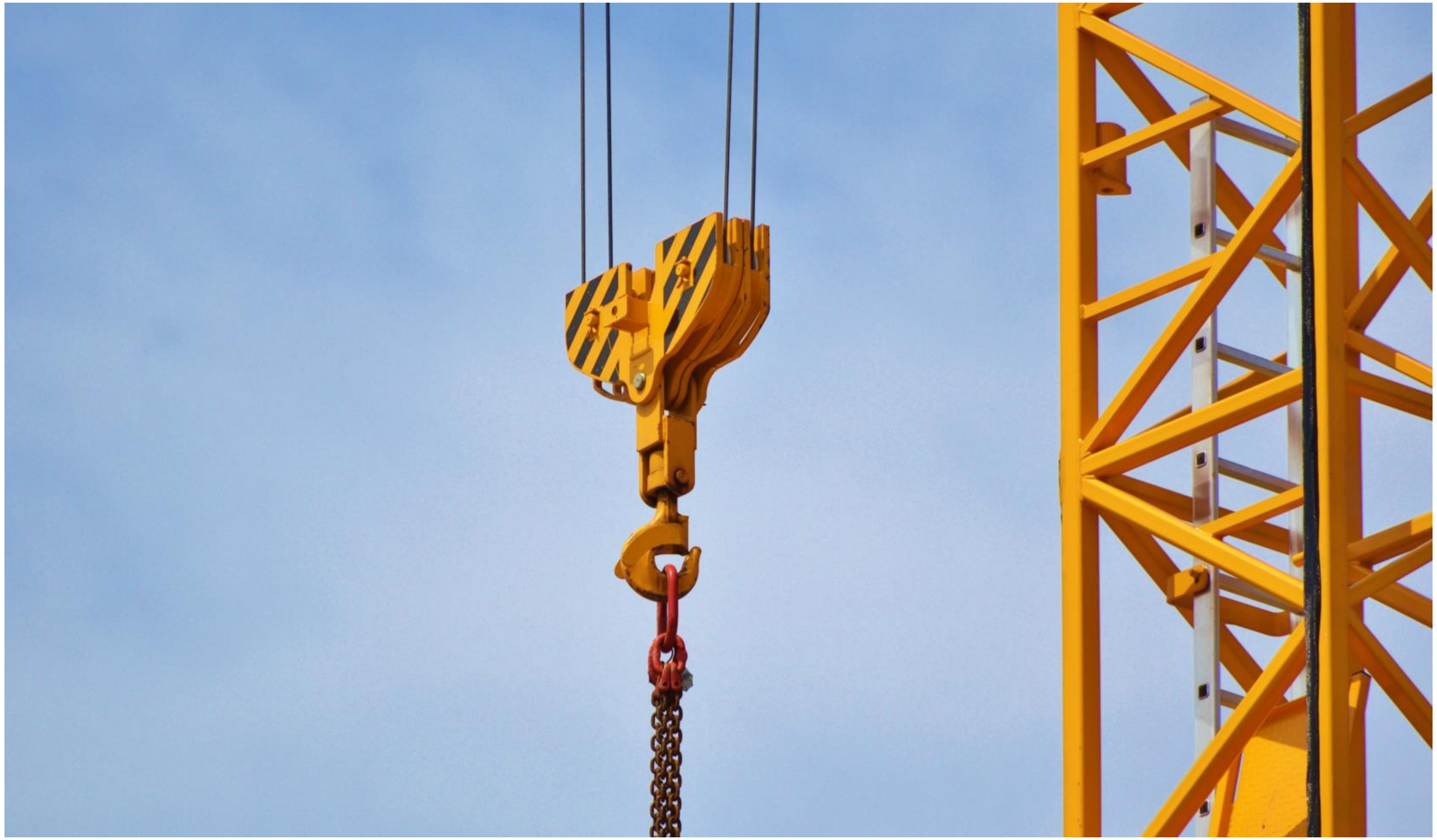
United States Construction Market Trends

Q1 2023

March 2023

Contents



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Introduction

Executive Summary

The Current Situation

- The construction labor force contracted slightly for a second consecutive quarter (-3.0%) as the construction unemployment rate increased for a third consecutive month (6.9%) which is typical for the time of year. That said, finding skilled labor continues to remain a major challenge for all aspects of the industry.
- External forces (FOMC interest rates to combat inflation, OPEC+, international conflict) continue to influence construction costs and material availability for certain items.
- Construction wages are now up 9.0% since Q3 of 2020 according to the US Bureau of Labor Statistics despite a minor quarterly decline of -0.5% which is most likely a seasonal adjustment.

Supply Chain & Material Availability

- Gasoline and petroleum costs continued to decline last quarter which helped contribute to lower shipping and trucking costs nationwide.
- Material lead times remained inconsistent as items that were previously difficult to obtain (roofing membranes, HVAC equipment, etc.) became more readily available, and items that had formerly seen relief (steel decking and joists) were once again challenged. Several electrical components (transformers and panels) have continued to have longer than normal lead times.
- The general freight trucking index from the Bureau of Labor Statistics declined or remained flat for a third straight quarter by -2% showing additional slowing and decline of shipping costs.

