



Bigger & Better

Expanding Your Precast Plant

Expecting the unexpected and crafting a **well-developed plan** are crucial to a **successful** plant expansion.

By Shari Held

Inspiration can come from many sources, from the whimsical to the philosophical. But when it comes to expanding a precast concrete facility or building a new plant, practicality and optimism rule.

“You can’t just erect a building because you want it,” said John Lendrum, president of Ohio-based Norwalk Concrete Industries. “You have to have a demonstrated need for it.”

In 2009, Norwalk Concrete first considered expanding, but

the recession put a halt to those plans. By September 2015, insufficient space and a “gut feeling” that added capacity would grow the business drove the company to reconsider. But the decision wasn’t finalized until the metrics justified the expense of adding 17,600 square feet to the existing facility.

“We also hoped to increase our operational efficiencies by being able to move like products together and lower our overall manufacturing costs,” Lendrum said.



Norwalk Concrete's expansion allowed for the addition of four overhead cranes, new coring machine capacity, new forming equipment and a solar energy field.

Increasing capacity to meet current market demand or to spur future growth – like the situation at Norwalk Concrete – is the common denominator in many plant expansions.

Crest Precast in LaCrescent, Minn., decided to increase its original plant by 14,500 square feet.

“The primary inspiration for us was we were passing on bidding work – even from repeat customers – to the tune of about 15% of annual volume,” said Steve Mader, president of Crest Precast.

A desire to increase production of its storm shelter and absorptive sound wall product lines ranked high on Crest Precast’s list of reasons to expand. There was also a safety issue.

“The space was quite cluttered and our production workers needed more room to walk around,” Mader said.

In Washington, a lack of space combined with increasing opportunities in the marketplace inspired Columbia Precast Products to build a new plant. In early 2017, the company will move from a 4-acre facility in Washougal to a 23.5-acre facility in Woodland.

“We need a lot of space to stage and stock our products because they take up a lot of real estate,”

said Ron Sparks, founder and general manager of Columbia Precast. The company typically stocks up to 8-foot-diameter manholes and retaining wall systems.

The new, 51,000-square-foot plant will give Columbia Precast ample space to install a dry cast system, which will increase production capabilities.

MORE THAN EXTRA SPACE

As part of its expansion, Norwalk Concrete also added four overhead cranes, new coring machine capacity, new forming equipment and a 135-kilowatt solar energy field.

“We added the solar field because we were able to show that economically, with the tax consequences, it just made sense,” said Lendrum, noting that green product lines make up an increasing portion of the company’s work.

The company hired a specialty contractor to install the solar energy field

“We’ve done a good job of thinking our way through the build and what we need and what we don’t need. I think it’s going to be a great opportunity for us.”

– Ron Sparks, *Columbia Precast*

and separated that out of the budget for the building envelope. Costs were reduced by casting the precast building panels and the foundation in house.

Crest Precast’s plant expansion design was based on its purchase of two used overhead cranes. The crane area is 42 feet tall and 65 feet wide, allowing workers plenty of room to operate.

“A modern precast plant needs a huge headroom,” Mader said. “All our buildings have at least 30 feet under the hook for handling products.”

Crest Precast also added an inside aggregate storage room. According to Mader, this will allow the company to expand volume during the winter. The company manufactured the precast insulated wall panels – used in the sidewalls – for the expansion.

“We have a nice, clean work environment that’s going to last a lot longer than a metal stud building,” Mader said.

Columbia Precast designed its plant with an outlook toward expanding production capacity and product lines. It can now manufacture up to 12-foot-diameter manholes, three-sided bridge units and retaining wall systems.

“Basically everything is on a bigger scale,” Sparks said. “The crane-way is wider and longer and we increased the weight capacity we can handle.

By moving to a new 51,000-square-foot plant in early 2017, Columbia Precast will significantly increase production capacity.



Those things don't sound that glamorous, but they really make a huge difference in our business. That's going to allow us to be really efficient."

In addition to two 20-ton cranes, two 10-ton cranes and a new batch plant, the new plant will feature a dry cast system that will enable Columbia Precast to cast and strip product every four minutes.

"In our case, it's probably going to increase our production capacity five times or more," Sparks said. "That's pretty significant. It will allow us to respond to demand in the marketplace."

Sparks estimates it will take two to three months to phase out production in the old plant while getting the new plant up to speed. The transition will take place in the winter – the slowest time of the year for Columbia Precast.

A LEARNING EXPERIENCE

Every project is different. No matter how many expansions you've got under your belt, surprises will arise. For Lendrum, it was regulatory hurdles and red tape related to the installation of the solar energy field.

"Getting that up and running put us about 120 days behind," he said.

For Mader, it was the cost of upgrading to 1,000-amp electrical service, which came in about 50% more than his original estimate. Sparks explained that being assertive on the front end

can be effective, as it may prevent a one- or two-week delay from evolving into a much larger problem.

Mader agreed.

"It took longer to build than we expected," he said. "We should have pushed the contractors a little harder."

RECOMMENDATIONS TO TAKE TO HEART

Each of these precasters has advice for fellow precasters considering expansion. Lendrum stressed the importance of planning.

"Plan how the disruption is going to impact your existing business," he said. "Driveways and production doors will be blocked. You have to give some thought to that."

Other planning challenges include deciding how to operate and train employees in the new facility and determining the optimal location for specific functions and equipment. Lendrum also suggests not putting all your dollars into the construction project. Instead, allocate part of the budget for unforeseen contingencies and costs not associated with the building envelope.

"And be sure to select a quality contractor who has demonstrated experience and proficiency in the type of structure you're building – especially with an expansion to an existing facility when you're trying to operate in it at the same time you're building," Lendrum said.

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Sparks believes a successful expansion starts with qualifying and hiring a good contractor and vendors.

“That doesn’t always mean going with the lowest cost,” he said. “Each vendor provides varying levels of assistance during the process. You have to compare apples to apples.”

Mader’s best advice: Build tall. He also endorses constructing a plant from precast.

“The taxman doesn’t charge you for height,” he said. “He only charges you for square footage. So build as high as possible. That will enable you to manufacture bigger products like box culverts, water storage tanks and electrical vaults.”

WAS IT ALL WORTH IT?

The answer is a big “yes” from all three precasters. Production in Norwalk Concrete’s new facility began in March 2016. The company has also cut production hours for several product lines and added capacity with its new forming equipment.

“We are very excited to finally get this building in use. I’m positive we’re going to increase our sales by 20% in the next year because of the new floor space.”

– Steve Mader, Crest Precast

conditions and better material flow and workflow. The improved efficiencies have also allowed the company to shave production hours off several product lines. Mader anticipates the company will now be able to add more employees, cutting down on overtime hours.

“We are very excited to finally get this building in use,” he said. “I’m positive we’re going to increase our sales by 20% in the next year because of the new floor space. That’s fast. But this industry moves fast. That’s just the way it is.” **PI**

Shari Held is an Indianapolis, Ind.-based freelance writer who has covered the construction industry for more than 10 years.

Crest Precast’s expanded facility contains indoor storage for aggregate, which will allow for more production volume in the winter.

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