Beinecke is no exception. For the purposes on this discussion, it's enough to say that the main library building has a central, glass-enclosed stack tower with space for about 180,000 volumes, and extensive underground stacks with space for 600,000 volumes, although in practice the underground stacks house a mixture of volumes, archival collections, oversize printed materials, paintings, sculpture, and other three-dimensional objects. Archival collections and books are also shelved in the University Library's high-density shelving facility

a few miles away. Between these two locations, the collections comprise about one million volumes and several million manuscripts.

By the early 2000s, the library's staff, researchers, and classes were outgrowing the available space. The building's plumbing, electrical, heating, and cooling systems, many of which were original to the 1963 building, needed to be updated, and asbestos in the stack tower and elsewhere removed. Machinery in the building's sub-basement, including room-sized air handlers and chillers, had to be dismantled, removed through a three-foot-wide shaft, and replaced with state-of-the-art equipment. Thousands of feet of pipes and ductwork needed replacement, and the building's security and fire-suppression systems were long due for an upgrade. Several focused renovations over the library's first 50 years had addressed some of these problems, but by 2012, it was clear that a major, building-wide renovation was needed.

The Beinecke collections support a wide range of Yale classes and scholarship from all over the world, so the idea of closing services for the entire period of the renovation was never considered. Instead, it was always assumed that the overarching goals of the project were to maintain as much service and access to materials as possible, without jeopardizing the safety of collections or staff.

To manage the entire construction process, the library formed a Renovation Committee, which began meeting about two years before major construction began. The Committee broke into subgroups, adding staff members who were not part of the Renovation Committee, to manage various aspects of the project. Both of us were on the Renovation Committee, as well as various subgroups, which we will describe as they become relevant.

Initially, the Renovation Committee hoped staff and researchers could remain in the building during the project, but it soon became clear that this would not be possible. In response, planners decided to open a temporary reading room in the university's main library, moving public-facing staff to offices near the temporary reading room, and permanently moving the technical services staff to a new location about one mile from the original building. Roughly speaking, this meant that half the staff were moved out temporarily, and half permanently. The space freed by the permanent move became new classrooms and dedicated work space to prepare and stage materials for the reading room, classes, exhibits, and transfer to the new technical services building and off-site shelving facility.

More difficult than finding room for the staff, however, was finding room for the collections. Beinecke stacks consist of seven floors. The golden "tower of books", a six-floor glass stack tower at the core of the building, had almost 18,000 linear feet (about 5.5 km) of shelving. Four basement stacks areas, approximately 15,000 each, were built at different points of Beinecke history, and each area had been designed to hold certain formats and sizes – folio volumes and broadsides in area 1, quarto volumes and archival boxes in areas 2 and 3, and a mix of octavo and quarto volumes in the so-called Wall street basement; last but not the least, two smaller "wing" levels, 6,000 and 8,000 feet respectively, holding octavo or quarto items. The total amount of shelving is close to 90,000 feet, and at the beginning of the renovation the stacks were about 90% full.

Because of the planned asbestos abatement in the glass stack tower, it was clear from the outset that the tower needed to be emptied; when the Renovations Committee received construction plans, it also became clear that each 15,000-linear foot area of the basement stacks needed to be emptied to allow complete dismantling of compact shelving in that space. The Beinecke

Library has an off-site storage facility, but it certainly was not possible to move 80,000 linear feet of material off-site in the time available. Instead, it was decided to move as much as possible off-site, and rearrange the remaining materials within the building, as different areas of the basement stacks were renovated in turn.

To address this, the Renovation Committee formed the Stacks Committee, tasked with identifying temporary storage for materials both from the tower and from the basement stacks. The Stacks Committee included representatives from Access Services, Preservation, Rare Book Cataloging Unit and Printed Acquisitions (together responsible for cataloging printed materials), and the Manuscript Unit (responsible for processing archives). The Stacks Committee worked to identify collections that could be transferred off-site, but this work was greatly complicated by the fact that we had to meet off-site shelving requirements, as well as access requirements: to be accessible from a remote location, all items had to be fully cataloged, barcoded, and housed, which is not the case for about 50% of Beinecke collections. The bulk of the tower materials, about 180,000 volumes, were not barcoded or housed when the project began.

Limitations of physical space in the basement stacks provided additional challenge: to empty 15,000 linear feet of each basement area, we needed to create swing space within the stacks. Beinecke uses its own unique set of call numbers, an old system of Yale call numbers, and LC call numbers. There are six major collections in the Beinecke library and quite a few smaller ones, and each has its own unique identifier; items within each collection are shelved by format and size, each having its own call number within the system. All of these call number systems needed to remain in order for on-site materials to be accessible.

