Plant Flow Original Building

Overview
TMP Manufacturing, a producer of urethane panels used to build walk-in coolers, is looking to improve the process flow through their building. They currently operate in a 115-year-old, 105,000 square foot facility that is quickly becoming obsolete. While they have adapted their process to fit their building’s unique characteristics, they are looking for more ways to improve the flow through the building. There is a problem within the building of storage of the panels that are already made causing the workers to be moving panels consistently.

Objectives
- Improve material flow through current facility
- Decrease the number of times product is being moved
- Have material flow in a single direction
- Calculate the return on investment for the current facility

Approach
- Did preliminary research on the company when we were assigned
- Visited the plant site and talked with the sponsor
- Got his input on what he wanted and what we could and could not do
- Observed the overall process of the plant, took pictures
- Obtained layout of the plant and worked as a team and determined the flow through the plant
- Visited again and collected data on times for each processes and change over times
- Created an ARENA model of the flow through the plant
- Created a VSM of the current and later on, modified plant
- Determined what the problem was and came up with possible solutions
- Drew current and modified layout on SolidWorks
- Able to create more storage and improve the flow through the plant

Outcomes
- Limited the congestion within the plant
- Work flow through the plant from start to finish was enhanced
- Heightened the efficiency of the process and increased the safety for workers and the panels
- Increased available storage by 5,554 square feet
- Panels become more accessible
- Increased throughout by 39 panels per day

<table>
<thead>
<tr>
<th>Modification</th>
<th>Space Added</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasket Tables</td>
<td>20' x 30'</td>
</tr>
<tr>
<td>Stretch Wrap Conveyor</td>
<td>40' x 57'</td>
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<tr>
<td>Shed Expansion</td>
<td>30' x 51'</td>
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<tr>
<td>Shed Construction</td>
<td>22' x 52'</td>
</tr>
<tr>
<td>Total</td>
<td>5,554 sq. feet</td>
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