

Testimony of Matt Marks in Support of LD 2106, An Act to Accelerate the Production of Affordable Housing and Strengthen the Historical Property Tax Credit Joint Standing Committee on Taxation January 24, 2024

Senator Grohoski, Representative Perry, and distinguished members of the Joint Standing Committee on Taxation my name is Matt Marks, I am a Principal at Cornerstone Government Affairs, a resident of Scarborough, and sending this on behalf of my client The Associated General Contractors of Maine.

AGC Maine is a statewide commercial construction trade association and a Chapter of AGC America which was founded in 1918 with 27,000 contractors, suppliers, and service providers nationwide.

The historic renovation tax credit provides critical benefits to the restoration of buildings, supports jobs in construction, and has rejuvenated structures across our state. The program allows Maine to encourage the development of some of our oldest buildings that inspire investment along main streets. From mixed-use, housing, and commercial development - everything from churches, schools, and other significant historical buildings in our state that were once in peril, have been reconstructed and brought back to life.

While the program has been successful, it has not kept pace with the rising costs of construction. Shortly before COVID, the construction industry was rebuilding. The industry lost a record 10,000 workers following the prior recession and through recruiting and education efforts the recovery was making gainful improvements building a new generation of skilled workers. As the industry modernized, increases in costs continued to rise for those efforts. As the pandemic proceeded, the industry encountered serious supply chain challenges.

The producer price index rose 11.2 percent in twelve months in 2022. Some key products such as diesel, spiked 61.5 percent, concrete 14.1 percent, asphalt 20.7 percent. I've included a copy of the December 2022 inflation report for your review. But on the ground, it was even more complex, and that resulted in complicated workarounds, such as fabricating products on the job site. The delays in material supplies caused work slowdowns and the search for alternative products resulted in additional costs. Contractors reported that some products became so difficult to secure, that the prices were only guaranteed for 48 hours. That was toughest on products that had a short shelf life before installation or required massive storage logistics to protect against weather conditions. Consider drywall or pipe, to ensure the project could meet the demand, contractors had to change from just-in-time delivery to stockpiling.

During that period, additional regulations also impacted the products that could be used in some jurisdictions. For example, insulation products, sealants, and other materials that became restricted in markets caused disruption or limited what could be used here in Maine. As you all have seen, there was also competition for those materials as the demand for construction activity surged. That placed pressure on the workforce and compressed material supply.

During the last year, the market started to return to normalcy and that doesn't equate to a price reduction but fewer spikes. As you might expect with goods or services that has remained somewhat unpredictable and inflation has continued to have a significant impact on the cost of construction. Maine exceeded our pre-covid employment numbers and even surpassed the pre-recession employment numbers. However, it was clear demand was still strong, and the number of retiring skilled workers continues to be a major concern.

AGC Maine and individual companies have been actively recruiting and educating new skilled workers for more than a decade. Through apprenticeships, formal education programs and outreach the effort continues. For example, AGC Maine is currently teaching construction basics to New Americans and will work with companies to transition those individuals to formal apprenticeships. They launched an effort that connects high school students with a program known as the Maine Construction Academy that is extremely popular.

In the last few years AGC Maine has relied on information from AGC's Chief Economist Ken Simonson to report on market conditions and employment projections. While the industry has benefited from a reduction in the pandemic prices for diesel and asphalt, the relaxation of pricing didn't occur across the supply chain. I've attached a copy of the inflation report to provide some perspective of the unstable pricing that was encountered. By examining the numbers, you can get a glimpse, but I'd refer all of you to the products you regularly purchase as a basis for your decision-making on this bill. While direct costs of materials impact price, the inflation of goods we all buy adds to the overall costs as companies must operate in those same conditions and ensure that employees are compensated to adjust their own personal cost of living adjustments.

There is also a reduction in bidders associated with a market in flux. Companies become risk adverse and accommodating for projects with unpredictable supply chain logistics resulted in a less competitive bid process. That means examining some basic concepts, bidding projects closer to home, taking more time to evaluate complicated projects and building that risk of costs into their bid packages.

Government contracting agencies and private entities have adjusted their anticipated bid prices to reflect the market. Programs like the historic tax credit should be increased to ensure that Maine can preserve important structures and find important reuse for those buildings. I encourage the Committee to approve this bill. I want to thank the Committee for considering our information, and I am happy to answer any questions.





