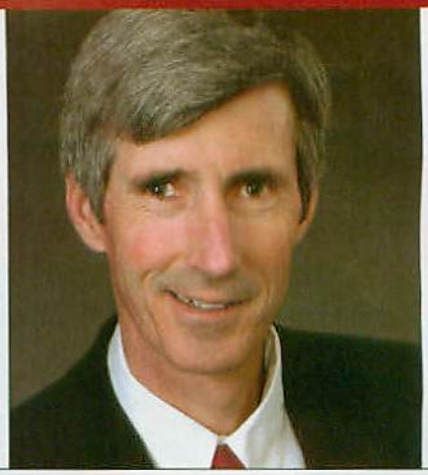
Philip C. LaBerge is senior estimator/
project manager, Panattoni Construction
214-363-0551 x226 • *pcl@panconinc.com*



ECODEV

ISSUES AFFECTING ECONOMIC DEVELOPMENT

by Philip C. LaBerge

Building a Warehouse Without Going Broke

A warehouse construction project is always a major undertaking. Whether you are retrofitting an existing DC or constructing a new one, it is crucial to pay attention to details so your project is done on time and within budget. Here are some tricks of the trade for controlling costs and ensuring a smooth project.

DESIGN AND CONSTRUCTION

■ Typically, 80 percent of warehouse costs come from eight areas: concrete, steel, earthwork, site utilities, roofing, general conditions, fire protection, and design fees. Focus on controlling costs for big items, and don't get hung up on minor expenses.

■ The square-foot costs of warehouses follow a parabolic curve – small buildings are expensive; big buildings are more economical. Building size matters. A 100,000-square-foot DC, for example, is 56 percent more expensive per square foot than a 600,000-square-foot building.

■ If possible, make your warehouse footprint square. Having a square footprint rather than a long rectangle minimizes the amount of tilt-wall panel you need. This reduces costs because tilt-wall panel is typically three times more expensive than floor slab.

■ Spend extra money to include a good deceleration lane and a wide curve at the warehouse's entry drive apron. Your truck drivers will appreciate it.

■ Keep the underside of the warehouse roof deck's highest point less than 40 feet above the finished floor. If it is more than 40 feet above, fire sprinkler requirements change, increasing costs.

■ Time is money. Monitor the design and construction schedule closely so it doesn't slip. Specify to the builders penalties for completing the project late, and incentives for finishing early.

SITE LOCATION

■ Place the building close to the street to minimize the distance between the building and its water sources and sewer lines.

■ Choose a flat site to minimize earthwork. It is expensive to import or export dirt.

THE DESIGN/BUILD TEAM

■ The greatest opportunity for cost savings on a job occurs during the preliminary design stages. Select an experienced design/build team that will optimize your building design.

■ Bid the warehouse project to several top design/builders. Competition is always healthy.

■ Ask for specifics about the field superintendent and project manager assigned to your building. Even at the best construction companies, the individuals working on your job make a difference in the project's quality and timeliness.

MATERIALS

■ Steel prices have increased significantly over the last year because of Hurricane Katrina, and the demand for scrap steel from Asia. *Control this major* cost component with a steel design that is 3.5 pounds or less per square foot.

■ Consider a white roof. White thermoplastic polyolefin roofing now costs about the same as traditional black ethylene propylene diene monomer roofing. The white surface reflects the sun's rays, keeping the building cooler.

■ In a non-air-conditioned warehouse, consider high-volume/low-speed fans to increase air circulation and improve worker comfort.

■ Choose fluorescent lights instead of metal halide lights. The initial cost is higher, but it usually takes less than one year to recoup that cost in electrical savings. And you'll continue to cut costs over the years with a lower electric bill. In addition, you can turn lights off during the day if skylights provide enough light, and use motion sensors to turn lights on and off when triggered by activity in the area. ■