The Stacks Committee addressed the challenges by thinking of collections first and foremost in terms of physical extent. Under normal circumstances, we prioritize collections for cataloging, processing, and other work based on use and research value. But, in the search for space, we needed to prioritize collections for additional work based on physical extent and the amount of work required to send it to the off-site shelving facility—if a large collection could be made ready to shelve off-site with relatively little work, we prioritized that work, even if the collection was a low priority for research.

At the same time, because the decision to send a collection off-site needed to be approved by the curator of that subject area, the larger the collection, the more shelf space would be cleared by each decision. Prior to the renovation, curators preferred that their collections be shelved onsite, but as renovation planning continued, they realized that collections stored off-site would be at less risk of damage due to construction accidents, and more accessible, since retrieval and delivery from the shelving facility would not be affected by construction work. In the end, we temporarily moved collections and individual items to the shelving facility that no one had expected would ever leave the library.

While the Stacks Committee worked to identify materials to move out of the building, we also worked with the managers of the shelving facility to develop a schedule for taking in materials. In the end, we agreed to transfer 500 linear feet of materials to the shelving facility every 2 weeks for 9 months—18 transfers in total, from April 2014 to January 2015 (in the end, we needed more room, so we added two more in February).

As we realized how much material we would need to move out of the building and shift within the building, it became obvious that we needed to hire movers. The Preservation Librarian

negotiated terms and conditions with two companies; we chose the one which provided relatively reasonable estimate and had experience moving special collections. However, we could not prepare and execute such massive transfers without help from all library staff. We hired two full-time temporary staff for a year to help prepare bound volumes for transfers, but we also held “boxing bees,” in which staff from all departments helped put books in their individual boxes. Another huge area of staff involvement was supervising the movers, with all staff members volunteering for two-hour shifts in teams of three or four. This allowed everyone to contribute, while reducing the work for key units (which might otherwise have been overwhelmed by covering this work on their own), and helped everyone understand the magnitude of the preparation work—helping to gain their patience when preparing for the renovation disrupted normal routines.

Deciding when to transfer each collection was difficult, because they needed to be closed for research for about three weeks to finalize preparations, move materials, and accession them at the shelving facility. But, because of our commitment to maintaining access, the reading room remained open until the last week before the renovation began, with classes in session and collections in heavy use. We also had to serve the research fellows, whose library-sponsored projects had been approved before we knew collections would be closed. Therefore, we had to schedule moving our most popular, signature collections around the times we had promised they would be available; transfer staff had to communicate collections closures in a clear and decisive way, and Access Services staff had to track the closed collections and update patrons and faculty accordingly.

The difficulty of scheduling collection moves around the fellows’ visits taught us another lesson, to plan even further ahead than you think you need to, and to consider suspending programs which will place heavy demands on materials and staff. Although we did not suspend the fellows program early enough, we did make the difficult decision to suspend acquisitions for the whole duration of the project, and also to keep a small number of collections closed for research because we did not have time to fully process them.

Once these bulk moves were underway, clearing the space needed for construction, we were able plan for the many smaller collections with specialized needs: medieval manuscripts, papyrus, oversized items, paintings, sculpture and other objects, a few pieces of furniture, materials requiring cold storage, nitrate negatives, the reference collection, safe items, and last but not least, the Beinecke’s copy of the Gutenberg Bible and Audubon’s Birds of America. The latter two items are on permanent display in the Beinecke exhibition area, and it was important to the university that they remain visible on campus during the renovation. Depending on the collection, these materials were sent to the library’s off-site shelving facility, an art storage vendor, a conservation and digitization vendor, or other museums on campus, moved by art handlers, hazardous materials shippers, or library staff accompanied by security guards.

After all off-site transfers were completed, and all technical services staff moved out, the stacks manager created a master list of collections remaining on site, and developed a complex shifting plan: an excel spreadsheet showing all call numbers to be shifted at a particular point of time, shelf space needed to fit certain numbers of items, and dates of shifting. The shifting plan considered post-renovation shelving needs, trying to minimize movement of special collections to reduce wear and tear. One collection – reference – had to be re-located to temporary reading room within one week of the reading room moving and re-opening, so we had to plan the best

possible path between two buildings to allow a very speedy shifting of about 600 linear feet, of this collection to make it immediately accessible in the temporary space.

Even with careful planning and preparation, we found that it was not possible to relocate certain types of materials either within the Beinecke stacks or to the off-site shelving facility, because they only fit on one type of shelving, in one room in the basement stacks. These oversized materials had to remain in their original shelving because there was no available swap space to fit them. Preservation and Access Services worked with the construction company and curators to determine how to protect materials in place by building huge boxes around their shelves, and close these items for paging during the project.