CONSTRUCTION INFLATION ALERT

For nearly three years the U.S. construction industry has been buffeted by unprecedented volatility in materials costs, supply-chain bottlenecks, and a tight labor market. To help project owners, government officials, and the public understand how these conditions are affecting contractors and their workers, the Associated General Contractors of America (AGC) has posted frequent updates of the Construction Inflation Alert.

New challenges keep emerging, even as some conditions improve. Overall inflation rates and economic growth have cooled, while congestion at West Coast ports has eased. These changes have led some owners to assume that construction costs and completion times must also have improved. Unfortunately, this is not the case for a large number of projects, materials, and contractors.

Demand for infrastructure, manufacturing, and power construction appears to be strong and likely to strengthen further, perhaps for several years to come. In any case, the cost of construction materials and labor does not generally move in sync with the overall economy. In short, owners should not assume that delaying projects will enable them to avoid volatility and disruptions in construction costs, delivery times, and labor supply, even if the economy slows significantly.

Meanwhile, Russia's ongoing attack on Ukraine and Western sanctions against Russia have disrupted production and transport of dozens of commodities. China's prolonged lockdown of Shanghai and other areas in an attempt to control the spread of covid has also affected production and shipping. New variants of covid, as well as a growing number of people with lingering or recurrent symptoms ("fong-haul covid"), add to uncertainty about labor supply. This version of the Alert is the eighth update since the first edition was posted in March 2021—an indication that the situation remains far from "normal." This document will continue to be revised to keep it timely as conditions affecting demand for construction, labor supply, and materials costs and availability change. Each new version is posted here: https://www.agc.org/learn/construction-data/age-construction-inflation-alert.

Readers are invited to send comments and feedback, along with "Dear Valued Customer" letters or other information about materials costs and supply-chain issues, to AGC of America's chief economist, Ken Simonson, ken.simonson@agc.org.

www.agc.org

Recent changes in input costs

Earlier editions of this guide highlighted the extreme runup in materials costs that began in early 2020. More recently, prices have moved in divergent directions for different materials. But, on balance, they continue to climb at a much higher rate than the consumer price index (CPI), the most commonly cited measure of inflation.

The extent of these increases is documented by the Bureau of Labor Statistics (BLS). BLS posts producer price indexes (PPIs) around the middle of each month for thousands of products and services (at www.bls.gov/ppi). Most PPIs are based on the prices that sellers say they charged for a specific item on the 11th day of the preceding month. Producers include manufacturers and fabricators, intermediaries such as steel service centers and distributors, and providers of services ranging from design to trucking.

The index declined at the beginning of the pandemic but began climbing on a year-over-year basis in August 2020. As prices rose at unprecedented rates for a wide range of construction inputs, the index accelerated steeply, rising at a record-high annual rate of 24% in June 2021. Year-over-year increases remained at or above 20% from May 2021 through April 2022.

Since the spring of 2022, prices have tumbled for lumber and most metals products, and the PPI for nonresidential construction inputs moderated to an 11.2% rate of increase from October 2021 to October 2022. But that is still far higher than the 7.7% annual rate of increase in the CPI over the same interval. In fact, as Figure 1 shows, the yearly increase in the PPI for nonresidential construction inputs has exceeded consumer price inflation every month since August 2020.



Figure 1



Costs	for new nonresidential construction vs. consumer pri	ices
	Year-over-year change in PPI for construction inputs and CPI	
	Advanted 2020 October 2022 and an analysis allowed	

	12 moi	12 months to:		
	Aug-20	Oct-22		
CPI	1.3%	7.7%		
inputs PPI	0.7%	11.2%		



The actual increase in costs varies a lot by type of material. Figure 2 shows the change in PPIs for four material inputs and four types of subcontractors in October 2022 from one month earlier (September 2022) and one year earlier (October 2021). The monthly change in materials costs ranged from a decrease of 0.7% for asphalt paving mixtures and blocks to 9.8% for #2 diesel fuel, while year-over-year changes varied from 14.1% for concrete products to 61.5% for diesel fuel. (Contractors use diesel fuel for their own trucks and offroad equipment. The price of fuel is also reflected in the cost of the thousands of truckloads needed to deliver equipment and materials to jobsites and haul away dirt, debris, and equipment. In addition, many materials require large quantities of diesel fuel or other petroleum-based energy to mine, mix, or manufacture.)

