



# A Triple Crown Event

DISTRIBUTION, TECHNOLOGY & SUPPLY CHAIN



## The Foodservice Distribution CONFERENCE & EXPO



**The Foodservice Distribution  
CONFERENCE & EXPO**  
OCTOBER 7-9, 2007  
LOUISVILLE, KY



# WAREHOUSE BEST PRACTICES FOR RISING STAR INDEPENDENT DISTRIBUTORS (\$85 MILLION AND UNDER)



**Presented by:**  
**John McGlasson, VP Industrial Engineering**  
**Food Tech, LLC**





- What are the cutting edge food industry practices?
- What are the basic building blocks for strong warehouse efficiencies
- What Layout features need to be in place to go “to the next level?”



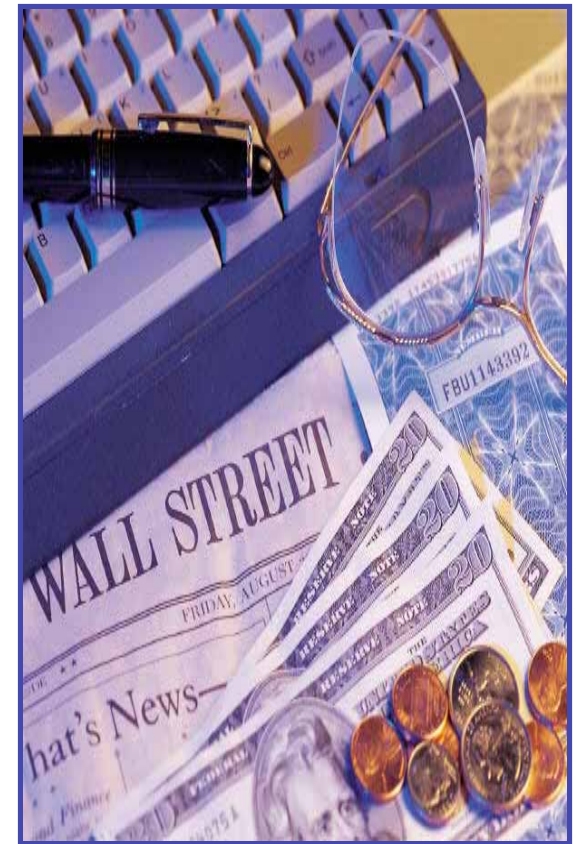
# “Big Picture” Issues & Practices



# Operational Overview Questions?

Is money being “left on the table” due to...

- Obsolete facility practices?
- Survival Tactics?
- Incorrect facility utilization?



# What's to gain with simple remedies...?

- Increased Profit
- Safety
- Product Quality
- Ability to better serve existing customers
- Employee retention and quality of life
- Ability to accommodate new business



# Is the facility the correct size?

General rules of thumb:

- \$10M annual sales per refrigerated shipping door?
- \$1M annual sales per 1,000 Square Feet of Warehouse



