Increasing Material Prices Gouge Construction Industry

By Peter W. van der Schans

Last year, exceptionally high construction material price increases caused problems for the construction industry due to the current economic and construction boom occurring in China. China's rapid growth and tremendous construction activity are still creating shortages in the United States and throughout the world.

Basic economics dictates that, in an open marketplace, prices rise when demand increases or when supply decreases. Demand is increasing exponentially in China, which affects prices worldwide. The increased demand stems from a growth in construction resulting from the country's economic revolution. China is in the middle of the tenth phase of its 50-year plan, which specifies that the construction industry should be promoted, improved and better managed. Other factors increasing China's demand for materials include preparations for the 2008 Olympic Games, construction of the Three Gorges Dam and the construction of thousands of highways throughout the country.

Material demand is also significantly higher in the United States due to a rise in construction activity, related in part to new home construction. Some of the highest price increases have occurred with steel, lumber and plywood, while cement has been in short supply. The graph shows the extent of construction material price inflation over the past 12 months.

STEEL

The construction industry has seen the demand for steel increase and the supply decrease simultaneously. All types of steel have increased in price over the past 12 months. For example, concrete reinforcing bar has risen by 45.2 percent and structural steel has risen by 25.7 percent.

Currently, China consumes about 25 percent of the world's steel supply. Because China is a major player in the steel production market, it can redirect previously exported steel to fill its own domestic demand while reducing the material's availability on the open market. A similar situation is occurring in India, where some suppliers have halted exports in order to meet their own domestic material demands.

While demand for steel has risen steeply, the shortage of coke, used in steel manufacturing, has reduced U.S. steel production. Other factors such as high energy costs, high transportation costs resulting from increased fuel costs, the decreased value of the U.S. dollar and the

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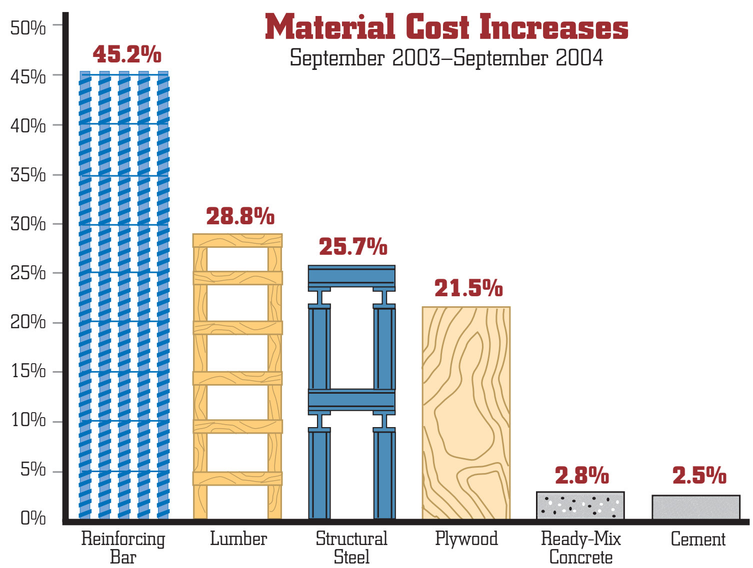
consolidation of steel manufacturers are all contributing to the increased steel prices. In addition, delivery delays have resulted from international shipping lanes being filled to capacity.

The federal government removed tariffs on imported steel earlier in 2004. While this action was expected to lower prices, the effect was negated by the rising demand.



Sources: ENR Cost Reports, September 2004

LUMBER AND PLYWOOD

The prices for lumber and plywood also have risen dramatically over the past 12 months, mainly due to increased residential construction activity in the United States. Low interest rates spurred much of this new residential construction.

Lumber prices have increased an average of 25.8 percent while plywood prices have increased an average of 21.5 percent. Since the start of the fall's hurricane season, repair and reconstruction work necessitated by wind and water damage further drove up lumber prices. These high prices will likely be sustained over the next year or two as the massive reconstruction efforts progress.

CEMENT

Some regions of the country have been hit with dramatic cement price increases, but on a national scale, the average price increase has only been 2.5 percent. The shortage of cement, however, has been widespread. In some cases, con-

crete-mixing companies, which rely on the steady supply of cement, cannot produce concrete fast enough to keep up with demand. The shortage has led to project delays and disruptions as well as increased costs.

In 2003, 20 percent of the U.S. demand for cement was fulfilled by imports. The United States has anti-dumping laws and very high tariffs against Mexico, making imports from that country cost-prohibitive. The length of time to import materials from overseas, as opposed to receiving materials from Mexico, is longer, as it takes weeks rather than days to receive a shipment. The resulting delays can be hard on contractors that need to adhere to a tight schedule.

In addition, because of high activity in Asian markets, particularly China, freightliners are making the majority of shipments to that part of the world rather than to the United States. China is currently consuming approximately 40 percent of the world's cement supply. The country's exceptionally high demand for concrete has allowed it to outbid U.S. buyers on the world market, further reducing availability to the United States.

CHALLENGING TIMES FOR CONTRACTORS

Many of today's construction contracts are lump-sum or unit-price contracts and can take a year or more to complete. Because these contracts are typically based on material prices estimated at the beginning of the project, the contractor can be adversely affected when material prices surge unexpectedly.

Depending on the contract, increases in the cost of construction materials can be transferred from the contractor to the owner. More often, however, the contractor absorbs the increased cost of construction materials. Considering the increased cost of materials and the fact that numerous projects today have slim profit margins, contractors are facing situations where they either make no profit or stand to lose money on a given project.

