



# Designing for distribution.

IET worked with Mueller Industries to develop a new facility layout for physical distribution operations that consolidated multiple sites into one location.

## The Customer

A commercial and residential building products manufacturer

## The Challenge

IET was selected to ensure overall efficiency of put-away / pick / pack / ship operations while minimizing capital costs associated with facility expansion, storage, and material handling equipment.

## The Solutions

First, IET identified all active SKU's and planned inventory levels. Storage assignment rules were developed based on SKU shipping activity and specific client requirements. Four design alternatives were evaluated for carton-packing operations using carton and pallet flow equipment to measure worker productivity. IET evaluated 3 design alternatives for surplus pallet storage utilizing high-density racking and NAVNA lift truck technologies. Layouts were proposed to maximize utilization of the current facility with and without expansion. Staffing requirements were then estimated based on labor standards developed using pre-determined time study techniques. IET prepared budgetary cost estimates for material handling and storage equipment and facility modifications. IET worked closely with the client's management team to obtain buy-in on all critical assumptions.

IET demonstrated that all outside facilities could be consolidated into one existing distribution center only by reducing overall planned inventory levels. IET assisted the client in developing rules for storing products in the proposed facility and provided the information needed to perform a detailed cost / benefit analysis on the recommended design. In addition, total pallet storage capability in the current facility was increased by 25%.

**"IET has been a dependable source of engineering support for us in the past and we know we can call on them to help us with projects of all sizes."**

**Company President**

**iet**

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How can IET help you?

Any way you need us to.

Productivity

Current production standards

Current production performance

Detailed reasons for variances

Detailed plan for improvement

Goal-setting, accountability

Capacity planning

Key capital resources

Direct and indirect labor

Salaried personnel

Facilities

Support

New manufacturing

Detailed process map

Layout

Facilities

Labor

Support

Indirect labor design

Standards

Material handling

Supervision

Maintenance

Plan for improvement

Total value analysis

Make vs. buy

Site selection

Consolidation

Vertical integration

Horizontal integration