# Dock Issues....

- 34 Degrees
- Sufficient Staging

35' Acceptable  
40'-60' Ideal



# Fixed slot item locations

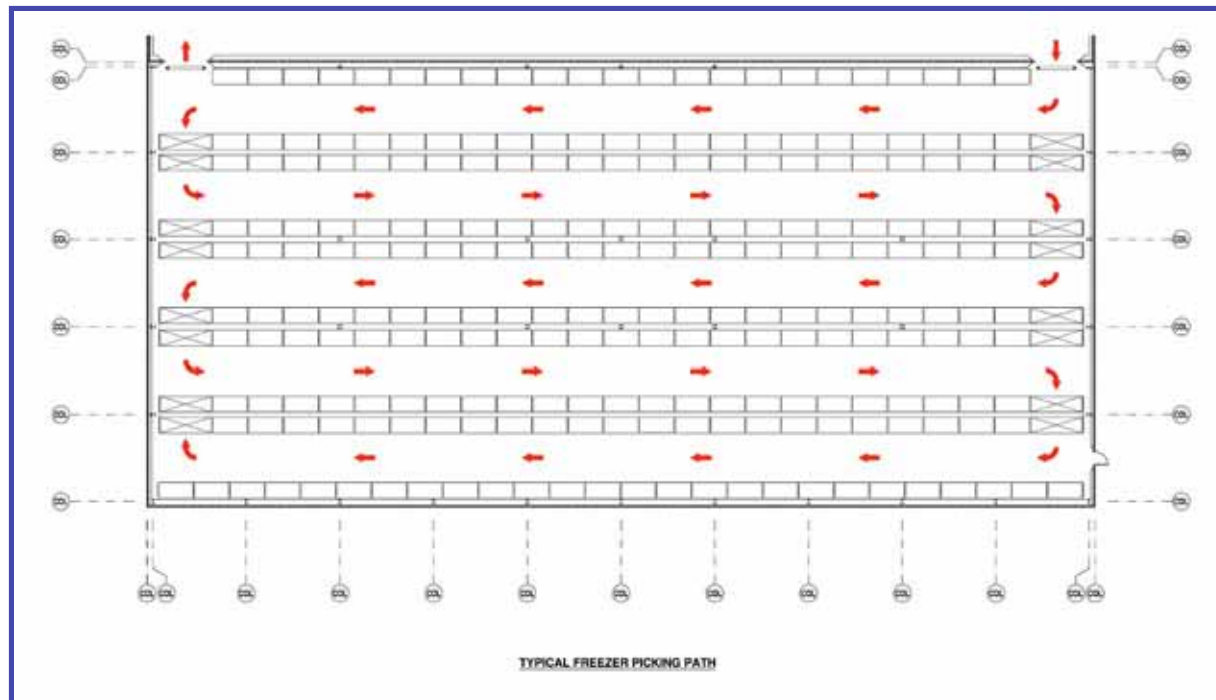


# Double pallet jack selection



# Determined selection path – Continuous selection

- Ability to pass
- Directional Travel

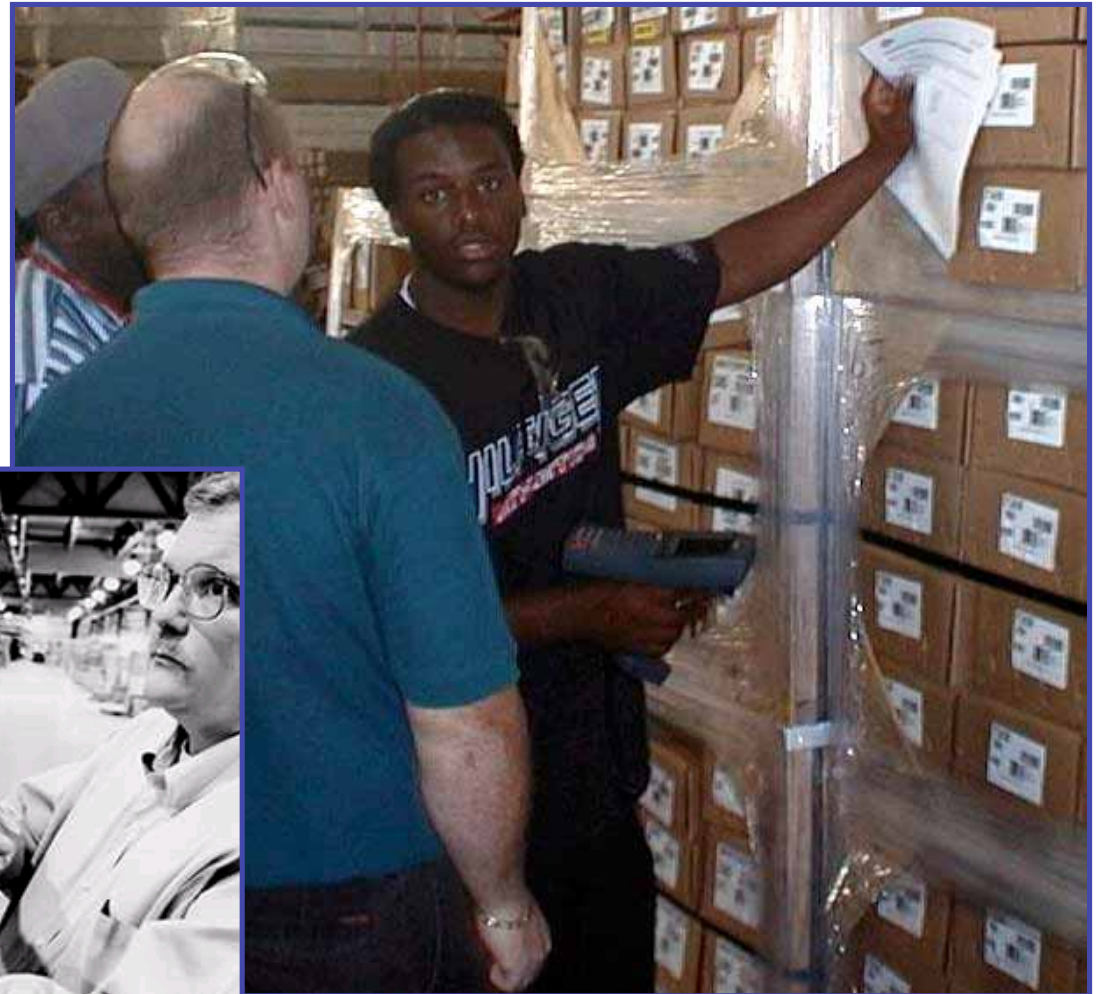


# Detailed Case Labels

- One case, one label
- Assignment Labels
- Predetermined 2 – Pallet Orders

