

# ON THE RISE

## CONSTRUCTION MATERIAL ESCALATION & AVAILABILITY REPORT

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**T**here is a major disruption happening in the development and construction industry that is affecting the feasibility of projects as we emerge from the COVID-19 pandemic. Most materials that are consumed for housing, lab, school, office, retail, and infrastructure are dramatically increasing in price and projects across the country are being impacted. The soaring costs began with the primary materials markets like lumber, steel, and glazing products, and are now affecting the secondary and tertiary materials markets (piping, wiring, ductwork, flooring, lighting, acoustical ceiling panels, etc.). Vendors are raising their prices on a monthly basis or more frequently in some cases and only holding their quotes for days at a time. The confluence of pauses in production at mills and factories during COVID-19, supply-chain disruptions (e.g. the Suez Canal blockage and Texas winter storm), skilled labor shortages, rising transportation costs (e.g. 50% increase in container costs for shipping and lack of truck drivers), tariffs (including steel, aluminum, and certain materials/products from China that were put in place in 2018), price of oil increases, raw materials scarcity, all compounded with the increased demand for materials by builders and developers has created a crisis in the marketplace that could affect construction starts in 2021. The lack of available materials due to supply-chain constraints is resulting in longer lead times for products, which will undoubtedly affect project schedules and budgets. The burden of increased construction costs will likely be passed through to tenants with higher rents and sales prices.

The following pricing analysis shows the Current State (May 2021) of affairs for the primary, secondary, and tertiary materials markets and addresses some of the causes for the escalation.



**“ Vendors are raising their prices on a monthly basis or more frequently in some cases and only holding their quotes for days at a time. ”**

**ERLAND.**

# MARKETS

## > STRUCTURAL STEEL

### CURRENT STATE

U.S. Hot-rolled Coil (HRC) steel prices have surged by 210% since August 2020 or from \$440/ton to nearly \$1,100/ton. The U.S. HRC three-month price rose 20% month over month to \$1,280 per short ton. Iron ore prices have gone from \$83/ton in May 2020 to \$193/ton in April 2021. We are also hearing that there are delays to secure steel joists as a result of the amount of warehouse construction specifically by Amazon and other large distributors. On Monday, May 10, China's benchmark iron ore futures rallied an incredible 10% to a record high.

### WHY?

These price jumps are not caused by demand; it is an end-result of the lack of supply to the U.S. market. Steel mills slowed output capacity in the spring of 2021 in response to the coronavirus shutdowns and were in no rush to bring it all back online. Former President Donald Trump's Section 232 steel and aluminum tariffs also limited supply from outside the U.S. to protect U.S. steel industry—affecting other metals as well. Current President Joe Biden is also in support of keeping these tariffs in place.