INTRODUCTION

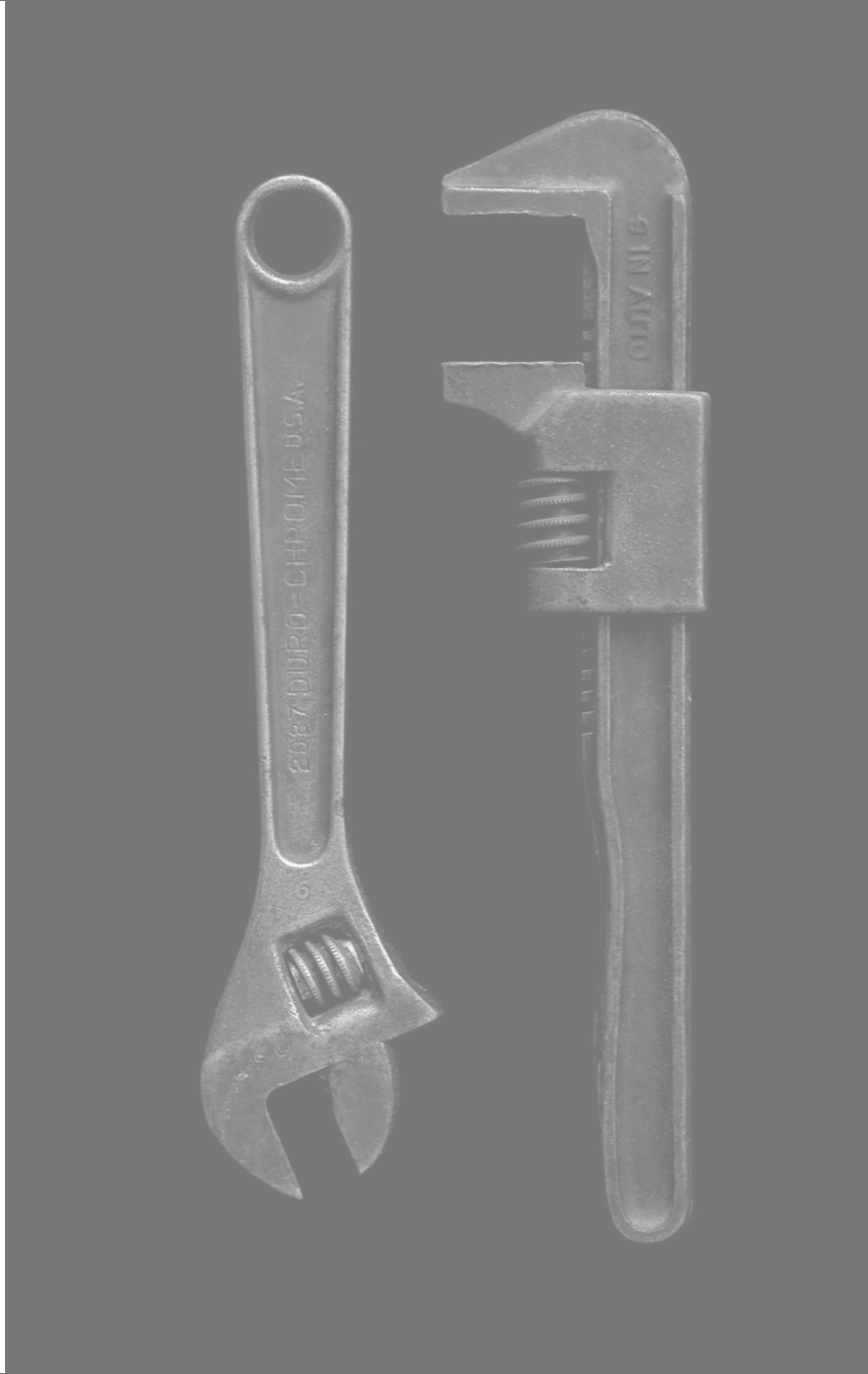
Executive Summary

Contractor Confidence & Construction Volume

- In a repeat of what was seen last quarter, surveyed contractor confidence remains mixed: some publications are displaying favorable outlooks (ABC, Dodge), while others are showing lower confidence indicators this quarter (AIA, ENR).
- Commercial and office construction volume are up 8.7% and 4.7% respectively over the past quarter, while residential volume is down 14.3% quarterly according to data from the US Census.
- Construction contractor backlog remained very strong at +**9.0 months** as reported by Associated Builders and Contractors (ABC) in February.

Cost Escalation

- Inflation continues trending downward as the February 2023 CPI rate was **6.0%**. This is down from 9.1% in June 2022 which was the highest rate in 40 years.
- 2023 should continue to show indicators which would lead to an anticipated reduced escalation rate of **6-9%**. While still higher than normal, “historic” escalation rates could potentially return by the end of 2024.
- Analysts remain cautiously optimistic that a full-on recession may be avoided as inflation continues to recede. However, myriad factors could change this tempered outlook.



INTRODUCTION

A Timeline of Recent Impacts

Discovery, Shut-Downs, Recovery and Beyond

The last 36 months have represented an unprecedented time for the construction market.

2020

Residential Building Boom Begins

From May 2020 to June 2022, residential construction spending increases **55.4%**. This drives up costs for both lumber and labor.

China's "Zero COVID" Lockdowns

China struggles to meet manufacturing demand, putting additional strain on the US construction industry.

2021

US Lowers Key Tariffs

In response to skyrocketing costs, the US removes steep tariffs on EU aluminum & steel (late 2021) and Canadian softwood (early 2022).

Key US Ports Jammed

Labor shortages cause backups at two key California ports, which handle ~40% of US imports.

2022

Inflation & Escalation Continue

Market projections indicate continued "higher than normal" labor and material cost escalations for the foreseeable future.

Russia Invades Ukraine

Invasion drives up fuel costs worldwide and impacts the chipmaking industry (reliant on Ukrainian neon and Russian palladium); aluminum markets also impacted.

2023

Economists Predict Potential Recession in 2023

Despite steadily increasing interest rates, the US economy has remained surprisingly resilient. That being said, economists still predict recessionary impacts at some point in 2023.

Extreme Weather

Major storms in Texas and Florida have affected manufacturing, production, oil refining and supply chain.

INTRODUCTION

CBRE Construction Trends Methodology

Identify, Analyze, React and Adapt to Market Issues

The data collected and used in this report primarily incorporates industry information and quarterly publications ending **Q4 2022**. Where current updated data is available, those Items have also been included here.

Identify

- Collect and assemble data from leading industry sources and attempt to accurately forecast future market trends.
- Find opportunities for vendor partners to work with project teams to help mitigate risk.

Analyze

- Determine the root causes of material and labor cost changes, as well as supply disruptions through data trends.
- Break down compiled data into usable segments in order to create an effective plan.
- Predict future issues related to cost and market availability.

React

- Allow for material substitutions where applicable, appropriate and advisable
- Find opportunities for vendor partners to work with project teams to help mitigate risk
- Plan projects accordingly with accurate cost escalations

Adapt

- Maintain constant communication with Clients and keep decision makers updated of changes to the market
- Make conscious decisions to allow for optimal solutions
- Award projects as quickly after proposals are received as possible