Given that the library decided to keep a temporary reading room open and to provide at least limited class support, Access Services staff needed to enter the Beinecke stacks once a day to retrieve and re-shelve materials for on-going classes and researchers. On the one hand, this requirement made shifting the collections more challenging. To fit the construction schedule, collections needed to move from one part of the stacks to another part within a three- or two-week windows between the end of major construction in one area and beginning in the next. At the same time, certain sequences of call numbers needed to be shelved so that staff could locate materials in new areas more or less intuitively as there was no time for additional training.

The temporary reading room was located in a different library across the street, connected to the Beinecke by sloped underground tunnel. Retrieving materials from the Beinecke stacks required each Access Services staff member push a heavily loaded truck full of manuscript boxes or volumes, which added health and safety concerns to the mix. Access Services managers worked with Yale Environmental Health and Safety to ensure the weight of a loaded trucks would not exceed 40 lbs. Given that some of Beinecke items can weigh as much as 60 lbs. or even more, we had to make a decision to reject paging requests for certain folio-sized volumes whose weight exceeded the maximum allowance.

As stacks became construction areas, all Public Services staff had to wear hard hats and heavy boots in order to comply with safety requirements. The construction company planned to meet the project's tight schedule by working 12-hour days, so we negotiated to suspend construction at their lunch time every day, test the air, and clean one path through the construction zone to allow Access Services staff to page and shelve materials. The Access Services librarian and lead staff members had to develop a temporary workflow for circulation, class set-up, and off-site retrievals for the whole duration of the project.

The Stacks Committee was disbanded when construction began; instead, the Yale Facilities Department ran a weekly meeting with the construction company, Beinecke director, head of Facilities, head of Security, preservation librarian, head of Access Services, stacks manager, and other involved departments. At each meeting, the group discussed progress and reviewed plans for the next three weeks, addressing construction or access-related issues, such as proper timing for flood testing, construction delays, last-minute changes in shifting deadlines, security coverage schedule and overtime, and staff safety concerns. Although much at the meetings was outside the usual concerns of Access Services and Preservation, our attendance meant that we heard quickly when an issue arose that affected access to or preservation of the collections, and ensured that the construction managers knew who to talk to about the collections. Because security officers and construction managers were in the library much more than the usual collections staff were, they became the first line of defence for the collections—we needed them to know when to stop work and ask us for clarification or guidance.

The library entered the final stages of renovation project in spring 2016. The tower had been completed, and we were given a go-ahead to re-fill it. As we lost some shelf space in the tower due to newly installed storage spaces, the stacks manager had to plan shelving of tower collections in a completely different pattern. Due to construction delays and a hard deadline for re-opening, all materials were reshelfed in the tower in only three weeks, in contrast to the months of work required to empty it.

As we moved out of the building, we had planned to bring back about 16,000 items which we had moved off-site to accommodate the renovation. But, because the library acquired 20,000 flat maps during the year of the renovation, the renovation project also included replacing thousands of feet of regular compact shelving with cabinets for oversize, flat materials. This reduction meant we had to bring back less material than planned. Again, we worked closely with the collection curators to identify collections which we could keep off-site. Fortunately, the experience of having collections off-site for the renovation had calmed the curators' concerns about off-site storage, as we were able to leave off-site over half of the materials we had planned to return, allowing plenty of growth room in the newly renovated stacks.

In the end, we moved about 8,000 items back into the building from the off-site shelving facility before the re-opening. As with refilling the stack tower, moving these materials back in was much faster than moving them out, taking less than two months of daily deliveries from the shelving facility to the library. Due to careful planning of in-building collection shifts and timely directory and floor plan updates, we were able to minimize collection movement and reduce staff re-training time; however, each and every item in the Beinecke stacks had been moved at least twice during the renovation period, so in order to assure that nothing is missing, we re-structured stacks space to make collection locations more logical, and re-introduced stacks inventory and shelving quality control.

Beinecke staff have learned plenty of lessons from the move and renovation. We found out that no matter how carefully you plan, you cannot plan for everything, and plans will change on short notice. But the multi-million renovation project has also demonstrated that if you plan everything possible, especially temperature and humidity control, human safety, and materials safety; if you include all library staff into all stages of your project and if you trust the judgement of the key staff members and the expertise of your vendors; if you stay aware of your staff stress levels and help them build and maintain confidence in the value of their input; if you remain flexible in your planning and allow adjustments in your plans for factors out of your control -- even such a mammoth project can be accomplished relatively painlessly.

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