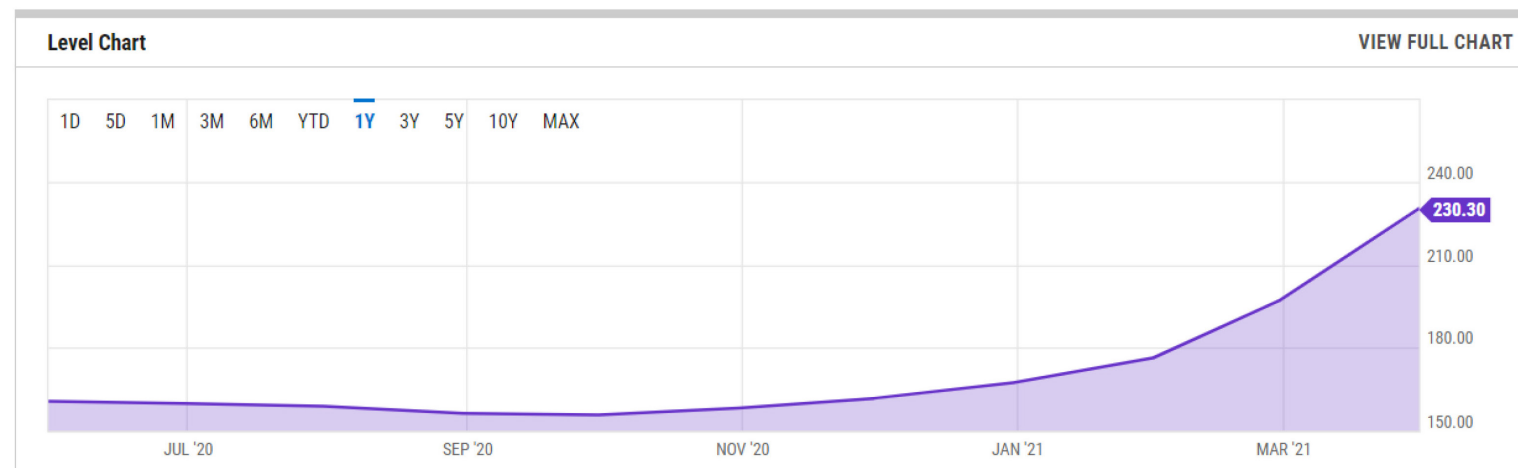
### FUTURE

With the increased supply and more imports of HRC steel coming online this summer, the expectation is that prices will begin to plateau. According to S&P Global Platts, more than 3 million short tons (st) of new capacity is entering the North American market and should ease the price pressures. Multiple mills in the U.S. have expansion plans underway that will add more than 7 million tons of steelmaking capacity to the market in 2021. Once supply and demand begin to approach some sort of equilibrium, steel prices should moderate, according to The Fabricator.

## US Producer Price Index: Iron and Steel Mills

230.30 for Mar 2021

Overview Interactive Chart



Source: Y Charts

## > LUMBER

### CURRENT STATE

Lumber prices have skyrocketed nearly 250% since March 2020. The price of lumber per thousand board feet was at \$381 in March 2020 and is now at \$1,502 in May 2021. Buyers are bidding up lumber prices as they try to keep up with strong demand according to Random Lengths. Mill owners say they are backed up with orders into June. Boards for July delivery, the most actively traded futures contract, ended in March 2021 at \$1,376.50 and now in May is at \$1,502.

Panel Market – The panel market is even crazier. There is a historic shortage of resin which is used for numerous building products including oriented strand board (OSB), plywood, insulation, adhesives, foam materials, and appliances.

### WHY?

Mills cut production during the pandemic, dropping supply by up to 30%. But during the summer of 2020, demand took off with the home remodeling wave, followed by new housing starts in 2021 (up 15-20% from Q1 '20), and then multifamily apartments that were in the pipeline restarted. U.S. wood product output returned to pre-pandemic levels in December 2020. Yet production remains about 16% lower than the 2006 peak according to the Wall Street Journal.

