

Case Study

PRITZKER MILITARY ARCHIVES CENTER: PRESERVING EVIDENCE OF A PATRIOTIC PRESENCE

Kenosha, Wisconsin



Honoring our **Nation's Past**

Whether during times of peace or war, over 26 million individuals have served in one or more of the branches of the US Military. Evidence of these valiant service people ranges back to the Revolutionary War and extends to the conflicts of today. One way to keep their memories and efforts fresh in the hearts and minds of those who came after them and enjoy the freedoms they fought to protect, is to preserve the artifacts collected throughout our nation's military history.

The mission of the Pritzker Military Museum & Library (PMML) and Pritzker Military Archives Center (PMAC) is to increase the public's understanding of military history, military affairs, and national security by providing a forum for the study and exploration of our military - past, present, and future - with a specific focus on their stories, sacrifices, and values. This requires not only a dedicated staff of archivists and preservation professionals, but also state-of-the-art storage systems - like those Spacesaver designs, manufacturers, and delivers - to properly preserve and protect these invaluable resources for generations to come.





The Challenge



Rallying Troops to Lead the Charge

Located on three floors of a historic, 16-story downtown Chicago building, the PMML found it was running out of space to properly address and accommodate the increasing volume of artifacts it accumulates from private and public donors. Upon assessing the capacity of its current storage solutions and the possibilities of upgrading these systems to allow for increased capacity, administrators at PMML realized they had no choice but to seek out an alternative option that would accommodate their current collections and allow for integration with their archives center and long-term growth.

Prior to making the decision to move, PMML had only enough space to hang 200 of their 1,000 accumulated framed pieces. Their predominately static shelving solutions were at capacity and, with a growing collection of approximately 40,000 artifacts including archival collections, letters, military documents, prints, posters, original artwork, glass plate negatives, photographs, weapons, maps and more than 65,000 volumes of books, the option to convert to high-density storage was not feasible with their current building's floor loading.

Upon deciding that a change in tactics must be made, PMML began the search for a strategic partner to bring their historic artifacts into the modern age of museum preservation through the creation of a facility that would perfectly reflect the stories of the past while making room for future pieces of history.



A New Base For Firing Up Discovery

After thoroughly vetting potential partners to bring their vision to life, PMML chose internationally-renown architecture firm JAHN for the project. Knowing the value that PMML has brought to the military archives community and to those who are represented through the organization's artifacts, JAHN started work in 2019 to deliver a facility that would honor this legacy.

The initial design included multiple buildings, with the museum and workshops in one building, and archival storage in another. Upon considering alternative configurations, they decided to build their new home from the ground up, allowing them to design the facility to be a space where artifacts and services could be housed within one building. Not only would this layout provide tremendous cost savings versus multiple buildings, but it would also help to increase the efficient and secure storage and transport of artifacts.

Focusing on the prospective building and its functionality, JAHN designed the structure - which is modeled after World War II amphibious vehicles - to appear exposed, but feature high-tech, efficient, and precise components like those of a piece of military equipment. Part of this push for incorporating advanced capabilities - led by administrators at PMML - included integrating Spacesaver's local storage representative and the Powered High-Density Mobile Shelving systems and other storage solutions they offer.



Before Installation

Preparing Resources for Deployment

With their plan of attack to develop their future home in place, staff at PMAC went to work prepping their artifacts for distribution to their new post. This process, requiring staff to examine all and replace the majority of bankers boxes used to house the materials, took one and a half years to accomplish. Upon arrival at the newly created facility in Kenosha, staff worked for six to eight months to properly categorize and distribute the materials into their new homes on the Powered High-Density Mobile Shelving systems.

Even with this transition, donations continue to file in and will for years to come. To properly assess and assign a destination for these new additions, PMAC created a "quarantine space" with static shelving to establish an isolated space to make sure the pieces are free from pests, mold, and other harmful contaminants before moving onto processing by staff members.