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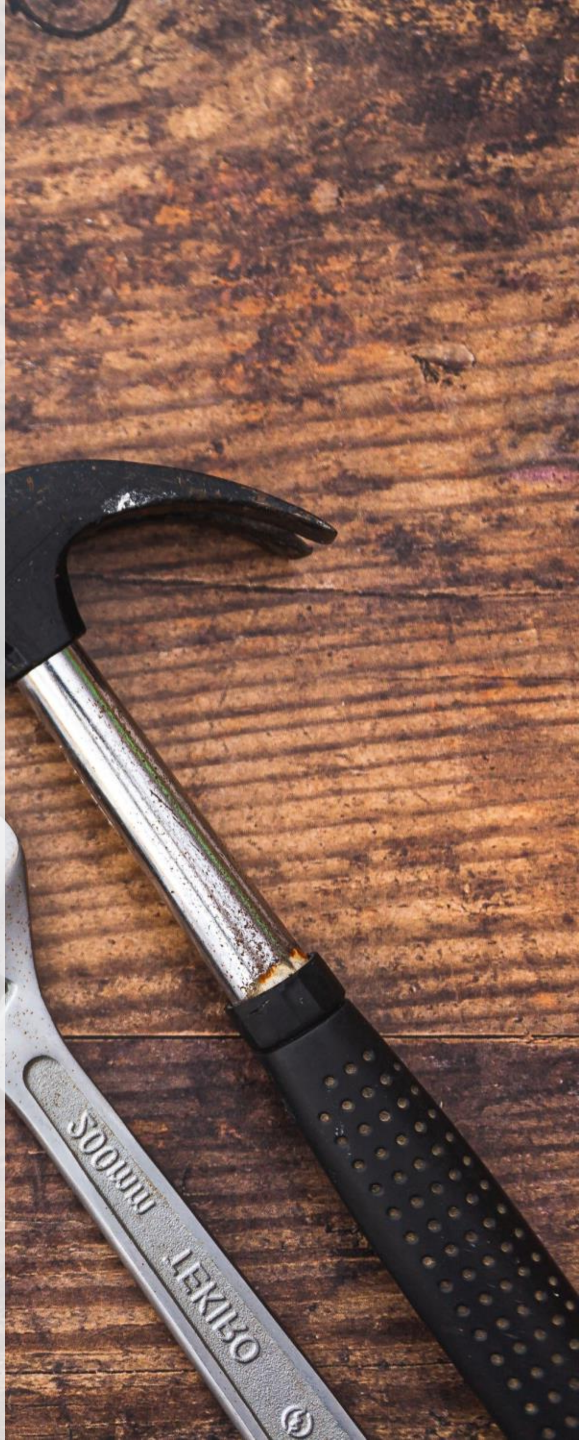
Material

Material Impacts

Construction Material Costs Continue Cooling Down as Commodities Soften



Producer Price Indices Remained Flat

- The PPI for Building Materials and Supplies Dealers showed traits of stability over the last quarter following two consecutive quarters of double-digit decline.

Commodities Costs Continue to Stabilize

- Steel and lumber costs have continued trending downward from their previous highs while cement and copper costs continue to steadily rise.
- Overall, commodities costs are expected to show fewer fluctuations compared with early-2022 in the coming quarters.

Construction Materials

- In general, construction materials costs are still higher than this time last year but have slowed since their hyper-escalation of 2021-22.
- The previous volatility of construction materials prices has continued to slow as costs have remained flat for two consecutive quarters.

Producer Price Index: Building Materials Dealers

Minor Changes Only Over the Past Quarter

Prices charged by producers as they exit through factory gates had a 2% quarterly increase as commodity values stabilized.

After two consecutive quarterly decreases of 10% or more, Q4 2022 saw a minor increase.

GRAPH: Building Materials and Supplies Dealers PPI

Source: PPI industry data for Building materials and supplies dealers | BLS, CBRE Cost Consultancy
Note: Line graph reflects trends | Bar graph reflects quarterly increase/decrease changes

Construction Material Costs

Construction Material Costs Are Still Higher Than Last Year, But Remain Stable for the Past Two Quarters

Engineering News-Record (ENR) publishes monthly 20 city averages for cost indices, wages and material prices. The cost index average continued to rise year over year for construction materials but has remained nearly flat since October 2022.

Construction materials continue to face strained manufacturing conditions, reduced supplies, and lead time issues which are keeping material costs elevated from last year.

The Producer Price Index (PPI) for net inputs to construction industries and goods remains higher than last year by **+4.9%** but has slowed and declined month-to-month since October 2022 to **-2.4%**.

Previous early indicators have confirmed a recent softening in material costs.

GRAPH: ENR Materials Cost Index (YTD)

GRAPH: PPI for Inputs to Nonresidential Construction

Source: ENR Construction Confidence Index | ENR, CBRE Cost Consultancy

MATERIAL IMPACTS

Major Commodities Costs

Lumber & Wood and Iron & Steel Continue to Decrease as Cement Concrete Cost Trends Upwards

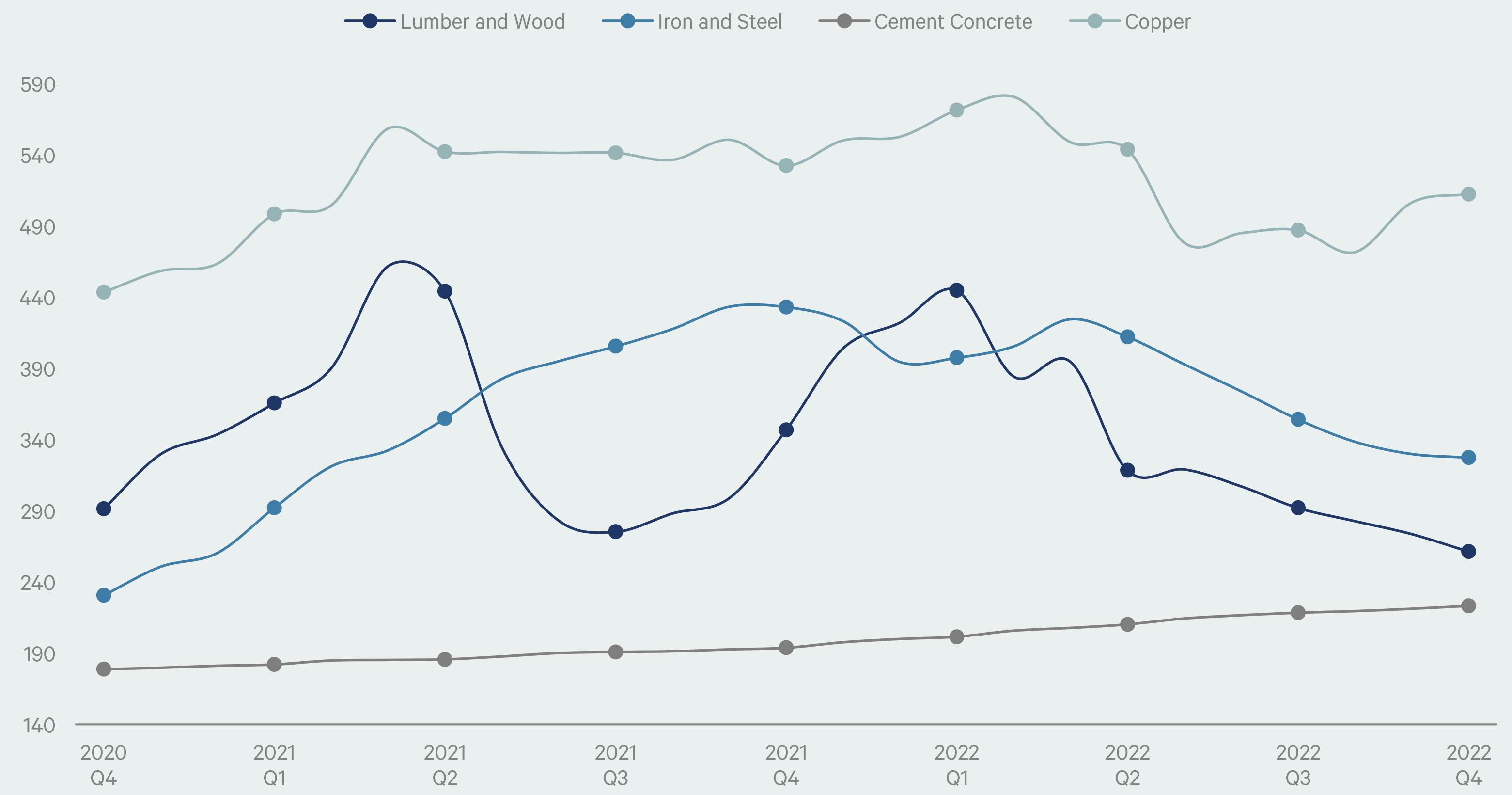
After a continued drop in Q3 of 2022, lumber costs decreased again by -11% in Q4 of 2022. This now represents a decrease for three consecutive quarters. The continued decrease in cost could represent a slowed demand for lumber and wood.