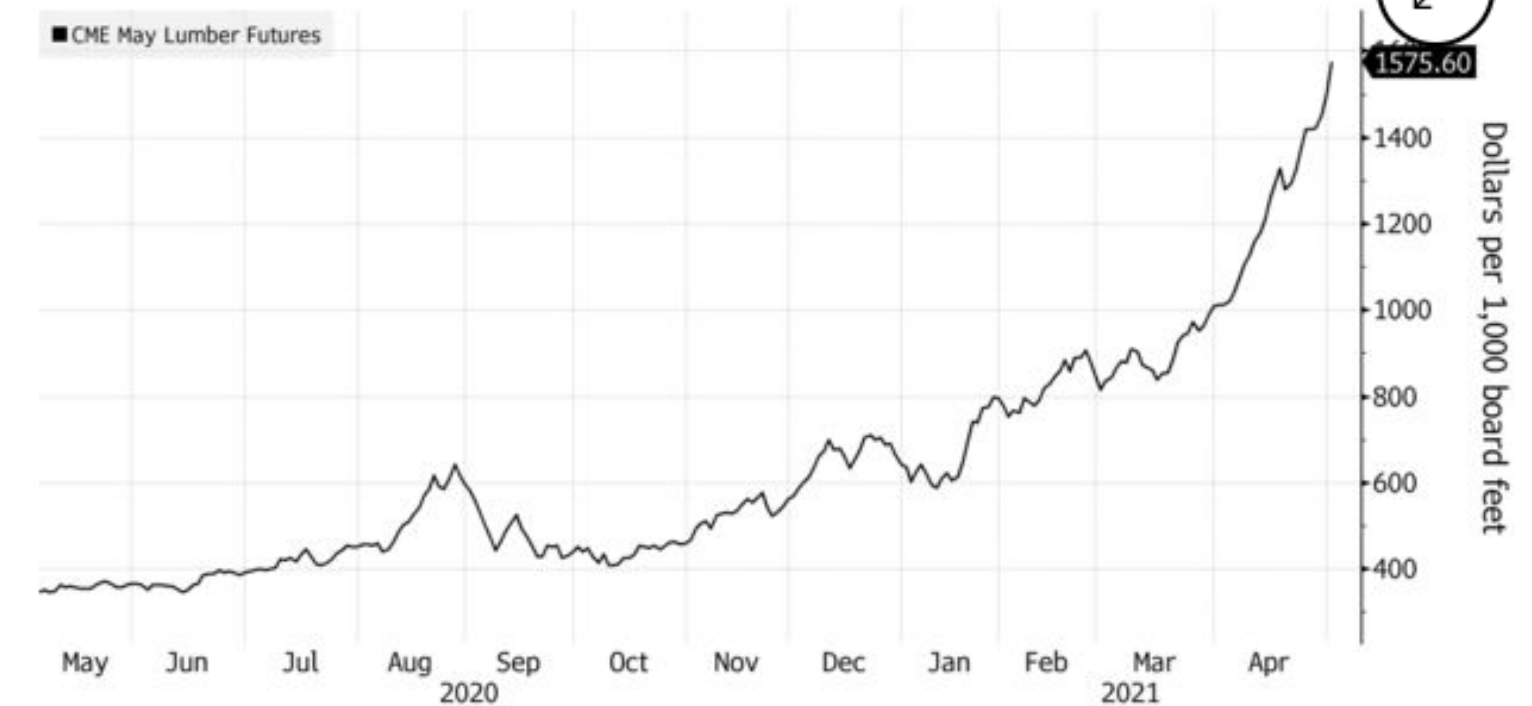
Spruce-Pine-Fir (SPF) producers increased prices higher and higher, with no quoted level stemming from demand. There were also significant trucking shortages affecting shipping times, adding to the urgency to secure orders according to Random Lengths. Southern Pine Plywood (SPP) has similar issues with trucking and limited-to-no availability on the open market after contracts were absorbed. Wholesalers quoted quicker shipping loads at sharp premiums to mill replacement levels according to Random Lengths.

Wood Panel Market – The wood panel market increase was caused by the deep freeze in Texas two (2) months ago and there is no telling when they will be able to catch back up. Panel prices are soaring to new records every week and there is a huge back log of buyers. Experts are certain prices will continue to rise in coming months.

### FUTURE

Loggers are busier than ever and are on pace to hit a 13-year high for production. However, there has been a steep increase in demand since last year with new home builds, remodeling, and the multifamily/condo market. “Even though we expect lumber demand to hold up well for some time, we still think that a rebound in supply will lead to a sharp fall in the price of U.S. lumber over the next eighteen months. We expect lumber prices to plummet to \$600 by year-end even as home-building

## Lumber Price per Thousand Board Feet May Futures Rise Dramatically



Source: Chicago Mercantile Exchange / Bloomberg

and renovations keep demand elevated,” said Samuel Burman, Analyst of Capital Economics Ltd commodities in Bloomberg on April 20, 2021.