Before Installation

PMAC is located in Kenosha, Wisconsin



Lining Systems Up At Attention

While the fruits of their labor are displayed within the approximately 9,400 SF of exhibition space on the ground floor of the facility, Spacesaver's Powered HDMS systems are located in the lower-level space. All items for display and research are kept on-site within these systems – except for those that are loaned out to researchers and digital share partners. At the PMML's previous location, patrons were able to pull circulating library materials directly. In the new facility, staff will source and bring materials to selected viewing/research spaces throughout the main level of the facility.

Strategically placed in an environment where many of the common agents of deterioration can more easily be mitigated, these invaluable resources are apparent as soon as you step off the elevator. The most impactful way the Powered High-Density Mobile Shelving systems have helped PMAC staff work more efficiently within the space is by creating a more efficient footprint overall. By utilizing these versatile systems, the PMAC can take what would have been approximately 20,000 SF of storage space and double it by removing wasted aisles.

First Unit: Book Storage

The staff at the PMAC has accumulated thousands (and growing) of volumes of books centered around the military experience, ranging in sizes and conditions and each requiring their own specific level of security and care.

To best accommodate the vast literary collection and the dedicated individuals tasked with their care, our local Spacesaver representative provided high-quality steel Cantilever shelving units mounted on Powered High-Density Mobile Shelving systems. The systems, comprising 45 carriages of 30' in length each, are designed to move independently or as a group to create 91 separate aisles that can be opened with the push of a button.

Each aisle is equipped with both aisle entry and Photo Sweep® sensors. For the aisles that contain highly valuable or fragile materials, TUSC® Technology Controls have been added to increase security by requiring users to enter a specific passcode to gain access.



Second Unit: Artifacts Storage

The military artifacts that PMAC receives come from a diverse set of sources and present in all shapes and sizes. Because of this, their storage solutions must have the ability to be both strong enough to support these items and flexible enough to adjust to their varying heights and widths. Taking this into account, our local rep outfitted the artifacts storage section of the archives with sturdy-but-adaptable 4-Post Shelving units mounted on our Powered HDMS systems.

From foot lockers to file folders, these versatile solutions can be manipulated to offer the most efficient and effective method of storage for over 500 archival collections. The storage area incorporates 18 carriages that combine to create 37 aisles of storage. Like their literary neighbors across the way, each aisle is equipped with aisle entry and Photo Sweep® sensors to help keep both personnel and possessions secure.

“The flexibility of our Spacesaver systems has made it very easy for us to store a wide range of materials in our collection,” said Dustin DePue, Director of Museum Collections at Pritzker Military Museum & Library. “Being able to customize our storage workflow by mapping out the different areas within the modules ahead of time has allowed us to integrate things like hanging storage for framed materials, which is a significant upgrade over our previous system.”



4-Post Shelving mounted on Powered HDMS



The Solution

Third Unit: Hanging Storage

If a picture is worth a thousand words, the PMAC had a lot to say when they transferred their hanging art collection from the Chicago location. A common theme among storage sectors for the organization, their capacity was nearly a fifth of their supply at the time they moved - and that supply was continually growing. Taking this into consideration, Spacesaver's rep opted for a combination of static and mobile storage to maximize the allotted footprint within the facility.

The storage package included four Wall-Mounted Art Racks and 22 Powered HDMS systems with Carriage Mounted Art Racks that added another 43 aisles and 172 screens. In addition, our hooks provided the Museum's hanging art a thicker, sturdier option, providing less swing and reducing potential damage to artwork. Each of these mobile systems also include our aisle entry and Photo Sweep® sensors. Together, these versatile, high-capacity solutions allow the PMAC to securely store the 1,000-plus pieces they transferred over - including World War propagand, war photos, and original art and photography - and leave room for future artwork.



Carriage Mounted Art Racks mounted on Powered HDMS



Carriage Mounted Art Racks mounted on Powered HDMS

Fourth Unit: Weapons Storage

Advancement towards promoting readiness is a key focus of the military and has been since its inception. This principle applies to many items, not the least of which, is the weaponry soldiers have utilized to defend our country. In addition to books, artifacts, and artwork, the PMAC has also received many different iterations of arms and supporting equipment.

