



thespeedchallenge

Sponsored by Diamond Phoenix

On a caffeine rush

What started as a small coffee shop has turned into a multi-channel business satisfying the tastes of coffee connoisseurs near and far.

TUCKED AWAY IN THE RUGGED HILLS OF VERMONT, SOME OF the world's finest coffee can be found. Green Mountain Coffee Roasters is a small, but fast-growing producer of multiple blends of gourmet coffees. Just a few years ago, the company faced distribution bottlenecks at its Waterbury, Vt., production facility due to increased volumes.

"Our pride came from roasting coffee, but as we grew, we realized that distribution also had to be a strength for us," says Jason King, director of facilities and engineering.

To meet an annual growth rate of between 15 and 20 percent, Green Mountain chose to build a complex distribution center in a small 56,000-square-foot area adjacent to the production facility. Its new DC serves Green Mountain's multiple distribution channels, which include wholesale, mom and pop grocery stores, large chains, convenience stores, and a consumer-direct channel through Internet and catalog sales. Such a wide customer mix requires a very flexible facility.

A major challenge was to design for growth while optimizing processes for current volumes. Green Mountain turned to Diamond Phoenix for the design expertise it required. Why select a company best known for quality carousels when no such storage is actually used in the building? Green Mountain found in Diamond Phoenix a company that is very good at design but also small enough to give the project the detailed attention Green Mountain sought.

"Their key people have experience at integrating large projects, so between that and the attention they give us, we have the best of both worlds," says King.

"They have been very flexible and responsive to our challenges, as well as changes to the design," adds Chris Bolduc, distribution manager.

The system design is based on dynamic routing and allocation of materials, resulting in a compressed facility layout. Working

together, Green Mountain and Diamond Phoenix developed a multi-phased, scalable approach that spreads the project over several years as growth dictates and capital becomes available for investment. Right now, the project is in Phase III out of 10 planned phases. Diamond Phoenix uses the same staff for each phase, which Green Mountain says provides a great deal of consistency and familiarity with the company and the project.

A prime example of the phased approach can be found in the design of the high-bay storage used for housing full pallets and

items that replenish other picking areas. The initial budget did not permit full automation of this area, so it is being completed as needed. Currently, turret trucks work in two of the three aisles, while the third aisle features an operator-controlled crane. The next phase, to be completed within a few months, will replace one of the turret trucks with a fully automated crane. A second automated crane is planned for next year.

Elsewhere in the building, the design incorporates pick-to-light for selecting full cases and split-case items. Workers pick full cases directly onto conveyor belts that run through pick tunnels. An additional pick tunnel is also slated for next year.

The split-case items are selected into totes and then sent to specialized pack areas, where the direct-to-consumer goods are readied for parcel shipment. A value-added processing area adjacent to the pack lanes also grinds coffee to customer specifications.

Currently, the facility handles some 25 million pounds of coffee annually, but it will eventually distribute nearly 50 million pounds when it reaches its full capacity and all phases are completed.

In the meantime, the three-shift facility continues each day to brew the perfect cup to the delight of coffee lovers everywhere.



Full cases of coffee are selected in pick tunnels using pick-to-light technology. These are placed onto conveyor belts that run through the tunnels.

For more information on Diamond Phoenix, call 888-233-6796 or visit www.diamondphoenix.com.

To watch a three-minute video of operations at Green Mountain Coffee Roasters' Waterbury, Vt., distribution center, go to www.dcvelocity.com and click on The SPEED Challenge.