Subcontractors' prices reflect their own materials costs, labor costs, and the degree of tightness in the market for their services. Notably, the PPI for all four types of subcontractors rose far more than the 7.7% increase in the CPI from October 2021 to October 2022: 21.5% for roofing contractors, 18.8% for electrical contractors, 15.7% for plumbing contractors, and 10.9% for concrete contractors.

Prices for many inputs have been extremely volatile, making it difficult for contractors to predict even near-term prices reliably. For instance, the PPI for diesel fuel, which jumped 9.8% from September to October, had declined 12.8% just two months earlier. Conversely, the PPI for steel mill products fell 6.6% from September to October but increased 10.5% from April to May.

Several factors are likely to keep some costs high in 2023, with the possibility of further price spikes. Russia's cutoff of natural gas to central and western Europe has led to a surge in natural-gas prices as the United States exports more liquefied gas to Europe. That affects the cost of construction plastics, glass, and other products that use natural gas as a feedstock or fuel source. Similarly, European demand for diesel fuel, sanctions against Russian oil, and attempts by the "OPEC+" group of oil producers to limit supplies have kept diesel and asphalt prices elevated and subject to large swings.

Figure 2

Wide variation in construction input cost trends

Change in producer price indexes (not seasonally adjusted)

	<u>Oct 2022 cl</u>	Oct 2022 change from:	
	Sep <u>2022</u>	Oct <u>2021</u>	
#2 diesel fuel	9.8%	61.5%	
Architectural coatings (paint, etc.)	1.1%	27.5%	
Asphalt paving mixtures and blocks	-0.7%	20.7%	
Concrete products	0,1%	14.1%	
Subcontractor price indexes, nonresidential building work			
Roofing contractors	1.9%	21.5%	
Electrical contractors	2.1%	18.8%	
Plumbing contractors	3.7%	15.7%	
Concrete contractors	1.1%	10.9%	

Source: BLS, producer prize indexes, www.bls.gov/ppi

Given such volatility, owners should not expect contractors' bid prices to mirror a short-term decline in prices for certain inputs or in the overall index for nonresidential inputs, let alone changes in the CPI. The CPI measures the cost of a "basket" of consumer goods and services, which has very little relation to the items driving construction costs.



The PPI for diesel fuel

increased 61.5% from

October 2021

Input costs and bid prices

Some owners may be under the misimpression that contractors' bid prices are closely linked to changes in input costs. In fact, the two often diverge, as has occurred over the past three years.

The pandemic drastically disrupted production and distribution of many construction materials and caused sharp changes in demand for numerous goods and structure types. Unanticipated price spikes occurred for many inputs—to record levels for lumber, steel, and copper products.

Contractors did not immediately pass along these increases in bid prices. Demand for some project types and in some regions remained weak; as a result, firms refrained from passing through a portion of costs in order to win contracts. In other cases, contractors may have assumed prices would fall by the time they had to purchase the materials.

As demand for construction heated up in 2021 and inflation became established throughout much of the economy, contractors did raise prices to a greater extent. But bid price increases did not "catch up" with increases in input costs until the summer of 2022.

Figure 3 shows the difference in the year-over-year change in input prices (specifically, the PPI for goods inputs to nonresidential construction) minus the change in bid prices (in this case, for new school construction building construction; other comparisons are similar). Periods in red show months when cost increases exceeded bid price increases, while periods below the 0% line show the reverse.

Figure 3

Cost squeeze on contractors can last two years or more

Difference between year-over-year change in materials costs vs. bid prices, Jan 2007-Oct 2022



Source: Source: Bureau of Labor Statistics, www.bls.gov/ppi, producer price indexes for goods inputs to nonresidential construction (material costs) and new school building construction (bid prices)

Over the 16-year history of the series, the number of months and total areas of the two differentials are similar. This is to be expected: If contractors consistently experienced cost increases that exceeded the increases in their bids, they would go out of business. Conversely, if bid-price increases consistently outran costs, other firms would enter the business, driving down profitability.



From December 2020 to June 2022, a period of 19 months, the year-over-year change in materials costs exceeded the year-over-year change in bid prices. Although there were two such intervals that lasted even longer, the gap was three times as great (in the summer of 2021) as in previous episodes, meaning the profit squeeze was much more intense.