## > POLYVINYL CHLORIDE (PVC) PIPING

### CURRENT STATE

PVC resin suppliers have implemented increases in February, March, and April, which are some of the largest in the past 35 years.

### WHY?

Resin suppliers have been dealing with supply issues since the winter storm shutdowns in February; facing a general lack of availability due to shipping disruptions as well as high global demand due to the COVID-19 recovery. Prices rose well beyond the contract increases (as much as 10¢/lb. more), particularly after the mid-February Gulf storm, which set back suppliers' inventory for months. The petrochemical plants in Texas that normally operate around the clock lost months of production. Loss of this production affected plastic resins and other “building blocks” for a wide range of construction products including PVC pipe and other hard plastic products like plumbing fittings

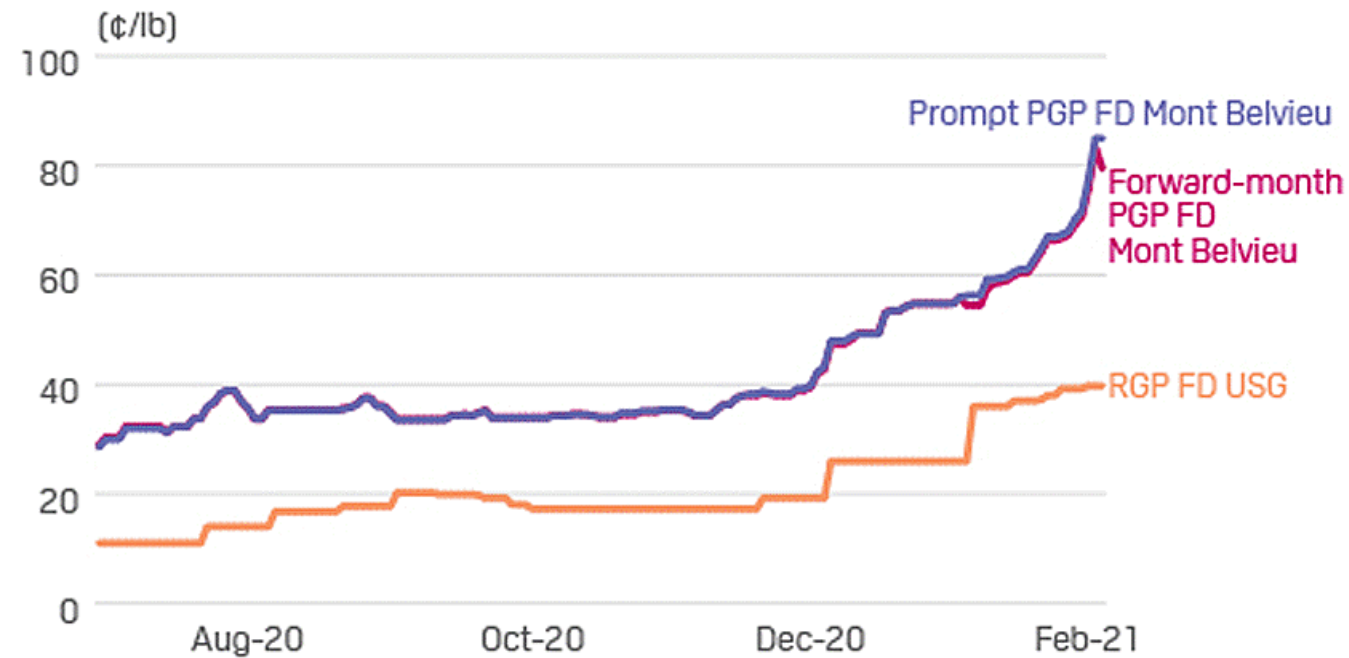
Due to the PVC resin shortages, PVC plumbing pipe mills are not able to run at full capacity. According to Merfish

United, this has caused supply to run tight with purchase inquiries being turned away or allocated and lead times going up to as much as 90 days.

