

CASE STUDY



Enhancing Military Logistics Efficiency for Tennessee Air National Guard

The Tennessee Air National Guard's base required an overhaul of their storage and logistics systems to support their growing need for efficient space utilization and rapid retrieval. With a diverse inventory ranging from large cargo to small, fast-moving parts, the base sought a solution to optimize storage density and streamline operations across their 175,000-square-foot facility.

The Client

The Tennessee Air National Guard, a critical component of the U.S. Air Force's reserve forces, provides mission-ready air and ground support across the country. With a focus on operational readiness and efficiency, the base required a system to manage a broad inventory and enable rapid, reliable access to essential materials.

Results Snapshot



66% improvement in space utilization with advanced mobile storage



Cargo-handling lifts allowed pallets to be built at ergonomic heights



Optimized storage for large items, saving 35% of floor space

THE CHALLENGE

Faced with limited space and a need for swift, accurate access to various components, the Tennessee Air National Guard needed a high-density storage solution tailored to military logistics. The system had to accommodate everything from large palletized goods to tiny, high-frequency parts, while also supporting ergonomic handling for personnel safety. Seeking a partner experienced in military storage and handling solutions, the Guard contracted a logistics solutions provider to manage a complete transformation, enhancing both functionality and space efficiency.

RESULTS

The newly integrated storage and handling system at the Tennessee Air National Guard base significantly enhanced operational efficiency across its 175,000-square-foot facility. By optimizing layout and incorporating advanced mobile storage, vertical carousels, and ergonomic cargo lifts, the system achieved a 2/3 improvement in space utilization, streamlined access to high-demand items, and ensured faster retrieval of essential parts. These enhancements equip the base to handle mission-critical logistics with exceptional precision, speed, and safety.

THE SOLUTION

01



Operations Review

A comprehensive analysis of the base's logistics requirements identified bottlenecks and areas for efficiency improvement, setting the foundation for an integrated design aligned with the Guard's mission goals.

02



Layout and Design

Customized AutoCAD designs maximized the facility's layout, incorporating strategically located mobile storage and ergonomic lift stations to enhance movement and reduce handling time.

03



Equipment Selection and Installation

Specialized storage equipment, including mobile systems, vertical carousels, and modular cabinets, was selected and installed to accommodate varied inventory types. Each piece of equipment was positioned to streamline workflow and optimize access.

04



Project Management

Every phase was managed meticulously, from initial planning through final execution, ensuring adherence to timelines and budget while minimizing disruption to the base's operations.

DETAILS AND EQUIPMENT

The Tennessee Air National Guard's new logistics system includes versatile storage modules tailored to diverse military inventory. Each solution, from bulk storage to small-parts organization, was designed to enable rapid retrieval and high storage density.

Storage Solutions and Strategy

Key Storage Solutions Implemented:

Mobile Storage Systems: Improved space utilization by two-thirds, maximizing floor area.

Pallet Lift in Pits: Allows ergonomic pallet assembly, reducing strain on personnel.

Modular Cabinets and Drawers: Efficiently store thousands of small parts in a compact area.

Vertical Carousels: Rapid access to high-frequency items, enhancing pick speed for small parts.



Material Handling and Conveyor Systems

The conveyor and handling systems introduced ensure seamless item flow and facilitate efficient handling across different storage zones.

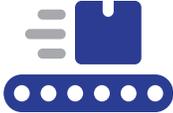
Conveyor and Handling Equipment Included:

Pallet Conveyors and Ball Transfers:

Streamline pallet movement and reduce manual handling.

Cargo Handling Lifts: Position pallets at optimal height, improving handling ergonomics.

Pallet Racks and Cantilever Racks: Provide stable storage for bulk and oversized items, supporting easy access.





CONCLUSION

With a tailored, high-density storage solution, the Tennessee Air National Guard base now operates with remarkable efficiency, meeting the demands of its mission-ready operations. The advanced logistics system maximizes space, enhances retrieval speed, and improves ergonomic safety, ensuring that personnel have access to essential materials with speed and accuracy.

The Results

- **Increased Storage Efficiency:**
Utilizes 2/3 less space
- **Enhanced Retrieval Speed:**
Vertical carousels expedite small parts access
- **Improved Ergonomics:**
Cargo lifts for safe pallet handling