Ranging in size and condition, these items require a specific storage setup to ensure they are properly handled and preserved and securely stored. To allow for this level of precision and care, our local representative outfitted the Weapons Storage Room with 4-Post Shelving that incorporates double doors and two levels of Weapons Rack III storage systems, as well as a 114" L x 36 3/8" H customized worktable with six lockable casters - allowing support in the efficient handling and processing of artifacts.



Customized worktable

Reserve Unit: Room For Growth

From the beginning of the project, the PMML's goal was to get 25-30 years of growth from the storage systems they would employ at their new facility. While the initial impact of the already installed solutions will support the organization for many years to come, collections growth trends indicate that they will not be enough to reach this goal. Understanding the complexities of installing rail systems post-foundation, our local rep suggested installing supplementary recessed rails during construction.

With this information, the administrators decided to have recessed rails installed to fill the open spaces adjacent to both its artifacts and library storage mobile systems. By installing addition rails during the initial construction phase, future carriage installations can be completed in less time, will require no adjustment to the building's foundation, and will help to reduce the risk of damage to stored collections from vibration or construction materials.



Rail Systems for future storage

The Solution

Technological Unit: Future Focused

To extend their reach beyond the bounds of their new facility, the PMAC is working to digitize their collections for better accessibility. Driven by the restrictions the COVID-19 pandemic put on visitors to the museum, not only will these efforts help to instantaneously share these relics with interested parties across the world, but they will also keep them preserved indefinitely.

The PMAC's Digital Lab contains a scanner that can accommodate 4' x 6' flat pieces, that is sensitive enough to capture the topographic layout of each piece. The scanner also uses no to low UV light to protect materials from their potentially damaging effects. With the scanner, the Lab also contains a 3D, 360-degree light box for imaging artifacts, models, and other 3D objects. To support the functionality of both valuable pieces of equipment, our local rep provided a 114" L x 36 3/8" H movable worktable featuring six lockable casters - similar to the one in the Weapons Storage space.



The building's structure is comprised of recycled steel and utilizes UV-coated glass panels to limit the affect the sunlight has on the internal temperature of the main floor space. Furthermore, the building is surrounded by a mixture of trees and tall grasses, helping to control the building's temperature.



