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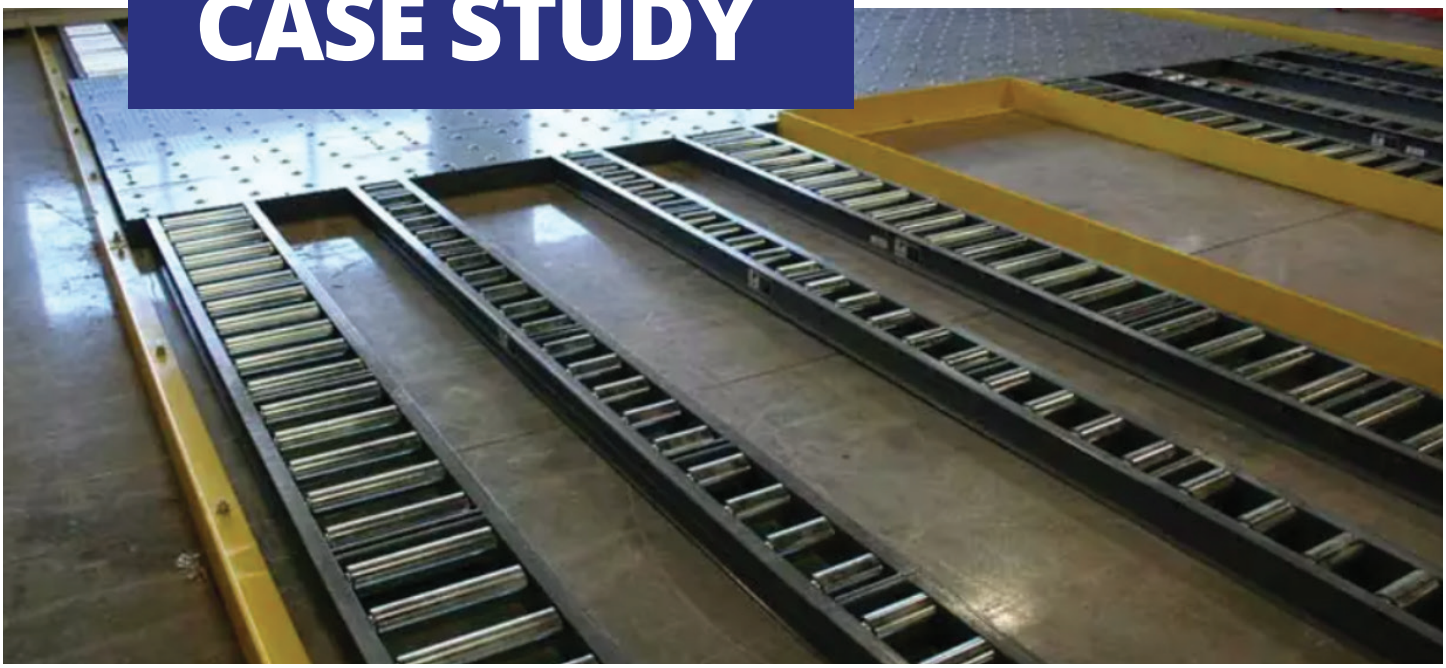
CASE STUDY



Maximizing Efficiency in Military Logistics for the Tennessee Air National Guard Base

The Tennessee Air National Guard Base required a modernized and efficient logistics system to support its evolving needs. Handling a diverse range of equipment and supplies, the base needed a solution that would improve storage density, streamline retrieval processes, and manage various sizes and types of inventory—from small parts to large, long items like pipes.

The Client

The Tennessee Air National Guard Base manages significant logistics operations for equipment, parts, and supplies essential to mission readiness. With 175,000 square feet dedicated to storage and handling, the base required a comprehensive, efficient system to optimize space, improve accessibility, and increase throughput for rapid response capability.