As Figure 3 shows, the duration and amplitude of these differences vary greatly and unpredictably. The implication for owners in the current environment is they should not assume a moderation in materials cost increases will be associated with an immediate or proportionate change in bid prices.

Supply chain issues

From the first days of the pandemic, availability and delivery times for materials have been never-ending headaches for construction firms. Recently, shortages and extended lead times have moderated or disappeared for some items but have worsened for others.

On the positive side, port congestion on the West Coast has lessened. Waiting times for lumber and steel products have returned to pre-pandemic levels. There have not been any recent events with supply impacts as severe as the February 2021 freeze in Texas that decimated the production of resins for construction plastics.

Not all bottlenecks have cleared up, however. Contractors continue to be affected by the much-publicized shortage of computer chips. Not only is the construction industry a major buyer of pickup trucks that are in short supply, but deliveries of construction equipment also have been held up by a lack of semiconductors.

Lead times remain unusually long for electrical transformers. In fact, some utilities are reportedly refusing to hook up new construction because they are saving their remaining supply for emergencies. The sole U.S. producer of electrical steel used in transformers has been unable to keep up with demand.

Perhaps the most consequential and long-lasting supply chain issue involves cement and concrete products. Shortages of cement had spread from a few states early in 2021 to 43 states by October, according to the Portland Cement Association. No cement capacity has been added in the United States since 2009. At the same time, the supply of two other "cementitious materials" that are added to some concrete mixes—fly ash and slag—has diminished with the shutdown of coal-fired power plants that supplied those materials as a byproduct of burning coal. (Those closures have also reduced the supply of artificial gypsum for making wallboard.) Exceptionally low water levels in the Mississippi River have limited barge movements of cement in the middle of the country.

Cement shortage appeared in

Cement shortage appeared in 43 states by October 2022

Meanwhile, demand for ready-mixed and precast concrete has increased. As a result, many suppliers have placed contractors on allocation, meaning they receive a percentage of previous years' orders (or possibly none if they are new customers). When contractors can't pour as much concrete as needed at one time, project completions are delayed, with attendant cost increases. The Portland Cement Association has indicated that additional cement production capacity will come online in the spring of 2023. Some states may receive more cement from Mexico. But availability is likely to remain tight in many areas, particularly as demand increases once projects funded by the Infrastructure Investment and Jobs Act of 2021 and other recent laws and bond issues get underway.



Furthermore, the last three years have shown that the supply chain for many items remains fragile and can easily be disrupted by governmental interventions such as covid-induced shutdowns in China, natural disasters such as hurricanes and freezes, or "one-off" events such as strikes or lockouts of rail or port workers.

Labor supply and costs

Construction employment has bounced back well from the early months of the pandemic. However, construction firms are far short of the number of workers they have been seeking. They have partially closed the gap by getting more overtime from the workers they have, but this cannot continue indefinitely.

As shown in Figure 4, construction industry employment declined by 15% from February to April 2020—a loss of 1.1 million employees in just two months. While both residential and nonresidential construction employment rebounded somewhat in May 2020, for more than a year after that date employment stalled among nonresidential firms—nonresidential building and specialty trade contractors plus civil and heavy engineering construction firms. During that period, thousands of experienced workers moved into residential construction (homebuilding and remodeling), found jobs in other sectors, or left the workforce completely.



Figure 4

Source: BLS current employment statistics, https://www.bis.gov/ces/

By November 2022, seasonally adjusted construction employment totaled 7,750,000, or 126,000 more than in February 2020. But there was a large shift between residential and nonresidential subsectors. Compared to February 2020 levels, residential construction firms had added more than 210,000 workers, while employment in nonresidential construction was still down 86,000 employees or 1.8%, as shown in Figure 4.



There is strong evidence that the construction industry would have added many more workers if they had been available. As shown in Figure 5, job openings in construction at the end of October totaled 377,000 (not seasonally adjusted), exceeding the 341,000 workers hired during the month. This gap never occurred before 2021 but has occurred in most months of 2022, implying that construction firms are having increasing difficulty filling positions and would have hired twice as many workers each month as they were able to, if there had been enough qualified applicants.

