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MANUFACTURING

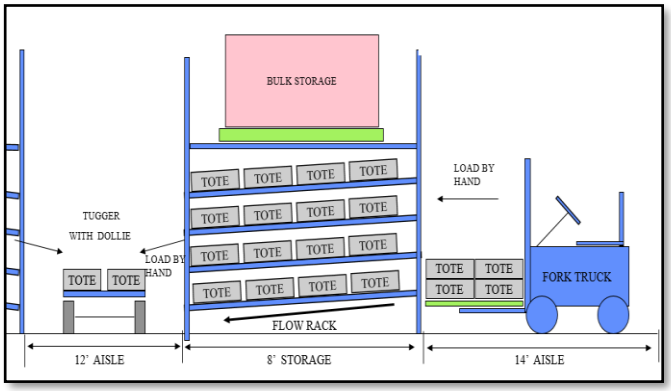
DESIGN SYSTEMS, INC.

Manufacturing Engineering & Consulting

Material Flow Analysis: Impact of Production Increase
Automotive Engine Manufacturer

Project Description

A major automotive engine manufacturer approached Design Systems, Inc. (DSI) to conduct a plant wide material flow analysis and study the impact of adding two extra production lines within the current facility. The goal of the project was to determine the effect of increased production on the storage space, dock utilization and overall material flow across the plant. The management also wanted DSI to generate alternative concepts to maximize the line-side storage efficiency.

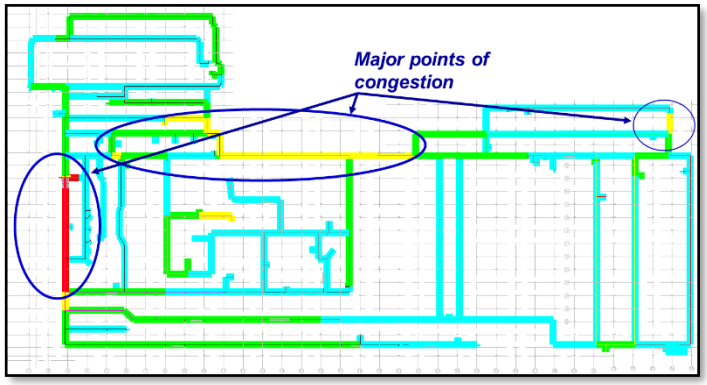


Client Objectives

- Perform a plant wide storage analysis, dock analysis and factory flow analysis.
- Compare the estimated capacity requirements to the existing storage.
- Optimize the material flow to minimize travel distances and reduce aisle congestion.
- Calculate the additional facility and equipment requirements.
- Develop alternatives of equipment for line-side material display

PROJECT OUTCOMES

- Determined that an increase of approximately 19,000 sq. ft. of storage space would be required due to the addition of production lines.
- Identified that 1 additional shipping dock is required to support the future production based on dock capacity analysis
- Recommended a decongested material flow strategy to reduce part travel distances up to 93%
- Generated multiple line side display alternatives to accommodate maximum storage in minimum floor space.



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