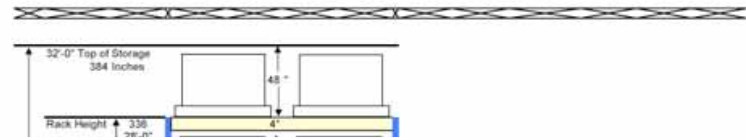


# Load audits

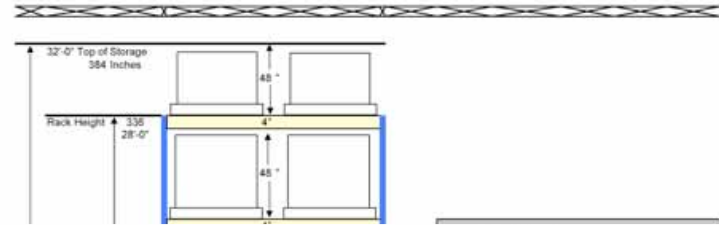


# Volume appropriate slotting

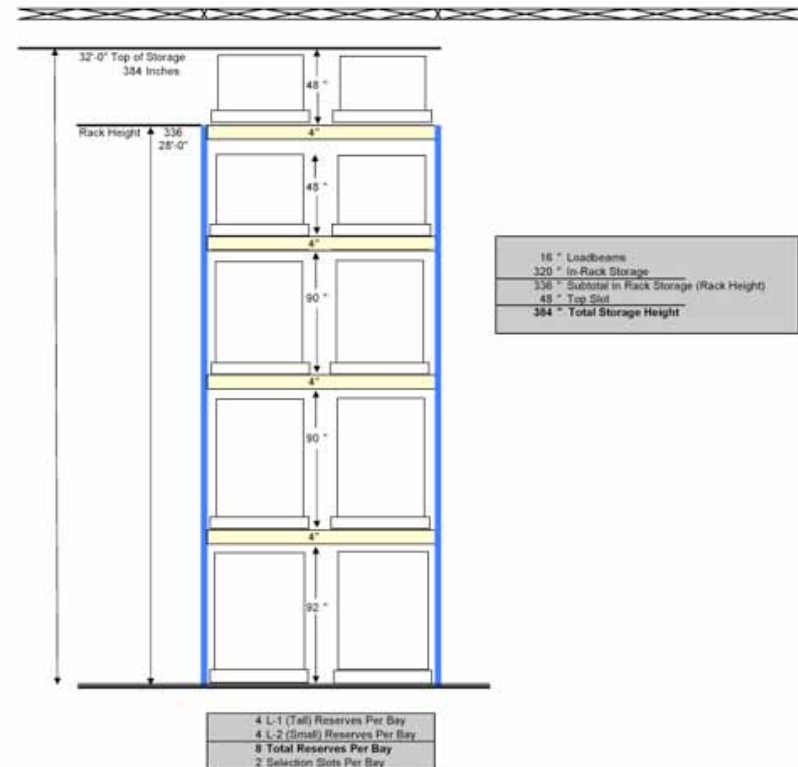
**Proposed Shelf Rack Elevation**



**Proposed L-2 Rack Elevation\***



**Proposed L-1 Rack Elevation**



# Selection LOCATION Types

- Conventional selective rack
- 2-High Selection Rack
- Hand stack Shelf
- Carton flow rack

