

## Wolter Makes Limited Storage a Thing of the Past at the Chicago History Museum

**Challenge:** To maximize historical document storage while streamlining access and retrieval from a 14,000 square foot semicircular basement storeroom that includes 33 round support columns and 36 manhole covers.



The Chicago History Museum was established in 1856 and currently located in the Lincoln Park neighborhood of Chicago. A major museum and research center for Chicago history, the Chicago History Museum strives to be a destination for learning, inspiration, and civic engagement. A unique service that the CHM provides is the access and availability to the collection given to people from all walks of life, from academic scholars and documentarians to history buffs and even school children. This requires paging staff to visit the archives to retrieve documents from open to close every day the museum is open.

The primary on-site storage facility was under-used due to structural and mechanical issues including a leaking roof, a low suspended ceiling, and an obsolete HVAC system. With a significant portion of the floor space rendered unusable, storage was further limited by aging fixed shelving and an older, inoperable electric high density storage system.

A major renovation was undertaken to bring the storage room up to the standards necessary to protect and store the collection of documents. “We’ve got approximately 6 million images. We’ve got somewhere around 30,000 linear feet of archival material. We have tens of millions of individual artifacts,” said Julie Wroblewski, Director of Collections at the Chicago History Museum. “My responsibility is to make sure that I am advocating for the acquisition, care of, safekeeping of, and use of the collections themselves and making sure that the staff who do that work have the resources they need to do it.”

The CHM reviewed bids from a number of highly qualified manufacturers specializing in high density storage systems and awarded the contract to Wolter, Inc. “One of the things I looked for when vetting different vendors, knowing that we had a very quirky space was, is this person listening to me when I tell them what our priorities are, and the areas that I’m worried about, or what we need to factor in where we’ve got a lot of different size materials,” Ms. Wroblewski said. “To say that the ‘quirky’ room presented a unique set of problems would be an understatement,” said Ken Pahlke, aka “Mr Storage” at Wolter, Inc., “There isn’t a straight wall in the room, and there are 33 round pillars, plus the 36 manhole covers in the floor ... it was almost impossible to accurately measure.”

**Solution:** Wolter, Inc. used state-of-the-art measurement technology to precisely map the space. The room was then divided into 15 different mechanically assisted high density storage systems with fixed units positioned where obstacles interrupted the runs of 1,667 feet of track installed in the floor. Shelving carriages range in length from 3 feet to 51 feet in length, creating over seven miles of shelving space when placed end-to-end, resulting in a 94% increase in storage capacity.



The Wolter team worked with The CHM to design and install a system that maximizes the floorspace, and cubic volume of the room. With the old suspended ceiling removed, and the new HVAC duct work and fire suppression system installed, Wolter was able to bring in taller storage units. The increased height of the new system, along with the precise mapping and exact positioning of the tracks resulted in a 94% increase in total usable storage space. This helped satisfy a key requirement for the design to accommodate future growth for the collection. "History doesn't stop creating itself," Wroblewski said.

The mechanically assisted high density storage system eliminates the aisles required with a standard fixed storage system. Storage carriages are moved left and right by manually turning a wheel positioned on both ends of each carriage. Special gearing allows just a few pounds of force to move a fully loaded 51' long

carriage. "Everyone was marveling at how easy it was to turn the shelves and, how easily the system worked, and they just couldn't believe how much we could fit down there now," said Wroblewski.

By dividing the room up into 15 independent high density storage systems with access at either end and a bisecting semicircular main aisle, Wolter created a system that allows multiple staff members to access the archives simultaneously, without interfering with each other. To ensure their safety, each carriage features a unique dual lock and unlatch safety system that allows staff members to lock out movement from either end.

"The ability to have everything well organized, easy to retrieve, easy to work with, means I don't have to worry about the space, allowing me to go out with the staff involved in making choices and selections and to say with confidence, yes, we can absolutely bring in this collection and take care of it." Wroblewski said.

"Our goal is to solve the problem," said Pahlke. "I would say Wolter pays attention to the whole project, not just our part and, we make sure that we're trying to think about and anticipate any issues that might affect the success, even if it's not directly tied to the design itself.

"Wolter is always going to be my first call. Ken's a great communicator and a great listener. I know that he'll spend the time to really understand the goals and priorities and the institution's goals and priorities," Wroblewski concluded.