Iron and Steel costs decreased in Q4 2022 by -8% which is a continued decline from last quarter.

Concrete costs continue to show a steady increase potentially due to several major infrastructure projects in the public sector coupled with significant industrial growth.

Copper and copper products costs are still somewhat volatile with a 5% increase over the past quarter.

GRAPH: Major Construction Commodities PPI



Source: Lumber and Wood, Iron and Steel, Cement Concrete, Copper and Copper Products Producer Price Index by Commodity, Index 1982=100 | St. Louise FRED, CBRE Cost Consultancy
Note: Line graph reflects trends

Product Cost Changes

Electrical Products Represent the Top Quarterly Movers

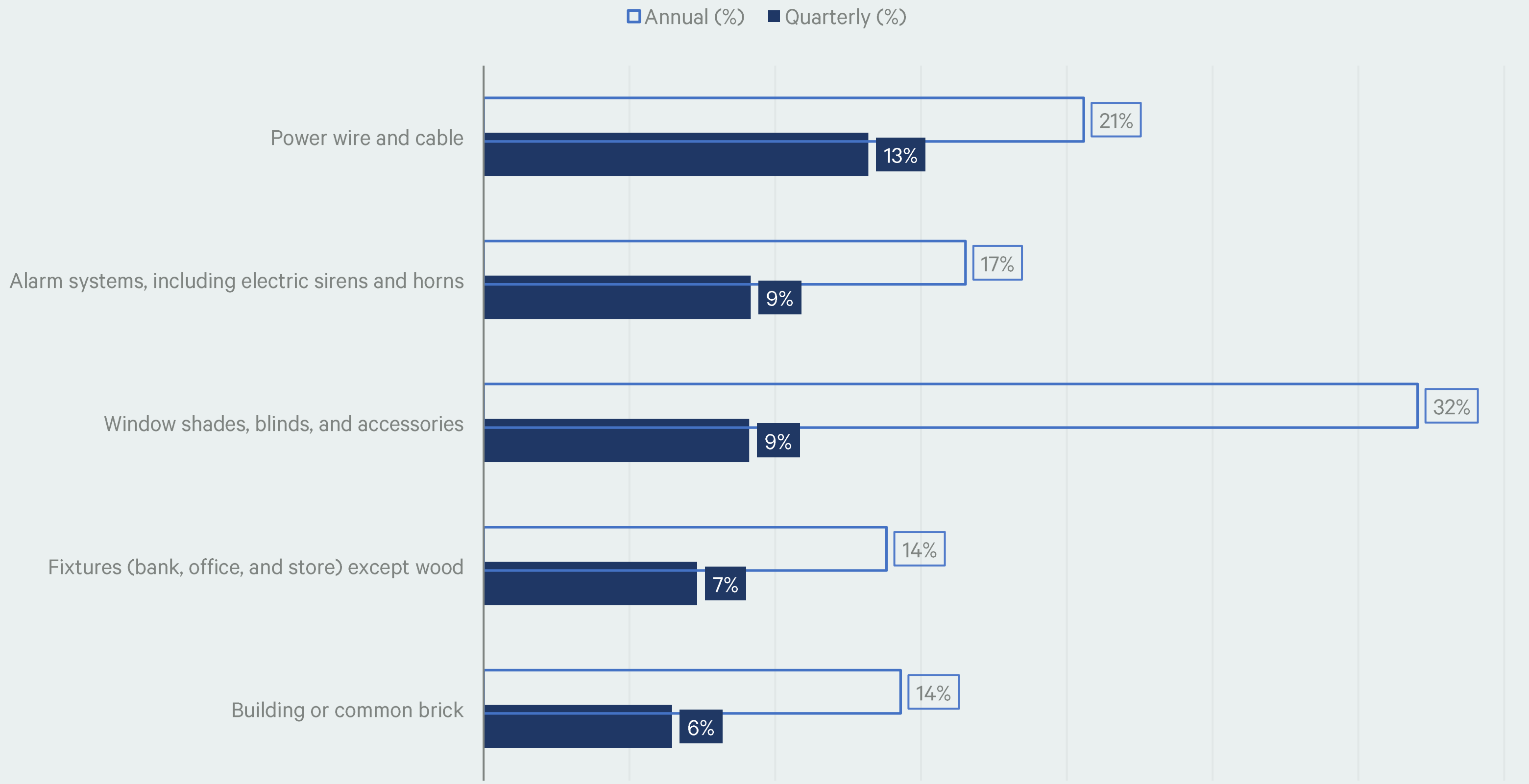
This quarter, the top three (3) products that have seen significant cost changes are as follows:

- Power Wire and Cable: +**13%**
- Alarm Systems: +**9%**
- Window Shades: +**9%**

Other construction products facing noteworthy cost changes this quarter include:

- Office, Bank Fixtures: +**7%**
- Common Brick: +**6%**

GRAPH: Top 5 Quarterly (%) Cost Movers



Source: Bureau of Labor Statistics, CBRE Cost Consultancy

Major Commodity Cost Fluctuations

The Majority of Major Commodities Costs Continue to Decline

- Most commodities have shown a quarterly decrease in cost.
- In general, commodities costs are down compared with last year.
- It is anticipated that commodities will continue to normalize over the next year.