# L-1 SELECTIVE Rack



- Greater than 60 cases per week movement
- Available for multiple pick facings  
*(over 100 cases per week)*
- Up to 100-inch slot height

# L-2 SELECTIVE Rack



- 20 – 59.9 master cases per week movement
- 4 items per selection bay
- Up to 50-inch slot height

# L-3 PALLET Rack



- 6 – 19.9 master cases shipped per week
- Typically 1 week supply in selection slot
- Selection location capacity can often eliminate need for reserve location

# CARTON Flow Rack



- Can select full or cut-cases
- 3.0 – 5.9 master cases shipped per week
- Consumes double deep bays for 8 ft deep shelf
- Usually limited to 5 levels with 6 locations per level resulting in 30
- Easier to reach upper and lower levels since cases flow to the front
- Guaranteed FIFO as locations are topped off from reserve or new receiving

# HAND Stack



- Inventory stored on wire decks
- 1.1 - 2.9 master cases shipped per week
- Little inventory in forward pick
- Usually limited to 5 levels with 6 locations per level resulting in 30 locations per bay
- Rules must be in place to ensure rotation
- Can substitute ½ deep front loading case flow for shelving

# Tote Rack



- Best For “Cut Case” Items
  - ✓ Utensils
  - ✓ Uniforms
  - ✓ Gallons
  - ✓ Spices
- 2 SKU’s Deep
- +-75 SKU’s Per Bay
- Items can be placed in totes at point of receiving for reserve storage

# STEP Shelf



- Inventory stored on subdivided plywood deck
- 0 – 1.0 master cases shipped per week
- Minimal inventory in forward pick
- Each shelf has 6 locations wide x 3 locations deep resulting in 18 locations per level
- 60 items per bay @ 5 levels high (maximum)
- Best when combined with hand stack locations above and selective rack below in the same bay
- Easy to reach all locations when configured in conjunction with L-2 rack

# Case STUDY

Selection Slot Capacity  
Average Cases

**Ambient Warehouse Slotting & Design Year Selection Slot Capacity**

Climate	Master Cases Shipped Per Week	Current Active Items	Selection Slot Type	Selection Items Per Bay	Pallet Rack		Facility Item Capacity	Average Cases Shipped Per Week
					Bays Required	Bays Provided		
Ambient	0 - 1.0	1,354 49%	Step Shelf	60	23	34	2,040	571 3%
	1.1 - 2.9	284 0.1	Shelf	24	12	20	480	568 3%
	3.0 - 5.9	460 17%	Flowrack	24	19	24	576	1,760 11%
	6.0 - 19.9	477 17%	L-3	6	80	120	720	4,923 29%
	20.0 - 59.9	157 6%	L-2	4	39	80	320	4,866 29%
	60.0 - 99.9	28 1%	L-1	2	14	50	100	2,011 12%
	Greater Than 100	12 0.4%	L-1, 2 facing	1	12	29	58	2,045 12%
<b>Total</b>		<b>2,772</b>			<b>198</b>	<b>357</b>	<b>4,294</b>	<b>16,744</b>

# Order selection standards (non-system based)

**(\$\$) x (# cases)**



A close-up photograph of a computer screen displaying a spreadsheet. The spreadsheet contains numerical data, including values like 100,000, 10,000, 75,000, and \$205,000. The text is slightly blurred, suggesting a shallow depth of field. The background is a light blue color, and the foreground shows a dark green surface, likely a desk or part of the computer monitor.