### FUTURE

There is an expectation that suppliers will complete their inventory recovery from the February Gulf storm later in May 2021. “May will start to show more normalcy, but don't expect prices to drop,” said Mike Burns, RTi's V.P. of PE Markets, as well as PCW Senior Editor David Barry and The Plastic Exchange's Michael Greenberg. In fact, Burns did not foresee much price relief until after September according to Plastic Resin.

## US SPOT PROPYLENE PRICES REACH NEAR-DECADE HIGH



Source: S&P Global Platts

## > ALUMINUM WINDOWS & CURTAINWALL

### CURRENT STATE

Aluminum Window and Curtainwall manufacturers have notably been one of the most prominently affected during COVID-19. They rely on glass suppliers, aluminum framing systems suppliers, and aluminum sheet goods for flashings, backpans etc. They also rely on sealants (which have been affected by chemical plant shutdowns in Texas) and mineral wool insulation for their frames (150 day lead times). Aluminum framing companies like Kawneer, OldCastle and YKK all raised their prices by 7% in March and April 2021. Alucubond composite panels (ACM) rose 5% in May. Glass products (monolithic, insulated, laminated and hardware) from companies like Rochester Insulated Glass, SolarSeal and SIGCO rose 10%, 13% and 13% respectively in April 2021.

### WHY?

This is due to the rise in costs of aluminum (15% price increase since beginning of year according to OldCastle), delay and price increases glass, price and supply-chain delays on aluminum, and labor shortages & costs across the board.

## > ACOUSTICAL PANELS, DRYWALL SUSPENSION, ALUMINUM CEILINGS & WALL SYSTEMS

### CURRENT STATE

Effective Monday, June 7, 2021, Armstrong Architectural Specialties will implement a price increase on list price

items up to 10% for all metal-based products, including metalworks, suspension, hanging kits, trim, clips, and other metal accessories; an additional increase of 5% for quotes on or after August 2, 2021; and a 7.5% increase on all acoustical and drywall suspension ceilings.

### WHY?

These actions reflect increased raw materials costs and transportation costs

## > COMMERCIAL ROOFING & INSULATION

### CURRENT STATE

Johns Manville, one of the largest suppliers of thermoplastic polyolefin (TPO), PVC, ethylene propylene diene monomer (EPDM) roofing, will institute a 5-8% increase in their pricing effective May 1, 2021. On May 15, they will also increase their prices on low-rise foam adhesives and single ply membrane adhesives by 7%. Hunter Panels is raising their prices by 5% effective May 14, 2021 on their polyiso roof insulation products. Carlyle also just raised their prices on EPDM, PVC, and TPO membrane roofing by 5% on March 1, 2021.

Kingspan recently announced that their GreenGuard insulation boards will increase by 10% and their underlayments will increase by 8% effective May 30, 2021. Blue Ridge Fiberboard customers will see a \$10 per 1,000sf on a 1/2" basis for orders shipped on or after May 17, 2021.

### WHY?

According to the Johns Manville memo released to customers on April 8, the government's mandated state shutdowns in early 2020 created a great deal of uncertainty and market disruption. Many manufacturers curtailed production in anticipation of a downturn. The market did not retract as much as expected and those manufacturers have struggled to restart and catch up raw material production. This specifically impacted the steel and metal production facilities, which is now impacting everything from the roofing to automotive industries.

As a result of the winter storm and cold temperatures that ravaged Texas and Louisiana, many of the chemical production plants located in those two states were not operational for a significant period. As a result of these plant outages and the force majeure declarations made by several of their suppliers, Johns Manville is experiencing extended lead times and occasional supply interruptions.

Finally, while some of our raw materials can be sourced from overseas, the shipping industry has been severely impacted by delays at ports due to short-staffing, container availability, and over-the-road driver availability.

