

CASE STUDY



NEFCO Distribution Center Transformation

NEFCO's Columbus operation had reached a breaking point in its existing facility. Sales growth had outpaced expectations, and the building could not support the volume, SKU profile, and service demands the business was now facing. NEFCO had already committed to a much larger nearby facility, but the new building required a complete storage and material handling design before it could become a fully functional, growth ready distribution center on a tight timeline.

LD Systems designed and implemented a scalable storage and material handling solution that increased capacity, improved picking and shipping flow, and created clear paths for future expansion through 2030.

The Client

NEFCO is a leading distributor of construction and industrial supplies, providing fasteners, tools, and job critical materials to contractors and job sites across the United States. NEFCO is known for service, inventory availability, and speed, supporting a wide range of industries that depend on reliable access to essential supplies.

Results Snapshot



Designed and equipped a new, larger facility



Centralized a two level pick module



Reduced elevated picks and long travel paths



Integrated pick to pack to ship flow

THE CHALLENGE

NEFCO's Columbus operation was pushing the limits of its existing facility. Sales growth had far outpaced original expectations, and the building could not support the volume, SKU profile, and service demands the business was now facing.

Storage capacity and vertical space were no longer aligned with the demands of the operation.

Storage capacity was constrained and vertical space was under optimized. There was no straightforward way to expand within the existing building without causing major disruption. At the same time, NEFCO had already committed to a much larger nearby facility that needed to be converted into a fully functional distribution center.

Picking activity placed increasing strain on productivity and ergonomics.

Many SKUs, including small parts, loose items, tools, and each pick products, were scattered across multiple rack and shelving types. Associates frequently relied on order pickers to access inventory stored high in conventional rack, requiring substantial travel and elevated picking activity. This slowed productivity, increased fatigue, and introduced additional safety concerns in congested aisles.

The flow from picking through packing to shipping lacked

the integration needed for higher order volumes.

Orders were often moved manually across long distances to reach packing and shipping areas. This created unnecessary handling, congestion near the dock, and inconsistent cycle times during peak demand.

The transition to a new facility had to occur without interrupting customer service.

The new building was essentially an empty shell that required a complete storage and material handling design. The solution needed to support the company's long term growth trajectory while allowing a phased move that avoided a high risk, all at once cutover.

RESULTS

- Designed and equipped a new, larger facility
- Increased capacity through vertical storage utilization
- Centralized small parts and each pick activity into a two level pick module
- Improved safety and ergonomics by reducing elevated picks and long travel paths
- Integrated pick to pack to ship flow with conveyors and 16 pack stations
- Executed a phased, low risk transition while maintaining service continuity

THE SOLUTION

01



Operations Review

LD Systems evaluated NEFCO's SKU mix, growth projections, and operational workflows to identify the storage, picking, and material flow requirements for the new facility.

02



Layout and Storage Design

The new facility was configured with high capacity pallet racking, structural cantilever storage for long materials, and a two level pick module designed to centralize each pick activity and improve vertical space utilization.

03



Equipment Installation and System Integration

LD Systems installed pallet racking, structural cantilever storage, pallet flow rack, shelving systems, accumulation conveyors, and 16 pack stations to create a continuous pick to pack to ship workflow.

04



Phased Implementation and Transition

LD Systems coordinated a staged transition into the new facility, installing systems and validating operations before inventory relocation to ensure uninterrupted service during the move.

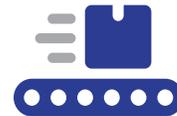
ENGINEERING THE SOLUTION

Storage Backbone for Bulk and Long Materials

Structural Cantilever Storage

LD Systems installed new structural cantilever rack to handle 10 foot and 20 foot materials in a more efficient footprint, using a configuration NEFCO's team was already familiar with.

Key features included 22 foot double sided uprights with heavy duty columns and bases, and structural arms designed for long, heavy product. This provided high density storage for long goods and eliminated makeshift storage practices.



High Capacity Pallet Racking

To support bulk and palletized inventory, LD Systems installed a new pallet rack system designed to increase capacity while improving safety and durability.

The system stands 25 feet high with five beam levels per bay, is rated for pallets up to 3,400 pounds per position, and includes full wire decking with end of aisle and tunnel protection.

Two Level Pick Module for Small Parts and Each Picks

To streamline small parts and each pick activity, LD Systems built a two level pick module designed to concentrate high activity SKUs into a compact, organized zone.

The module includes:

- Perimeter pallet flow rack for fast moving SKUs, with safety decking on the upper level
- Bulk rack with ergonomic shelf heights and wire decking
- Metal shelving for smaller loose items, tools, and each picks

This allowed NEFCO to concentrate a large portion of order picking in a well organized area that is safer and significantly more productive.

ENGINEERING THE SOLUTION

Integrated Conveyor and Packing Flow

LD Systems integrated accumulation conveyors and pack stations to connect the pick module directly to shipping, creating an end to end workflow from pick to pack to ship.

The system includes:

- U shaped conveyors inside the pick module on both levels to receive totes and cartons from pickers
- Conveyor lines running from the module to the dock, then along the shipping lanes
- 16 total pack stations, two at each of eight positions, fed directly from the conveyor line

This reduced walking, manual handling, and bottlenecks near shipping while improving throughput consistency.

Expansion Ready Design and Phased Transition

Designed to Grow

From day one, the system was designed to expand with NEFCO's growth.

The pick module can accept a future third level and can be extended in length. A large open bulk storage area can be converted into additional pallet or cantilever rack as demand grows.



Phased, Low Risk Transition

LD Systems executed a staged move that kept NEFCO operating while shifting into the new facility.

Key steps included installing and approving new racks at the new site first, completing the pick module before dismantling critical shelving at the old building, moving and reinstalling existing racks as inventory transferred, and bringing conveyors online after core storage and picking operations were stable.

This minimized downtime and avoided a high risk, all at once cutover.



CONCLUSION

NEFCO's New Albany operation is now supported by a modern distribution environment designed for higher volume, improved safety, and long term scalability.

LD Systems converted an empty facility into a fully functional, growth ready distribution center with high capacity pallet and cantilever storage, a two level pick module that centralizes each pick activity, and integrated conveyors feeding 16 pack stations.

With a phased transition that maintained service throughout, and expansion paths built into the layout, NEFCO is positioned to support projected growth through 2030 with significantly more capacity, higher throughput, improved ergonomics, and a clear plan for continued expansion.