CHART: Divisional Commodity Changes (%)

DIVISIONAL COMMODITY PRICE MOVEMENT			2020 Dec	2021 Mar	2021 Jun	2021 Sep	2021 Dec	2022 Mar	2022 Jun	2022 Sep	2022 Dec
Metals	Steel Mill Products	Quarterly (%)	10.97%	35.09%	28.90%	21.86%	7.47%	-16.26%	11.57%	-14.49%	-10.81%
		Annual (%)	5.23%	41.18%	89.20%	135.49%	128.05%	41.36%	22.36%	-14.15%	-28.75%
	Iron and Steel	Quarterly (%)	12.43%	26.66%	21.46%	14.30%	6.80%	-8.22%	3.69%	-14.08%	-7.56%
		Annual (%)	11.29%	38.75%	74.40%	97.69%	87.80%	36.08%	16.18%	-12.67%	-24.41%
Woods, Plastics, & Composites	Softwood Veneer and Plywood	Quarterly (%)	-11.65%	40.08%	56.97%	-57.04%	16.85%	55.70%	-18.22%	-13.68%	-12.03%
		Annual (%)	54.68%	99.83%	198.15%	-16.55%	10.37%	22.67%	-36.08%	28.44%	-3.31%
	Plywood	Quarterly (%)	-8.44%	28.22%	44.26%	-44.57%	11.40%	36.50%	-12.70%	-7.91%	-7.54%
		Annual (%)	30.73%	59.83%	123.68%	-6.13%	14.22%	21.59%	-26.42%	22.25%	1.46%
Thermal & Moisture	Thermoplastic Resins & Plastics Materials	Quarterly (%)	8.63%	21.65%	14.64%	4.85%	-4.59%	-3.69%	7.25%	-7.09%	-10.17%
		Annual (%)	7.18%	28.76%	61.96%	58.84%	39.51%	10.45%	3.33%	-8.44%	-13.80%
	Aluminum Sheet, Plate, and Foil	Quarterly (%)	3.60%	5.69%	13.22%	7.15%	-1.21%	11.83%	-7.42%	-9.98%	-2.84%
		Annual (%)	-4.08%	5.51%	33.44%	32.83%	26.66%	34.02%	9.59%	-7.93%	-9.45%
Finishes	Floor Coverings	Quarterly (%)	0.46%	0.66%	1.91%	1.93%	1.66%	-0.92%	-1.02%	2.30%	1.51%
		Annual (%)	0.41%	0.40%	2.94%	5.03%	6.29%	4.62%	1.62%	1.99%	1.85%
	Gypsum Building Materials	Quarterly (%)	4.47%	5.95%	10.53%	2.74%	2.24%	5.39%	7.47%	3.87%	-0.08%
		Annual (%)	4.65%	7.08%	20.80%	25.69%	23.01%	22.36%	18.97%	20.27%	17.54%
HVAC & Mechanical	Copper & Copper Alloy Sheet, Strip & Plate	Quarterly (%)	8.96%	8.18%	6.19%	0.39%	-0.17%	13.61%	-3.74%	-9.90%	5.93%
		Annual (%)	20.15%	36.30%	42.46%	25.66%	15.13%	20.91%	9.59%	-1.64%	4.36%

Source: Bureau of Labor Statistics, CBRE Cost Consultancy
Note: Annual changes are measured month to month

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Supply Chain

SUPPLY CHAIN IMPACTS

Supply Chain Disruptions

Skilled Labor Challenges Persist, but International Markets Open Up as COVID Restrictions are Eased

Petroleum Costs See Significant Cost Reductions From 2022 Highs

- Diesel costs are now down more than 26% from their highs last June as shipping and trucking prices begin to level off. Regular gasoline is down more than 33% since that same timeframe last summer when it hit an all time high of $5.01/gallon.

Freight Index Continues Its Decline

- The General Freight Trucking Index fell for the second consecutive quarter reaching a value not seen since Q4 2021.
- Overall shipping and trucking costs are still significantly higher than pre-pandemic, but some experts predict a return to those levels over the next year.

Increased US Manufacturing Despite Labor Challenges

- After suffering through the supply chain woes of the early pandemic, many clients and design teams began looking for domestic products to incorporate into their projects. That being said, there are currently more than 800,000 open and unfilled US manufacturing jobs, a 174% increase since the pandemic began in 2020. Manufacturers have not been spared from the labor woes that have continued to challenge the construction and shipping industries.
- Despite these challenges, manufacturing output increased 1.0% in January according to the Federal Reserve, and accounts for 11.3% of the total US economy. This trend is set to continue as the demand for US goods grows.

Gasoline & Crude Oil Costs

Petroleum Costs Continue to Fall Towards 2021 Levels Easing the Strained Logistics Industry

Increased fuel costs have contributed to already strained supply chains as well as elevated material costs nationwide.

With these increases, petroleum-based products such as plastics and asphalt will continue to face challenges to maintain current price levels. However, average regular gas costs have declined -$1.67/gallon from their all-time highs ($5.01/gallon) in June 2022 and have **decreased 8.4%** since last quarter.

Diesel fuel reached an all-time high of $5.81/gallon in June 2022 but is now down to $4.29/gallon in February 2023. This was a **13.7% decrease from the previous quarter.**

-$0.27 / Gallon

Reported 2/28/2023
Decrease in the US National Yearly Average for a gallon of regular gasoline