Blue Ridge Fiberboard cited the demand and cost escalation of natural woods, as well as the inbound and outbound transportation costs.

## > MULTIFAMILY HOUSING ROOFING

### CURRENT STATE

According to CertainTeed, Multi-family Residential will raise their prices on all builder, multifamily housing, job specific quotes, and invoice verification prices as of July 1, 2021 by up to 12%. Owens Corning Sales, LLC has also announced a price increase of 7-9 % on all shingle and roofing accessory products effective June 1, 2021. This increase will apply to all new construction and multifamily business. IKO is implementing an up to 8% increase on all residential steep slope roofing products and accessories, effective April 5, 2021 for all residential new construction and multifamily customers.

### WHY?

This adjustment is due to increasing raw material costs associated with the manufacturing of asphalt shingles and accessories, costs associated with COVID-19 safety protocols, and the significant supply-chain challenges.

## > WATERPROOFING

### CURRENT STATE

Waterproofing manufacturers have announced price increases on multiple lines to include below grade, silicones and polyurethane sealants, coatings, and other



commercial building envelope products. While construction management firms strive to manage costs to ensure competitive pricing in the market, we are unable to absorb these additional costs into our business. Beacon, the largest publicly traded distributor of roofing materials and complementary building products in the U.S. and Canada, implemented a price increase effective with all orders ranging between 5-15% on April 12, 2021.

**WHY?**

Major disruptions in the availability of raw materials and increased freight costs have necessitated these manufacturers' increases as well as the cost of oil rising. Sealants were affected by plants that were shut down in Texas after the February storm.

*“Continued high demand for steel products and a limited global supply of raw materials has continued to drive price increases.”*



**> METAL PIPE**

**CURRENT STATE**

Continued high demand for steel products and a limited global supply of raw materials has continued to drive price increases. Our subcontractors are getting hit with 7-8% price increases in April/May re: all steel piping and associated steel materials, including carbon steel fittings and flanges, weld fittings.

**WHY?**

Shipping container shortages due to long unloading times at ports and shipping backups from the Suez Canal incident have stretched supply-chains thin and increased shipping costs. Domestic freight availability has further hampered fulfillment, with an increased demand for shipping leading to longer lead times and increased freight rates according to Merfish United.

**FUTURE**

These increased input costs have resulted in past increases on domestic steel pipe, globally sourced steel pipe, and metal conduit. According to Merfish United, more increases are anticipated both in the short-term and long-term, as demand increases, and mills look to meet demand and stabilize inventories.

**> COPPER**

**CURRENT STATE**

Better than expected recovery outside of China has driven the strong demand for copper, not only in traditional sectors but also for green energy initiatives. With copper components found in all kinds of electrical components needed to replace carbon energy, prices increased as production resumed following the COVID-19 shutdowns according to Merfish United. On Monday, May 10, the price of copper also hit an all-time high.

**WHY?**

Prices increased as production slowed following the COVID-19 shutdowns of mines. The biggest copper producing country is China followed by Chile, Peru, and the U.S. These producers are struggling to meet the global demand for green economy initiatives (e.g. electric vehicles), therefore playing a role in sky-rocketing the price of copper. There is a global worry about the future supply of copper keeping up with demand. Adding to the cost of copper wiring is the insulation (covering) which is a petroleum product that is also facing price escalation.

**FUTURE**

As current mines are brought to capacity, a surge in copper production still falls short of demand. According to Merfish United, new mines are not expected to open in the near term, which will keep prices high through 2021.

**Copper's Brilliant Year**

The green revolution is creating huge demand for copper

✓ Copper (LME)



Source: London Metal Exchange, Bloomberg

**> LIGHTING**

**CURRENT STATE**

Major lighting manufacturers just announced price hikes in May 2021, including Cooper Lighting (7%), Hubbell (5-9%), and Leviton (8%).