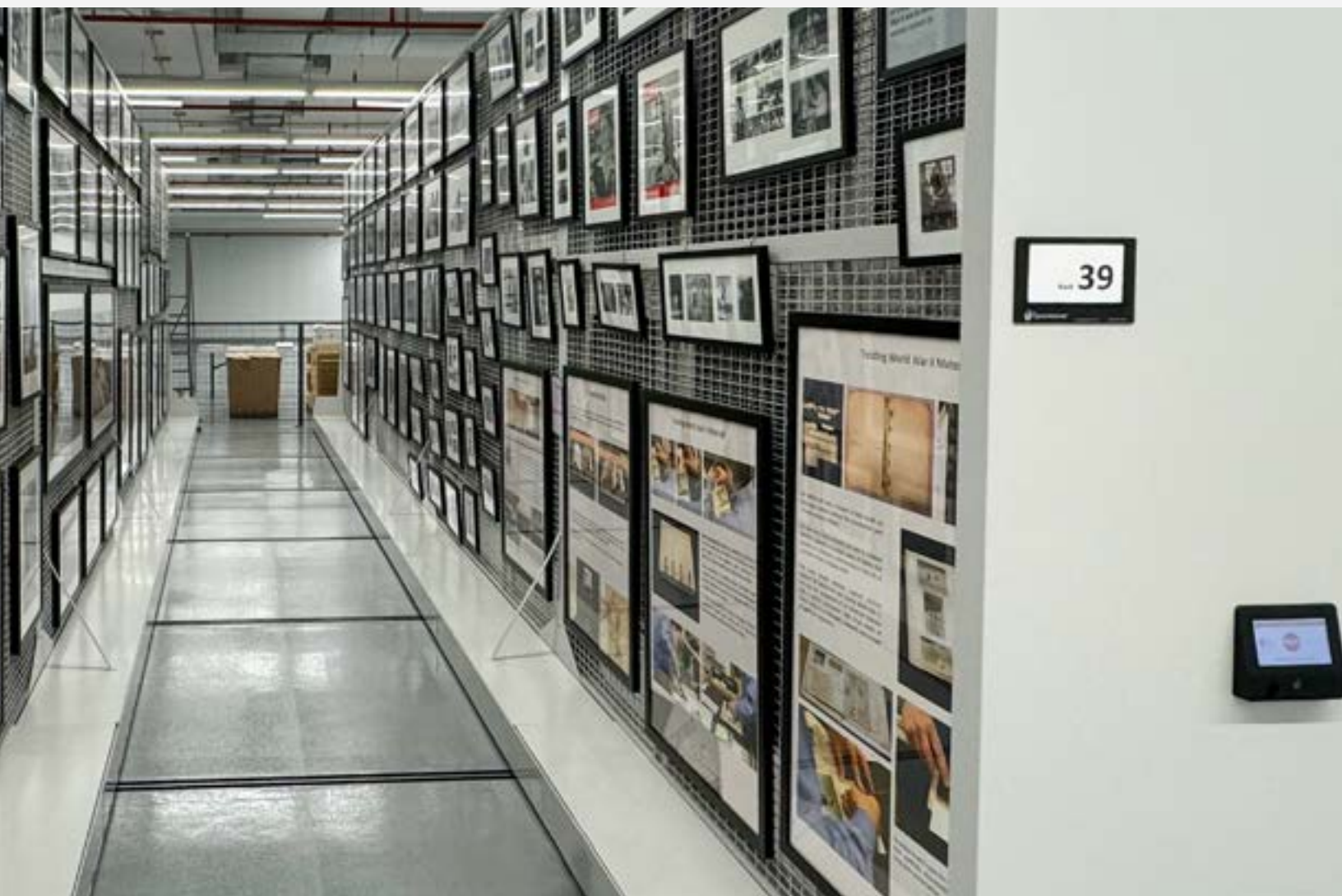
Establishing A Cadence For A Lasting Future

In addition to incorporating these valuable systems within the facility, the PMAC is integrating several sustainable operations. The building's structure is comprised of recycled steel and utilizes UV-coated glass panels to limit the affect the sunlight has on the internal temperature of the main floor space. Furthermore, the building in surrounded by a mixture of trees and tall grasses, helping in the temperature control. Lastly, a portion of the facilities electrical systems are supported by a solar panel field located in the southeastern corner of the property.

Already experiencing a growing interest from visitors, researchers, and donors alike, the PMAC sees their Spacesaver systems as solutions for the long-term, ones that can provide them a modular

space to offer lasting preservation and safety for their collections. By utilizing Spacesaver's Powered HDMS systems, the PMAC can maximize their storage capacity and maintain their growth rate without worry - allowing them to continue to receive priceless materials from donors and further their mission.

According to DePue, the installation is already drawing the attention of other institutions and has driven several archival entities to come and see it for themselves. With the system in place - which includes installed recessed rails for future growth - he is confident the PMAC can operate to the highest standards and will continue to do so for years to come.



FUN FACT: *The PMAC's favorite feature of the Powered High-Density Mobile Shelving (HDMS) systems are the automated controls. With these in place, they can provide safety, security, and efficiency for their staff, visitors, and the materials themselves. Having collections ranging widely in age and value, being able to set a passcode for select aisles and the collections within them, who has access to select aisles and the collections within them, while the safety sensors add an additional level of safety and security to the day-to-day operations that occur in the space.*

**Scan here for the
Video Case Study!**





Making Your Vision A Reality

Spacesaver's robust engineering teams and custom manufacturing capabilities can help bring your design team's vision to reality. Contact us to learn more about how our in-house teams partner with your local Spacesaver consultant to optimize space while also protecting collections for generations to come.

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