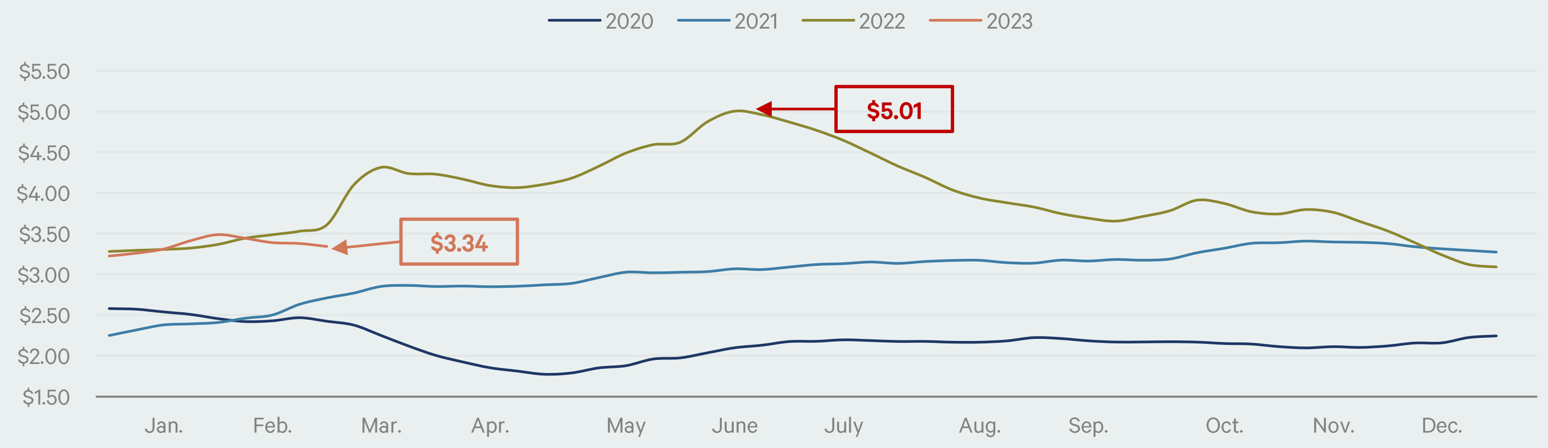
$76.95 / Barrel

Reported 2/28/2023
Cost of US WTI Crude Oil; -$18.77/barrel (-19.6%) lower than this time last year

$4.29 / Gallon

Reported 2/27/2022
Cost of US No. 2 Diesel; -$0.19/gallon (-4.22%) lower than this time last year

GRAPH: US Regular Retail Gasoline Price Comparison ($/Gallon)



Source: US Energy Information Administration, AAA

Supply Chain Impacts

ACM Panels, Electrical Transformers See Elevated Lead Times; Steel Joists & Decking Re-enter The Discussion

Supply chain chaos continues throughout the industry. Product availability will continue to face challenges in production and delivery. The lead times shown here are the delta from the previous quarter.

Key Factors Currently Impacting Material Availability

- Ongoing Supply and Logistics Issues
- Shutdowns in Manufacturing Hubs
- Rise in Energy Costs
- Increased Construction Project Volume
- Skilled Labor Force Scarcity
- Continued Surge in Inflation

+6 weeks
acm metal panels

A continued strain of obtaining raw aluminum has been further aggravated by the ongoing conflict in Ukraine. Both Ukraine and Russia were leading producers of aluminum prior to the Russian invasion last February, and raw aluminum remains a significant component of myriad construction materials.

+4 weeks
elec. transformers

With a limited pool of US manufacturers, delays for transformers have been caused by constraints on labor and materials as well as production capacity. Most transformers come from foreign sources which have added to those lead times for transit and delivery in addition to material component sourcing.

+4 weeks
steel joists & decking

2021 saw bar joist lead times of 9 months or more but recovered to more "typical" lead times in mid-2022 as manufacturers were able to catch up with demand. That sustained demand has again seen lead times for steel joists and metal decking again tick upward.

Supply Chain Impacts

Roofing Membranes & Mechanical Equipment Experience Reprieve from Previously Elevated Lead Times

Supply chain chaos continues throughout the industry. Product availability will continue to face challenges in production and delivery. The lead times shown here are the delta from the previous quarter.

-14 weeks
roofing membranes

Previous shortages and lead time delays due to shipping challenges, raw material procurement issues and labor shortages have been eased as domestic manufacturing competition has increased, and supply chain woes have lessened.

-14 weeks
rooftop units / ahus

One of the major challenges that previously threatened and delayed mechanical equipment was the lack of semiconductors. While still an issue, it has eased slightly and helped contribute to shorter lead times. Overseas delivery problems have also lessened as more of the world eased COVID restrictions.

-10 weeks
hvac vav boxes

Many of the reasons listed for mechanical rooftop units and air handler units also applies to variable air volume (VAV) boxes availability. Sheet metal and components have become somewhat more available as manufacturers begin to catch up with increased demand seen last year.

Lead Time Projections

HVAC Equipment Lead Times Still Longer Than Normal, But See Relief; Electrical Equipment Availability Remains Challenged

The supply chain remains in a fragile state with extremely long lead times for certain items. Some materials have become more readily available, but that is not the overall trend. The logistics industry remains strained at best with a lack of skilled drivers, increased costs of trucking materials, continued congestion at American ports, and political tensions increasing overseas.

Regional, project by project and case by case may vary, but these are some of the key items that are currently experiencing availability issues. These are not the only items markets are experiencing issues with, but simply some of the most notable at the moment. One item to note for this quarter is the variation in lead times collected across the country. There were significant differences seen based on the contractors surveyed for various reasons for multiple items. The CBRE Market Trends Team has attempted to represent those differences with lead time ranges.

CHART: Lead Time Changes

Trade Item / Material	Current Lead Time	Change from Prev. Quarter	Delta to Prev. Quarter
Concrete	4-5 weeks	+1 weeks	+33%
Architectural Brick	3-4 weeks	+1 weeks	+25%
Metal Decking	16-20 weeks	+4 weeks	+33%
Open Web Steel Joists	20-24 weeks	+4 weeks	+25%
Roofing Membranes	8-12 weeks	-14 weeks	-57%
ACM Metal Panels	12-16 weeks	+6 weeks	+100%
Wood Doors	14-16 weeks	-4 weeks	-22%
HM Doors	8-10 weeks	+2 weeks	+33%
Paint	3-4 weeks	+2 weeks	+200%
HVAC VAV Boxes	8-10 weeks	-10 weeks	-57%
HVAC Controls	10-12 weeks	-4 weeks	-33%
HVAC AHUs and RTUs	24-36 weeks	-14 weeks	-28%
Electrical Panels	24-36 weeks	no change	0%
Transformers	22-26 weeks	+4 weeks	+22%