**WHY?**

Cooper Lighting's plants are in California. As a result of COVID-19 and the State closing down for months last summer, the plants were shut, and limited inventory was amassed. Also, Cooper counts on materials such as LEDs from Asia (particularly China). China also had issues with plant closures and thus were unable to ship enough materials. Once the materials did arrive in California, there were logistical and transportation issues at the ports due to COVID and the backlog. Now many U.S. plants, not just lighting plants, are having a challenging time hiring back skilled labor.

**> HVAC EQUIPMENT**

**CURRENT STATE**

Across the board, we are already seeing manufacturers raise the cost of equipment, parts, and supplies prices. Many manufacturers have made these announcements public, with increases ranging anywhere from 3% up to 9%. Carrier and Daikin and many others announced they are raising their prices 7% starting in May and June 2021.

**WHY?**

The reasons from the industry cite rising raw material and component costs, including stainless steel, galvanized steel and copper, which are up 30 to 50% compared to last year, increased labor rates, fuel and transportation costs, and changes to processes.

**> HIGH VOLTAGE SWITCHGEAR**

**CURRENT STATE**

Switchgear is a highly integral electrical transmission and distribution equipment that comprises of a combination of electrical disconnect switches, circuit breakers, and fuses. Companies like Square D, Easton, Siemens, GE, and Toshiba are some of the major players in the market. Currently, prices have risen on switchgears on an average of 7-10% in 2021.

**WHY?**

Much of the switchgear that is supplied to our northeast projects is from the southern U.S. Southern plants had a difficult time keeping up production during the pandemic. U.S. switchgear manufacturers also rely on parts from China for circuit breakers and all. China's factories were shut down and the supply-chain was affected. U.S. manufacturers did their best to keep up demand by finding other areas to receive parts and assemble components, all leading to longer lead times and price escalation.

# CONCLUSION

Input costs for contractors are rising at an inflationary rate (13% since spring 2020), supply-chains are being constricted leading to longer lead times, and skilled labor costs are increasing. Contractors and subcontractors may be taking on some of the risk holding material prices in order to make the projects “pencil out” and commence. Some subcontractors may already be building contingency dollars into their estimated material and labor increases costs to account for mid-project price spikes. Most will not hesitate to rescind their proposal or increase their prices prior to award. General Contractors are focused on getting Owners to GMP as quickly as possible and locking in the proposed subcontractor rates. Doing this allows the project team to commence the procurement process and buyout materials before prices continue to climb. Owners need to factor in the new inflationary reality and support expedited procurement, appropriate adjustments to design, the potential for delayed completion dates due to material availability, and the potential impact on project budget to accommodate or work around these impediments.

“Contractors and subcontractors may be taking on some of the risk holding material prices in order to make the projects “pencil out” and commence.”

The Associated General Contractors (AGC) recently published an Inflation Alert to its membership. The AGC says, “The situation calls for immediate action by federal trade officials to end tariffs and quotas that are adding to price increases and supply shortages. Officials at all levels of government need to identify and remove or lessen any unnecessary or excessive impediments to the importation, domestic production, transport, and delivery of construction materials and products. Project owners need to recognize how much conditions have changed for projects that began or were awarded in the early days of the pandemic or before and to consider providing greater flexibility and cost-sharing. Contractors should become even more vigilant about changes in materials costs and expected delivery dates and should communicate the information promptly to current and prospective clients.”

On May 3rd, U.S. Treasury Secretary Janet Yellen said she sees no inflation problem brewing, downplaying earlier comments that rate hikes may be needed to stop the economy overheating as President Joe Biden’s spending plans boost growth. Residential rents are already on the decline as the cost of multifamily projects soars in 2021. There is optimism, however, that the supply-chain will correct itself and improve; skilled labor will come back into the workforce; production and supply will catch up with the demand; and material prices will begin to plateau towards the end of 2021 before construction starts begin to stall.



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