I 1.05- NBU Facility Layout Optimization

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The rising STAR *of Texas*

NBU NEW BRAUNFELS UTILITIES

Problem Statement

- There are areas of the yard occupied by partially used cable spools.
- There are also parts returning from the field that require testing or rework that take up space and constrict the aisles.
- Crews have issues navigating the narrow aisles of the yard and at times even cause damage to inventory or other assets in the process.

Problem Purpose

The purpose of this project will be to optimize the current facility layout to allow for the safe and efficient movement of the operation teams in the yard. We are evaluating on- hand inventory levels to ensure waste is limited by stocking no more than what is necessary. Both goals will require processes to be defined for and followed by the operations and purchasing teams. What is developed as a part of this project will then be replicated when developing the new facility and will minimize the area needed for the current stock levels and allow for the projected five percent growth YOY going forward.

Problem Objectives

- Optimize the current facility layout to ensure that utility vehicles are allotted the 50' minimum turning radius.
- Minimize inventories to a level that will save NBU money on holding cost while still allowing them to complete all necessary work orders.
- Develop operation processes that will create a base level of operational development.

Project Metrics

Objectives	Relative Weight	Metric
1. Facility layout optimization	0.60	Reduce the percentage of total space being occupied by both necessary and unnecessary inventories in the yard.
2. Optimization of inventory levels	0.30	Reduce the total holding costs of current inventory levels.
3.Operation processes to develop and sustain results	0.10	Increase the percentage of the to tal number of employees trained to follow the proposed improvement procedu re.

Methodology

DEFINE

- Problem Statement
- Problem Objectives
- Statement of Work

MEASURE

- Compile a list of parts for Inventory
- Inventory Model
- Facility Layout Measurements

ANALYZE

- Identify Constraints within the Inventory
- Identify Constraints within the facility layout

IMPROVE

- Improve Processes for Inventory
- Optimize Facility Layout
- Implement new processes within the yard

CONTROL

- Using our Metrics as reference, one can differentiate change within the improvements

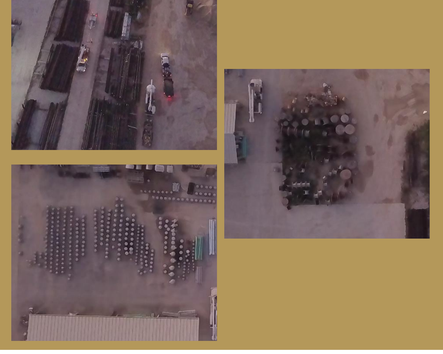
Measure

Inventory

- Compiled a list of parts contained within yard.
- Of those parts, determined which impede traffic the most
- Determined demands, prices, lead times, area, and ordering for each of the parts.

Facility Layout

- Collect data on vehicle length, width, and turning radii.
- Collect data on total yard area, paved yard area, yard area occupied by inventory, and aisle widths.



Analyze

Inventory

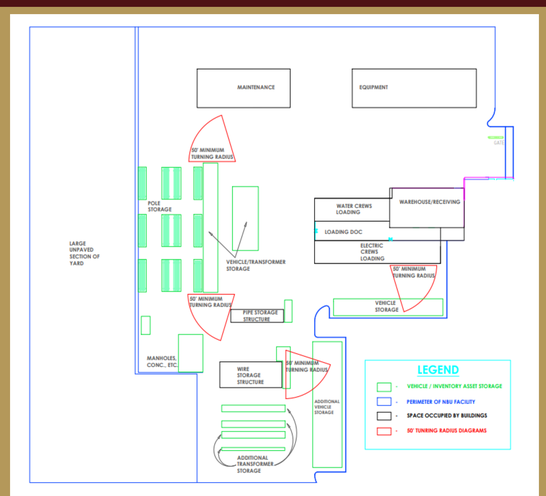
- Evaluate whether current on hand inventory is reasonable based on demand levels and lead times.
- Based on data collected in Measure phase, determine current overall cost based on holding cost and area occupied.

Facility Layout

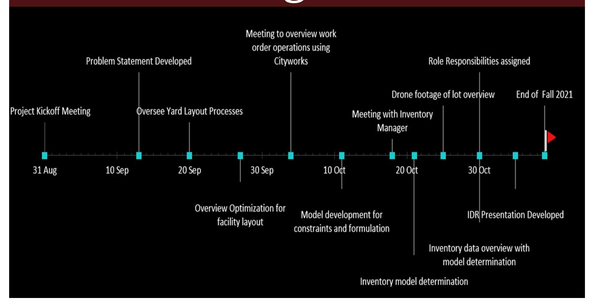
- Certain items need to be stored under shelter or on pavement. Adjusting the storage location of these items would require moving structures or additional paving.
- The location of structures in the yard in relation to the aisles will have to accommodate the maximum swing radii of the fleet.

Processes

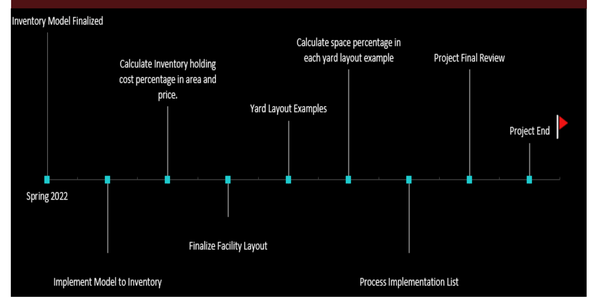
- New processes will be developed to control traffic flows, advise storage in the lot, and SOPs that would accompany the processes introduced.
- Human factors will play a role following the implementation of these new processes. There will be traffic signage for team members to adhere to as well as instructions related to the pulling of partial spools of material



Progress



Future Plans



Team

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