In addition to rising prices, another major problem is the delayed delivery of materials to contractors due to material shortages. Material delivery delays can be beyond the control of contractors and can delay an entire project. Such delays put contractors at risk of liquidated damages and extended overhead and project costs due to missed project deadlines.

IMPACT ON PUBLIC PROJECTS

Public projects constitute a large portion of construction spending in the United States. Many municipal projects are being delayed because bids are coming in much higher than the budgeted amount. This is a somewhat unique problem for cities and states, because bonds, which are usually for a specific amount, often must be approved by voters. In several recent cases, from the time when a bond was put to a vote and the time bids were requested, material costs increased dramatically. Thus, bids are coming back for much higher than the approved amounts.

At that point, municipalities must determine how to make up the difference, which could mean going back to the voters for more money. This can put projects on hold if voters are unwilling to approve increases in the bond amounts, or if there is simply no additional money available. For example, in South Hackensack, N.J., bids for an elementary school renovation came in at approximately $2.5 million more than the budgeted amount due, for the most part, to increased steel prices. Because voters were reluctant to approve the increase, the project was put on hold.

POSSIBLE SOLUTIONS

Extraordinary material price increases can, as they have in the past year, set in quickly and unexpectedly. In addition, some of these high prices may be here to stay, at least for the near future. Some possible solutions for dealing with increases and high prices include:

1 Incorporate Price Protection Clauses into Contracts (apply bid qualifications)

A contract clause can be the ideal way for a contractor to protect against material price increases. Typically, a price escalation clause will take effect with a price increase more than a certain percentage, around 10 percent, and max out at a percentage of perhaps 80 percent. As a concession to the owner, the clause also may include provisions for reduced compensation should prices fall. Specific language for drafting a contract clause requires consulting an attorney; however, some elements to consider including in a price protection clause are:

- A statement indicating that the contract amount is subject to change, depending on the price of certain materials;
- A specified trigger percentage and maximum percentage;

- A time extension due to material shortages and delays resulting from material shortages;
- A notification requirement for the contractor to inform the owner of delays and requests for extensions or of significant price differences; and
- A specification that proof of price increases or material shortages will be provided in writing from various sources.

2 Lock in Material Prices

In the same way that owners secure the value of a contract with a contractor, a contractor should attempt to lock in construction material prices with its suppliers whenever possible. This is difficult to do for concrete because suppliers have been reducing the time during which their price quotes are valid.

3 Buy Materials as Early as Possible

On projects where it may not be standard practice, if site conditions allow, a contractor should purchase as much steel or other materials as early in the project as possible and store the materials onsite. Buying early is advantageous because the contractor can lock in prices and ensure an adequate supply of materials for the project, even if a market shortage occurs later in the project.

4 Delay Construction

Because of the volatility of material prices, an owner may benefit from delaying a project, when practical, until prices come down. A certain amount of risk is associated with this tactic because prices could steadily increase.

5 Bulk Discounts

If a contractor is purchasing material for multiple projects, it may benefit from purchasing materials at the same time to receive bulk discounts. From an owner's perspective, utilizing some of the same furnishings and finishes on similar projects can provide better bulk discounts.

Builders and contractors can work together to obtain group discounts on materials by buying larger quantities at a bulk rate.

6 Employ Alternatives To Help Reduce Costs

A contractor can have parts of a project redesigned with less costly materials in order to keep a project within budget. Value engineering involves reducing the scope of the project, delaying certain aspects of the project or eliminating wish-list items like skylights or elaborate landscaping.

In some situations, consider renovating an existing building as opposed to building a new structure. A cost comparison may reveal that a renovation is significantly less expensive than a new building. Alternatively, depending on the condition of the existing building, the renovation may be significantly more expensive (e.g., renovating a much older building requires bringing it up to code).

7 Renegotiate Contracts To Accommodate Price Increases And/or Industry Shortages

The owner must acknowledge certain realities regarding material price increases and it may be necessary and beneficial for the contractor to be proactive with the owner. A contractor sometimes can renegotiate a contract to accommodate price increases or industry shortages.

In some situations, it may be in the owner's best interest to renegotiate. For example, if the duration as well as the price of the project increases significantly, the contractor may be put at financial risk. In this situation, the owner could make certain allowances for increases rather than risk the entire project.

8 Maintain a Good Relationship With Material Suppliers

It is good business practice and common sense for contractors to maintain a positive relationship with material suppliers. Part of building and maintaining this relationship is paying the suppliers' invoices on time. Without the cooperation of the material suppliers, the project simply will not happen.

LOOKING TO THE NEAR FUTURE

Increased material costs are already increasing the price of new homes and may eventually cause a decrease in residential construction. The increased material costs and potential schedule delays also may decrease the level of overall construction in other sectors.

The market, however, may experience some relief in the near future. The following factors may alleviate the current situation:

- Rising interest rates may slow construction enough for cement and steel production to catch up, thus stabilizing prices and supplies.
- Construction rates will decrease as winter approaches, allowing production rates to catch up and prices to stabilize.
- The Chinese government has taken measures to slow its economic growth, which may in turn reduce demand and prompt a decrease in material prices throughout the world.
- Potentially, new production and manufacturing facilities could increase supply.

Contractors should protect their own interests in a market that is shifting an increased amount of risk onto them. Protection from material price increases is just one of the precautions contractors should consider in 2005. Owners also should be aware that current material shortages can delay projects and increase their costs.

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