100,000	100,000
10,000	10,000
10,000	10,000
75,000	75,000
\$205,000	\$205,000
-200,000	-200,000

# 2 Climate Delivery

-10 degree Nose of Trailer  
Side Door  
Frozen & Meat

34 degree  
Ambient Items  
Refrigerated items  
Trailer Curtains

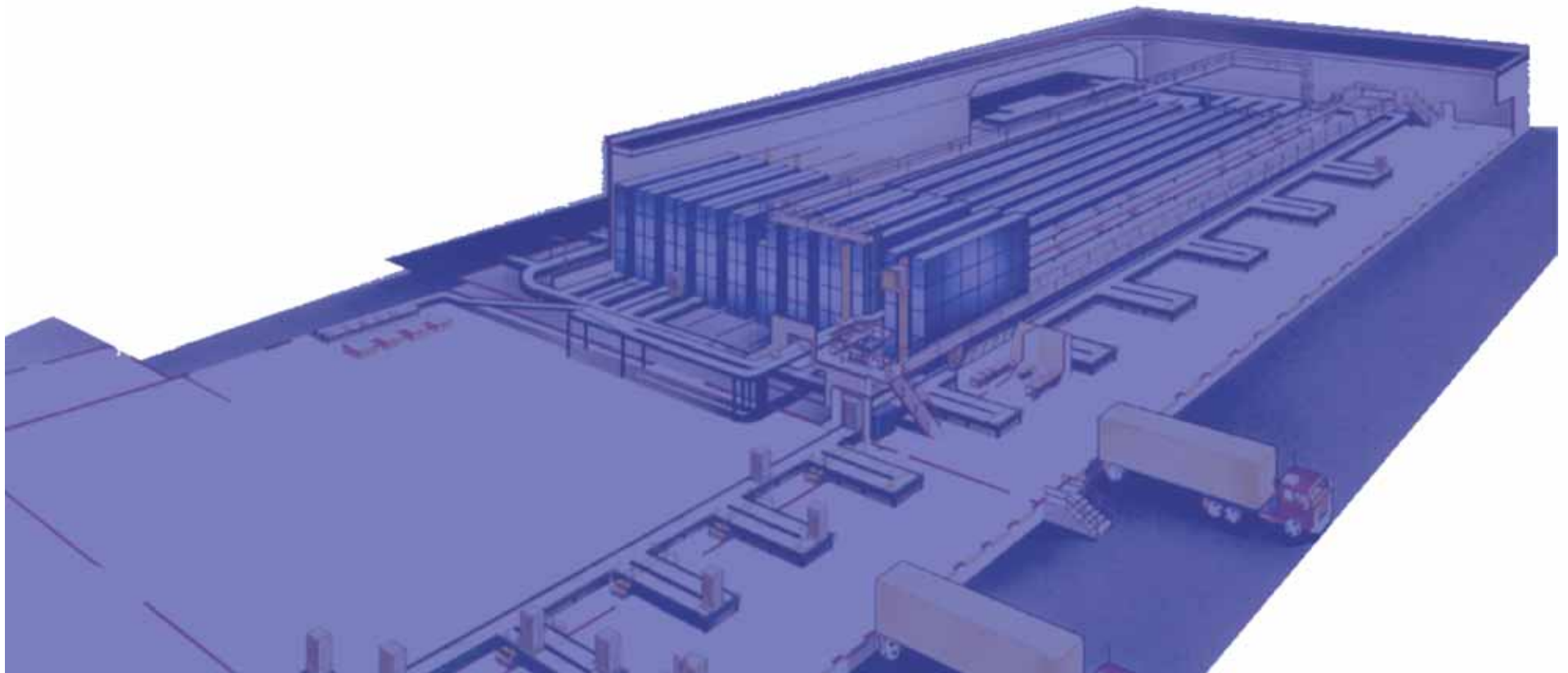
# Trailer Curtain



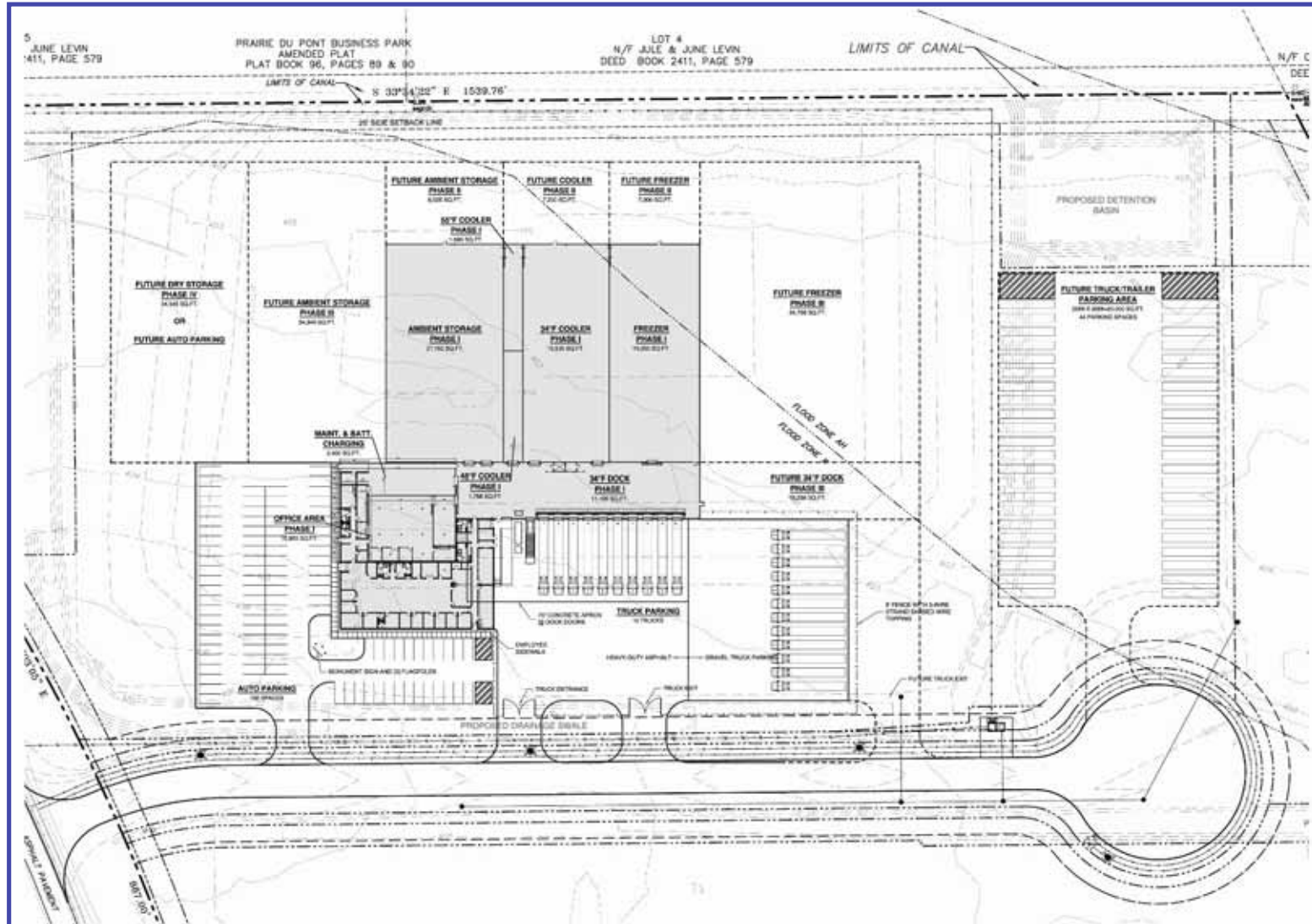
# Technology to Consider (sam to give presentation on this part)