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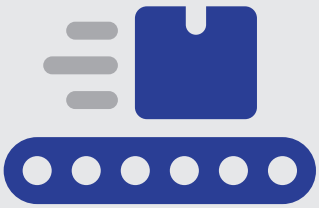
Results Snapshot

Reduction in required storage space

Enhanced accessibility for oversized and long items



Seamless inbound pallet flow with automated conveyors

THE CHALLENGE

The Tennessee Air National Guard Base needed to optimize their existing 175,000-square-foot warehouse to accommodate various equipment types and maximize space utilization. Their current storage and handling setup was insufficient to manage diverse inventory sizes efficiently. The solution required a streamlined flow for inbound pallets, effective storage for both small and large parts, and improved access to bulky items like pipes. To achieve these objectives, the base turned to LD Systems for a transformative approach to layout and material handling.

RESULTS

LD Systems implemented a fully integrated storage and material handling system that significantly enhanced the Tennessee Air National Guard Base's logistical capabilities. By introducing mobile aisle storage, pallet conveyors, and cantilever racks, LD Systems reduced required storage space by 60% and increased accessibility to long items, such as pipes, while maintaining smooth inbound flow for pallets. These improvements have empowered the base to handle diverse inventory demands with remarkable efficiency and flexibility.

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THE SOLUTION

01

Operations Review

LD Systems conducted a detailed assessment of the base's logistics operations to identify areas of improvement. This review informed a strategic design tailored to optimize space, improve accessibility, and facilitate faster handling of various item types.

02

Layout and Design

Using advanced AutoCAD software, LD Systems crafted an optimized layout that maximized space usage and incorporated efficient pathways for smooth material handling. The design included designated zones for different storage types, reducing the footprint of stored items while improving retrieval times.

03

Equipment Selection and Installation

LD Systems selected high-performance storage solutions tailored to the base's needs. These included pallet conveyors for streamlined inbound flow, mobile aisle storage to enhance space utilization, and cantilever racks for secure, efficient storage of long items. Installation was carefully managed to ensure minimal disruption to the base's ongoing operations.

04

Project Management

Throughout each project phase, LD Systems maintained close oversight to adhere to timelines and budgets, providing a seamless transition to the new system and enabling the base to maintain critical operations without delay.

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DETAILS AND EQUIPMENT

Following an in-depth analysis of the base's storage and handling needs, LD Systems optimized the layout to include mobile aisle storage, pallet conveyors, and dedicated zones for various item types, from small parts to oversized equipment. This efficient design enabled smooth flow from receiving to storage, ensuring seamless operations.

To maximize space and improve retrieval speed, LD Systems implemented mobile storage systems and cantilever racks for long items like pipes, significantly reducing the facility's storage footprint. The solution transformed the base's operational capacity, equipping it to handle diverse inventory with enhanced speed, flexibility, and accuracy, all within a compact, optimized footprint.

Storage Solutions and Strategy

The comprehensive solution for the Tennessee Air National Guard Base's 175,000-square-foot facility included specialized equipment designed to optimize every aspect of storage and handling:

Mobile Aisle Storage: Reduced required storage space by 60%, enhancing overall storage density.

Pallet Conveyors: Enabled smooth inbound pallet flow, reducing manual handling in the receiving area.

Cantilever Racks: Efficiently accommodated long items, such as pipes, in a compact storage area.

Modular Cabinets: Provided compact, organized storage for small items, maximizing available space.

Pallet Ball Transfer Floor: Facilitated quick, precise movement of pallets to designated locations.

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Material Handling and Conveyor Systems

The integrated conveyor system streamlined the movement of goods throughout the facility:

Inbound Conveyors: Facilitated the efficient transfer of pallets to receiving zones, enhancing workflow and reducing labor requirements.

Pallet Ball Transfer Floor: Enabled easy repositioning of pallets within storage and packing areas, optimizing order flow.

Cantilever Racking: Designed for long, bulky items to be stored and accessed efficiently, minimizing clutter and freeing up floor space.

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CONCLUSION

With LD Systems' integrated logistics solution, the Tennessee Air National Guard Base now operates with advanced efficiency, meeting the demands of its diverse inventory with enhanced accuracy and accessibility. The system's optimized storage density and smooth inbound flow position the base to manage logistics with improved speed, safety, and flexibility, ensuring mission-critical readiness.

The Results

- 60% reduction in required storage space
- Enhanced accessibility for oversized and long items
- Seamless inbound pallet flow with automated conveyors

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