Source: ENR, Aggregated Multiple General Contractors' Reports

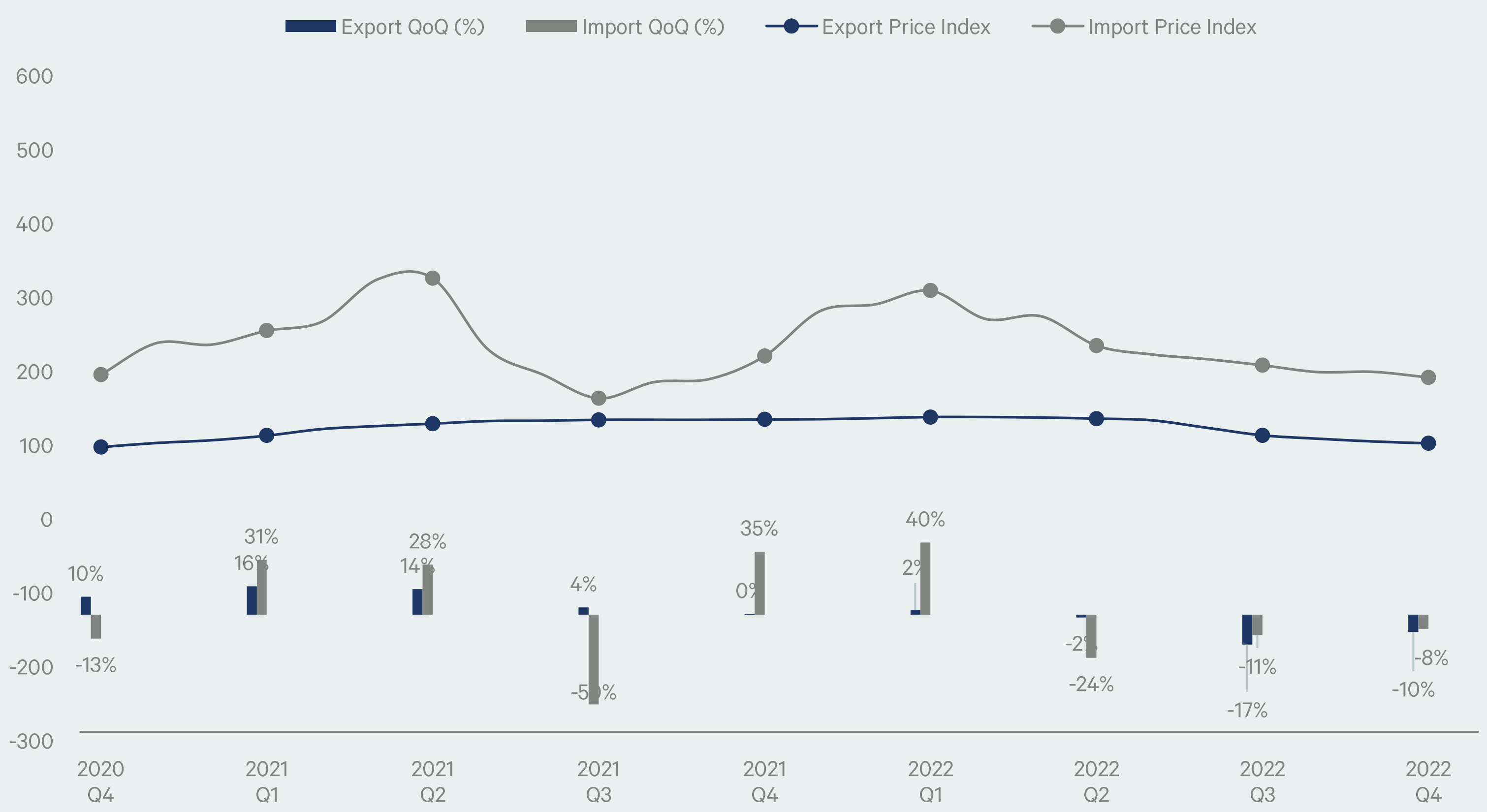
Lumber Products

Fewer Imports and Exports Continue to Reflect Reduced Demand

The lumber export rate decreased by -10% last quarter. Additionally, lumber import rates dropped in Q4 2022 by -8% after continued decreases throughout 2022.

Both import and export costs for lumber have stabilized as supply and demand balanced in Q2 2022. A slowdown in single-family development projects appears to be the main cause of this recent equilibrium.

GRAPH: Lumber Imports vs Exports Index



Source: Logs & Lumber, Export Price Index (End Use), Index 2000=100 | Logs & Lumber, Import Price Index (End Use), Index 2000=100 | FRED, CBRE Cost Consultancy
Note: Line graph reflects trends | Bar graph reflects quarterly increase/decrease changes