- WMS
- Voice Selection
- RFID
- Labor Incentives
- Dynamic Truck Routing

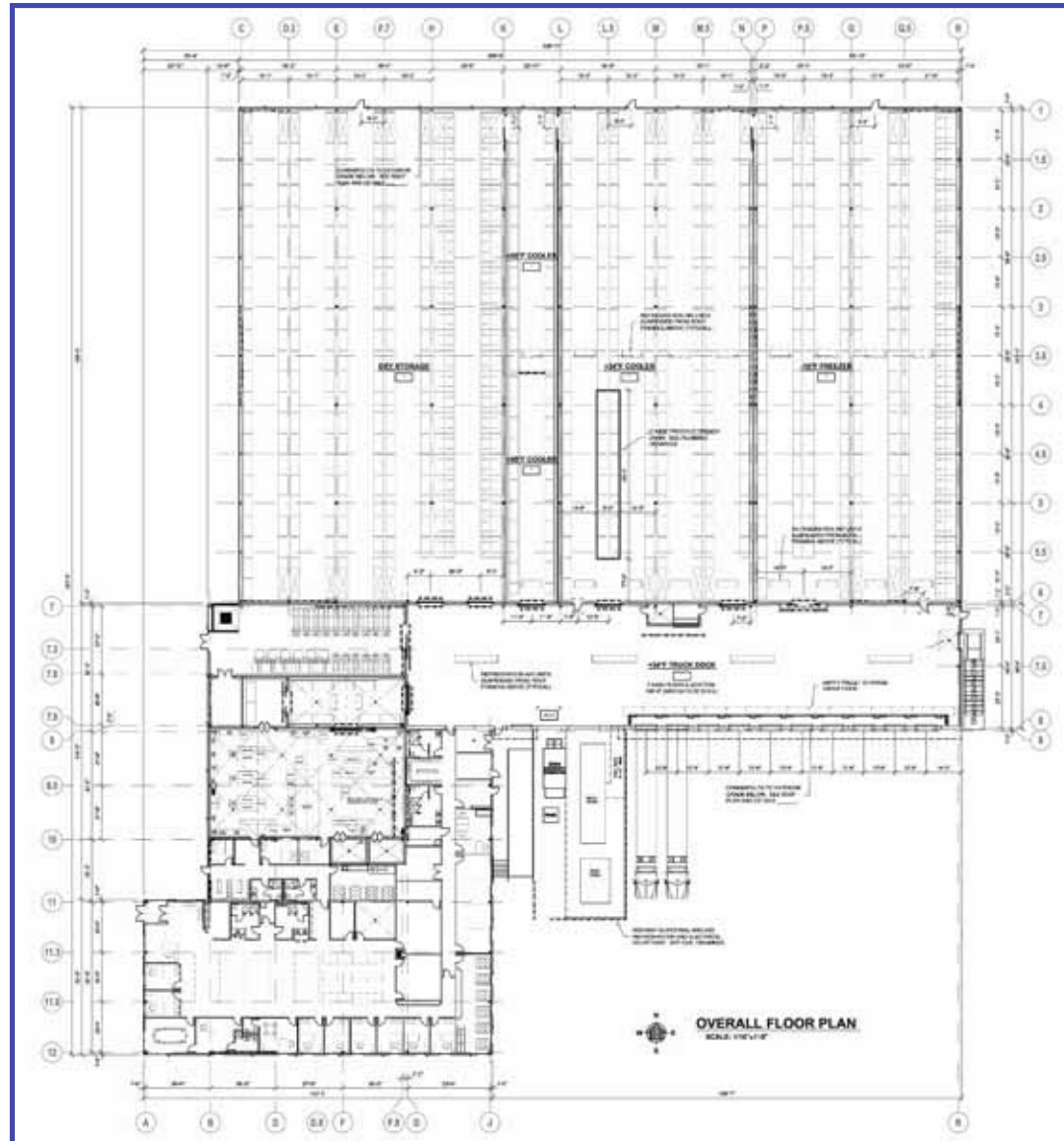
# Design Trends



# Foodservice Site Plan



# Foodservice Floor Plan



# 34 Degree area open to dock



# Vertical Hydraulic Dock Levelers



# Sanitation Curb



# Panel Curb



# Door Protection



# Office and Employee Amenity Area



# Check List

- Productivity Benchmarking/Operational Efficiency Audit
- Utilization of Available Technology
- Facility Audit
- Energy Utilization Analysis
- Plan for the Future



# Comments / Questions?

John McGlasson

Vice President, Industrial Engineering

Food Tech, LLC

Phone (800) 880-0118

[jmcglasson@foodtech.com](mailto:jmcglasson@foodtech.com)

[www.foodtech.com](http://www.foodtech.com)

