

Cubic Designs Inc.
CUSTOM MEZZANINE SYSTEMS

16770 W Victor Road
New Berlin, WI 53151
www.cubicdesigns.com

800-826-7061
262-789-1966
Fax 262-789-1970

GOODYEAR TIRE AND RUBBER COMPANY

With construction costs at a premium and leased space an impractical solution, The Goodyear Tire and Rubber Company had to find a better way to expand its facility in Sun Prairie, Wisconsin.

Staff engineers at the plant were faced with several expansion problems . . . add a new production line, increase storage, enlarge the testing laboratory, improve product flow as well as make room for a growing maintenance department. After conducting a thorough evaluation of different ways to add space, Goodyear solved each problem by installing six separate custom designed mezzanines in key areas throughout the plant. The mezzanines were designed and manufactured by Cubic Designs, Inc., a Milwaukee, Wisconsin based company.

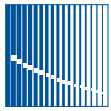
"Initially we explored the possibility of expanding the building," said Ike Okoye, plant engineer at Goodyear who spearheaded the expansion project. "We did a cost analysis to compare using mezzanines vs. expanding the building and found out the latter would cost 3-4 times what the mezzanines would cost . . . for the same footage.

"After the cost analysis was complete, Okoye decided to survey the building interior to see if in fact mezzanines could be utilized without disrupting the current operation.

"We had to pinpoint strategic locations within the plant that needed additional space," said Okoye. "Additionally, we had to determine whether or not a mezzanine would fit in each of those areas."

Okoye did a three-month study of the flow of product and the potential impact the project could have on warehousing, maintenance, and production departments. After meeting with and convincing all department heads and operating personnel on the mezzanine solution, he set out to implement the expansion plan.

- m o r e -



Cubic Designs Inc.
CUSTOM MEZZANINE SYSTEMS

16770 W Victor Road
New Berlin, WI 53151
www.cubicdesigns.com

800-826-7061
262-789-1966
Fax 262-789-1970

Goodyear p2

"I shopped around and found Cubic Designs. I looked at their product . . . the quality was there and the design was good," said Okoye. "Most important was their ability to custom design the mezzanines to our needs."

"It was a risk because I didn't know much about the company," said Okoye. "They proved that the risk I took was worthwhile. The mezzanines were designed the way we needed them and installed on time."

Okoye compared custom designed mezzanines to modular, prefabricated mezzanines but found the latter to be inappropriate. He also considered leasing additional plant space. In the end, the custom design approach and Cubic Designs' willingness to work with Goodyear really made all the difference.

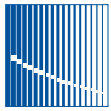
"Leasing isn't cost effective because you still run the risk that every year or two, you might need more space," said Okoye. "Plus, when you start leasing space, you start expanding outside your main facility and that didn't make sense in our situation," he added. "The best thing to do is to look around you and try to maximize the existing area you have . . . explore what's above you."

The first mezzanine system installed at Goodyear was "L" shaped, specifically designed to allow for the addition of a new production line. It was unique because it helped Okoye solve two entirely different problems.

"We wanted to provide additional warehouse space and at the same time make room for a new production line," said Okoye. "We designed the system so the top level could be accessed from a warehouse aisle and the lower level could be used for the new line."

According to Okoye, the warehouse initially lost space when a rack unit had to be relocated during the new line project. The mezzanine, however, allowed for even more warehouse storage space.

- m o r e -



Cubic Designs Inc.
CUSTOM MEZZANINE SYSTEMS

16770 W Victor Road
New Berlin, WI 53151
www.cubicdesigns.com

800-826-7061
262-789-1966
Fax 262-789-1970

Goodyear p3

"When we finished the whole project, the warehouse actually ended up with more square footage than before," said Okoye.

The second mezzanine, which was installed in the production storeroom, doubled the space in that area. A third mezzanine provided new storage for parts used to service electric control panels located in the area. That mezzanine was designed to accommodate future expansion.

"At some point, we plan to relocate the electrical panels in that area on top of the mezzanine," said Okoye. "This will allow us to make better use of the floor space . . . we have that capability built into the current mezzanine," he added.

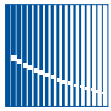
In the end, Goodyear was able to locate mezzanines where they needed space while keeping production equipment close to existing operations. The mezzanine solution proved so successful that Goodyear continued to apply it to other areas of the plant. One mezzanine allowed the company to install a new cleaning station they did not have before.

"During production, we coil hose onto specially designed pans and process it. Then we remove the hose and clean the pans," said Okoye. "We found the pan cleaning operation alone was costing us up to \$20-25,000 per shift per year. I did a cost analysis and determined that a new cleaning station would pay for itself within one year. The problem was where to put it . . . there was no room.

"To make room, Okoye worked closely with the engineers at Cubic Designs to install a mezzanine at the desired location. But that meant relocation heavy pressure vessel tanks on top of the mezzanine.

"The tanks alone weighed close to 6 tons. In addition to that, we needed to relocate a high pressure pumping system on top of the same mezzanine," said Okoye. "I told the engineers at Cubic Designs that I wanted the structure to be very strong with extra safety factors . . . we worked together and designed it. Structurally it is super."

- m o r e -



Cubic Designs Inc.
CUSTOM MEZZANINE SYSTEMS

16770 W Victor Road
New Berlin, WI 53151
www.cubicdesigns.com

800-826-7061
262-789-1966
Fax 262-789-1970

Goodyear p4

The mezzanine is tied into two building support columns. Extra columns were also installed underneath the tanks for added strength.

"By moving the tanks on top of the mezzanine, we were able to create additional floor space for the pan cleaning station. Now we can clean a pan faster and send it back into production while improving product flow."

Goodyear's most recent mezzanine was installed in the company's testing lab where more space was needed for new equipment and storage. The mezzanine increased the size of the lab by one third. The lower level is enclosed to maintain the air conditioning. The second level, however, is open to the plant so parts can be brought in and placed on the mezzanine forklift. Lab technicians can access the second level storage area through a separate stairway.

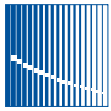
In less than a year, Goodyear installed five mezzanines and a sixth mezzanine has just been completed in the maintenance department. R.J. Bichlmeier is the senior staff engineer at Goodyear, responsible for the maintenance department mezzanine.

"Our plan is to use the top level of the mezzanine to add office space and storage for the maintenance department," said Bichlmeier. "The first level will be used to make room for other maintenance activities and new machinery we have on order."

All told, the Goodyear Sun Prairie plant has gained over 4700-sq. ft. of additional space, for a total cost of \$90-95,000.

"That same square footage would have cost well over \$300,000 if we had expanded the building, and that's not including electrical and plumbing costs," said Okoye. "Even if we could have expanded the building in one area, we would not have fully achieved our objective because we needed space in various locations . . . not just one."

- m o r e -



Cubic Designs Inc.
CUSTOM MEZZANINE SYSTEMS

16770 W Victor Road
New Berlin, WI 53151
www.cubicdesigns.com

800-826-7061
262-789-1966
Fax 262-789-1970

Goodyear p5

"We maximized our dollars to solve various space problems as well as meet growing production demands," said Okoye. "The mezzanines have helped us accommodate our need to get more room out of our existing plant."