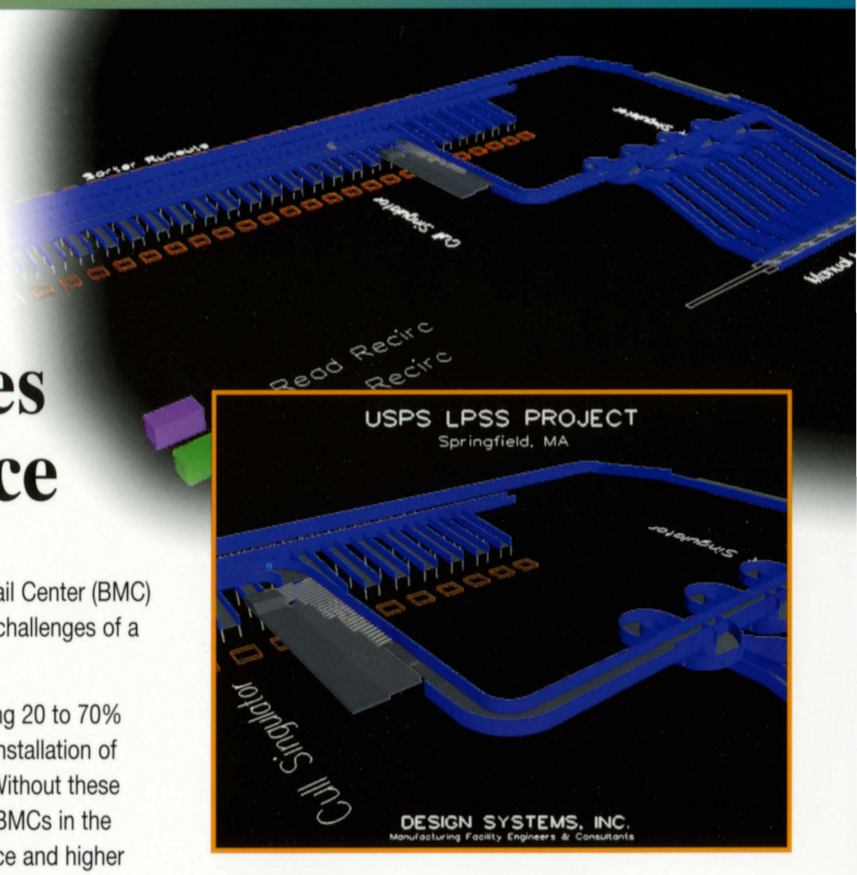
MATERIAL HANDLING SYSTEMS

**PROJECT**

# Large Package Sorting System

**CUSTOMER**

# United States Postal Service




Like all USPS processing plants, a Bulk Mail Center (BMC) must use its resources wisely to meet the challenges of a changing mail processing environment.

Presently, package piece count is increasing 20 to 70% annually, prompting the BMCs to request installation of a Large Package Sorting System (LPSS). Without these systems, package volume will overwhelm BMCs in the near future, causing a degradation in service and higher costs due to an increase in manual processing.

The LPSS operates within BMCs and other USPS mail processing facilities to sort large parcels. Systems include a sorter and equipment to deliver and take away product from the sorter. The configuration of the system is **site-specific** depending on the space availability, package count, and number of distributions required.

These are the important points relative to the LPSS project.

## *Flexible Model for Evaluating LPSS Systems*

The simulation was constructed with distinct modules, such as singulator, scanner, etc., so that different configurations could be easily modeled.

If different configurations are modeled, floor space requirements may be more accurately quantified after determining the effectiveness of the new system.

## *Package Sort Plans*

The simulation model was tested using one sort plan. To optimize the number of runouts, changes must be made to the sort plan and the staffing of the runouts. Alternatives include:

- Combining low volume runouts and having multiple pallets at one runout.
- Splitting up high volume runouts to ease workload and minimize "full" conditions.
- Using multiple operators at single high volume runouts.

## *Overall*

The highest impacting deficiency in the LPSS system today is the sweep operation at the end of the runouts.

The uneven distribution of packages to these runouts decreases sweeper utilization, and increases packages sent to the mis-sent runout, which is less efficient than the regular runouts. Optimizing the sort scheme will correct a large part of this problem.

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