Figure 5



Construction job openings & new hires

Source: Source: Bureau of Labor Statistics, www.bis.gov/jit, JOLTS

In order to attract, retain, and bring back workers, construction firms are raising pay. Average hourly earnings in construction for "production and nonsupervisory employees"—mainly hourly craft workers—rose 6.1% from November 2021 to November 2022. That was roughly three times as large as the 2.0% increase that occurred three years earlier, in the 12 months ending in November 2019.

Despite the acceleration in wages, until recently construction pay has not risen as fast since the beginning of the pandemic as in other industries. Historically, as shown in Figure 6, contractors paid a "premium" to attract workers willing to work in the conditions, locations, and hours required for construction. Specifically, average hourly earnings for production workers in construction were 20-23% higher than for than the average for all private sector employees, until the onset of the pandemic. This premium shrank to 15% at the start of the pandemic as restaurants, warehouses, delivery services, and other industries drastically increased pay, and the premium has remained around 17% or less for the past 2-1/2 years. Other industries now offer greater flexibility regarding hours and worksites, including work from home, working conditions that are not possible for construction.



Figure 6



Construction wage "premium" vs. total private sector

Excess of average hourly earnings for production/ nonsupervisory employees in construction vs. private sector

These differences imply that construction wages will have to rise even more steeply to restore (and perhaps expand) the pay premium. In addition, it is likely that contractors will pay more overtime to make up for the workers they don't have. They may also turn more to offsite production and onsite drones, robotics, 3-D printers, and other ways of reducing the number or skill level of the workers they employ.

What can contractors and ownersdo?

Contractors can provide project owners with timely and credible third-party information about changes in relevant material costs and supply-chain snarls that may impact the cost and completion time for a project that is underway or for which a bid has already been submitted.

Owners can authorize appropriate adjustments to design, completion date, and payments to accommodate or work around these impediments. Nobody welcomes a higher bill, but the alternative of having a contractor go out of business because of impossible costs or timing is likely to be worse for many owners.

For projects that have not been awarded or started, owners should start with realistic expectations about current costs and the likelihood of increases. They should provide potential bidders with accurate and complete design information to enable bidders to prepare bids that minimize the likelihood of unpleasant surprises for either party.



Owners and bidders may want to consider price-adjustment clauses that would protect both parties from unanticipated swings in materials prices. Such contract terms can enable the contractor to include a smaller contingency in its bid, while providing the owner an opportunity to share in any savings from downward price movements (as has occurred at various times in recent months with lumber, diesel fuel, and metals prices). The ConsensusDocs set of contract documents (www.consensusdocs.org) is one source of industry-standard model language for such terms. The ConsensusDocs website includes a price escalation resource center (https://www.consensusdocs.org/price-escalation-clause/).

The parties may also want to discuss the best timing for ordering materials and components. Buying items earlier than usual can provide protection against cost increases. But purchase before use entails paying sooner for the items; potentially paying for storage, security against theft and damage, and insurance; and the possibility of design changes that make early purchase unwise.

Conclusion

The construction industry continues to be in the midst of a period of exceptionally volatile and sometimes fast-rising costs for a variety of materials, compounded by major supply-chain disruptions and difficulty finding enough workers—a combination that threatens the financial health of many contractors. No single solution will resolve the situation, but there are steps that government officials, owners, and contractors can take to lessen the pain.

Federal trade policy officials can act immediately to end tariffs and quotas on imported products and materials. With many U.S. mills and factories already at capacity, bringing in more imports at competitive prices will cool the overheated price spiral and enable many users of products that are in short supply to avoid layoffs and shutdowns.

The federal government can improve the labor supply by allowing employers to sponsor more foreign-born workers to fill positions for which there are not enough qualified applicants. In addition, the federal government should fund and approve more apprenticeship and training programs to enable students and career-switchers to acquire the skills needed for construction trades.

Officials at all levels of government should review all regulations, policies, and enforcement actions that may be unnecessarily driving up costs and slowing importation, domestic production, transport, and delivery of raw materials, components, and finished goods.

Owners need to recognize that fast-changing materials costs and availability require a quick decision regarding bids and requests for changes. For new and planned projects, owners should expect quite different pricing from previous estimates. They may want to consider building in more flexibility regarding design, timing, or cost-sharing.

Contractors need, more than ever, to closely monitor costs and delivery schedules for materials and to communicate information with owners, both before submitting bids and throughout the construction process.

Materials prices do eventually reverse course. Owners and contractors alike will benefit when that happens. Until then, cooperation and communication can help reduce the damage.





Construction adds 2,000 jobs in November; pay accelerates; job openings set record for October

Construction employment, seasonally adjusted, totaled 8,033,000 in November, a gain of 2,000 from October and 200,000 (2.6%) year-over-year (y/y), according to AGC's <u>analysis</u> of data the Bureau of Labor Statistics (BLS) <u>posted</u> today. The y/y growth rate outpaced the 1.8% increase in total nonfarm payroll employment. **Residential construction employment** (at residential building and specialty contractors) rose by 1,000 in November and 53,000 (1.6%) y/y. **Nonresidential construction employment** (at building, specialty trade, and heavy and civil engineering construction firms) increased by 1,400 for the month and 147,800 (3.2%) y/y. Seasonally adjusted **average hourly earnings** for production and nonsupervisory employees in construction (craft and office) rose 5.9% y/y to \$34.96 per hour, an acceleration from the 5.5% y/y increase in October. The "premium" for nonsupervisory construction workers rose to 19.3% over the private sector average of \$29.30, still considerably below the average premium in 2000-2019 of 21.5%. The number of **unemployed jobseekers with construction experience** climbed to 496,000, not seasonally adjusted, from 393,000 in November 2022 and the unemployment rate for such workers rose to 4.8% from 3.9%.

There were 457,000 job openings in construction, not seasonally adjusted, at the end of October, the highest October total in the 23-year history of the series and up 11% from the October 2022 total of 411,000, BLS reported on Tuesday. Hires for the full month totaled 393,000, an increase of 28,000 (7.7%) y/y. Layoffs totaled 188,000 or 2.3 per 100 employees, the third-lowest layoff rate in series history, indicating firms expect to stay busy. The record openings suggest the dip in employment gains in November may reflect an inability to find qualified workers, not a slowdown in demand.

The Dodge Momentum Index decreased 1% in November from October 14% y/y, Dodge Construction Network reported on Thursday. The index is "a monthly measure of the initial report for nonresidential building projects in planning, shown to lead construction spending for nonresidential buildings by a full year." The commercial component decline 1% for the month and 20% y/y; the institutional component slipped 1% for the month but rose 2% y/y.

The value of construction starts in current dollars (not adjusted for inflation) inched down 0.2% y/y in October, data firm ConstructConnect <u>reported</u> on November 21. Nonresidential building starts decline 10%, with the largest component—institutional starts—down 21%, commercial starts down 24%, and industrial (manufacturing) starts up 21%. Engineering (civil) starts jumped 22%, with roads/highways up 10%, water/sewage up 11%, power and miscellaneous civil up 85%, bridges down 14%, dams/marine up 33%, and airports up 26%. Residential starts slumped 36%, with single-family up 1.2% and multifamily down 71%.

Total **construction starts** in current dollars fell 7% from September to October at a seasonally adjusted annual rate, Dodge Construction Network <u>reported</u> on November 21. Nonbuilding starts tumbled 32%. "A decline in utility/gas starts drove category starts to a 12-month low. Miscellaneous nonbuilding starts dropped 20%, and environmental starts were 15% lower. However, highway and bridge starts improved 6%." Nonresidential starts rose 8%, "led by the groundbreaking of several very large manufacturing plants...If not for those plants, total commercial starts would have lost 28%. Commercial starts dropped 18% during the month due to a very sharp pullback in office activity, while institutional starts fell 15%, despite a solid gain in healthcare starts....Residential building starts fell 1%...Single-family starts lost 2%, while multifamily starts were flat."

"Economic activity in the services sector expanded in November for the 11th consecutive month," the Institute for Supply Management <u>reported</u> on Tuesday. Construction is among four sectors (out of 18) that reported a decrease in business activity and in backlog of orders (5 sectors), but also reported an increase in new orders (11 sectors), employment (10), and faster supplier deliveries (6). Construction is one of two sectors reporting no change in prices paid for materials and services. Items significant for construction reported up in price include construction labor; electrical components; heating, ventilation, and air conditioning equipment; oriented strand board panels; personal protective equipment; and plumbing supplies. Price declines were reported for fuel (2 months in a row), lumber (2), and steel products. Items listed in short supply include building materials, construction labor (3 months), electrical components (8), and transformers (15).