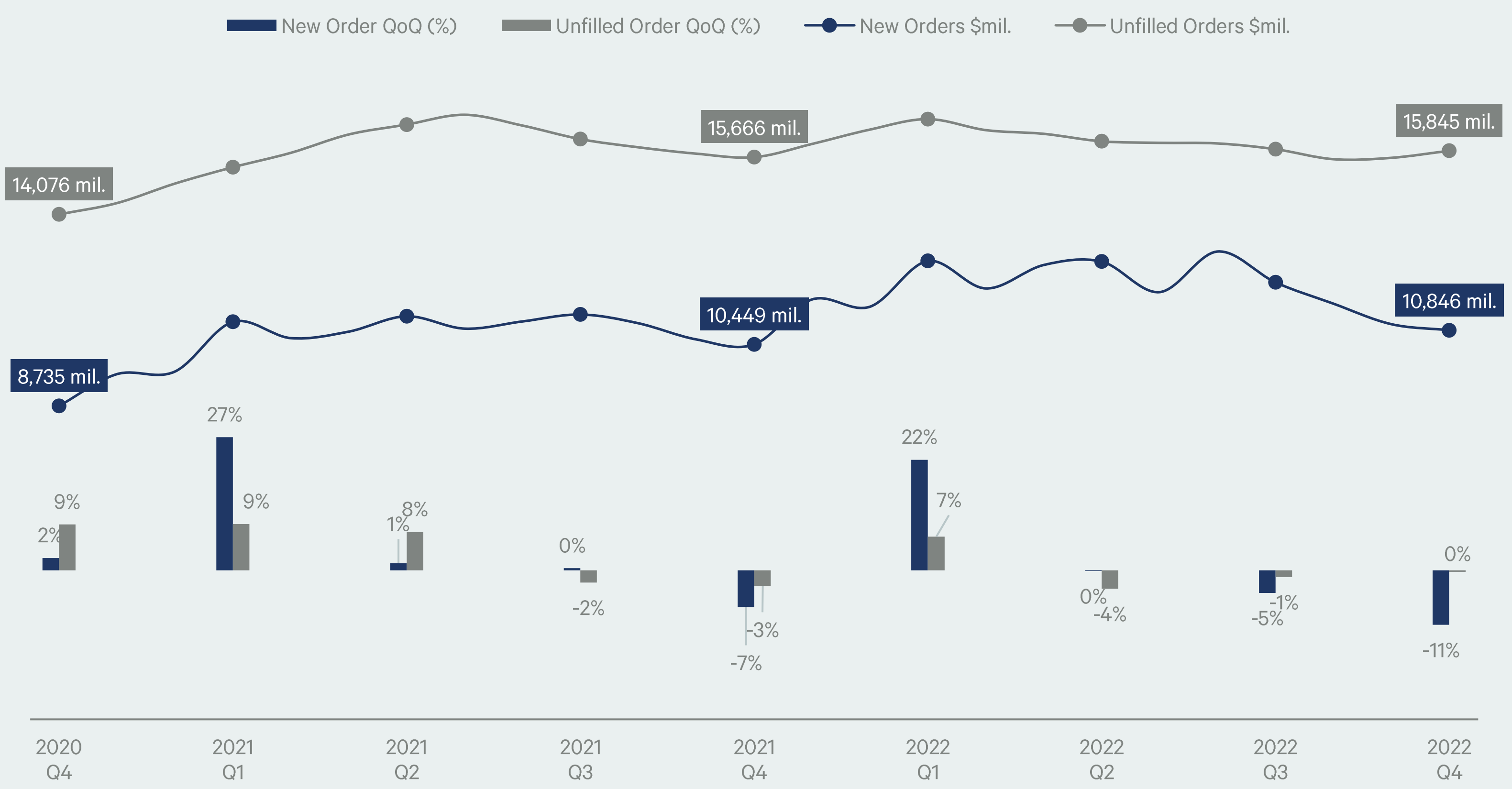
Iron and Steel Orders

Fewer New Orders and Minor Changes in Unfilled Orders Continue to Show Lower Demand

Iron and Steel products unfilled orders did not show any significant changes in Q4 2022. Conversely, demand has been trending downward over the past quarter.

New orders have also dropped by -11% after a significant spike in Q1 2022.

GRAPH: Iron and Steel New Orders vs Unfilled Orders



Source: Iron & Steel Products, Export Price Index (End Use), Index 2020=100 | Iron & Steel, Manufacturers' New Orders, Unfilled Orders | FRED, CBRE Cost Consultancy
Note: Line graph reflects trends | Bar graph reflects quarterly increase/decrease changes

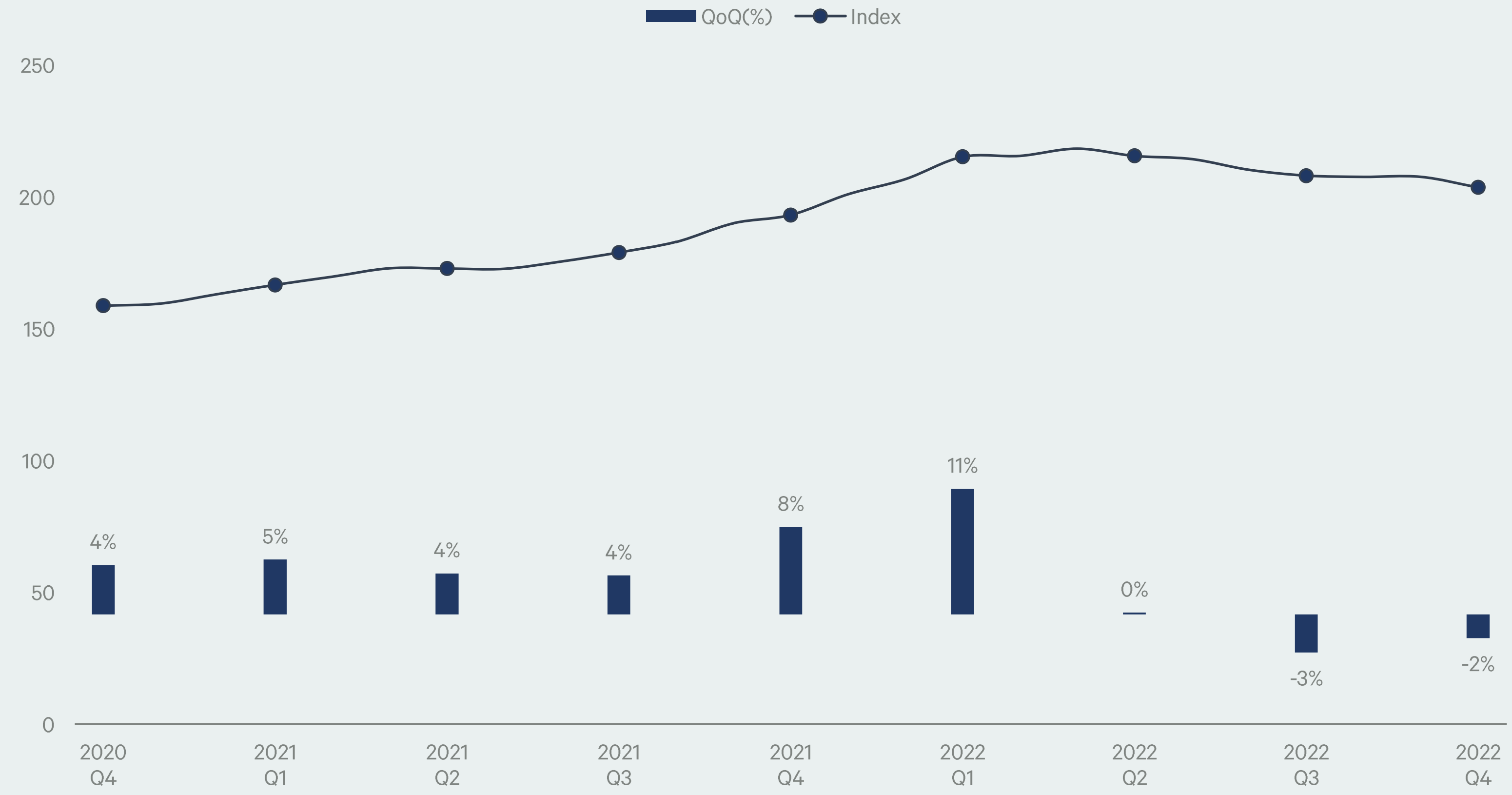
Freight Trucking Costs

Costs Level Off After Two Years of Steady Increases

The general freight trucking cost has continued trending downwards since the beginning of 2022.

The Index decreased an additional **-2%** since last quarter showing signs of a potential recovery.

GRAPH: General Freight Trucking US Index



Source: General Freight Trucking, General Freight Trucking, 2003=100 | Bureau of Labor Statistics, CBRE Cost Consultancy

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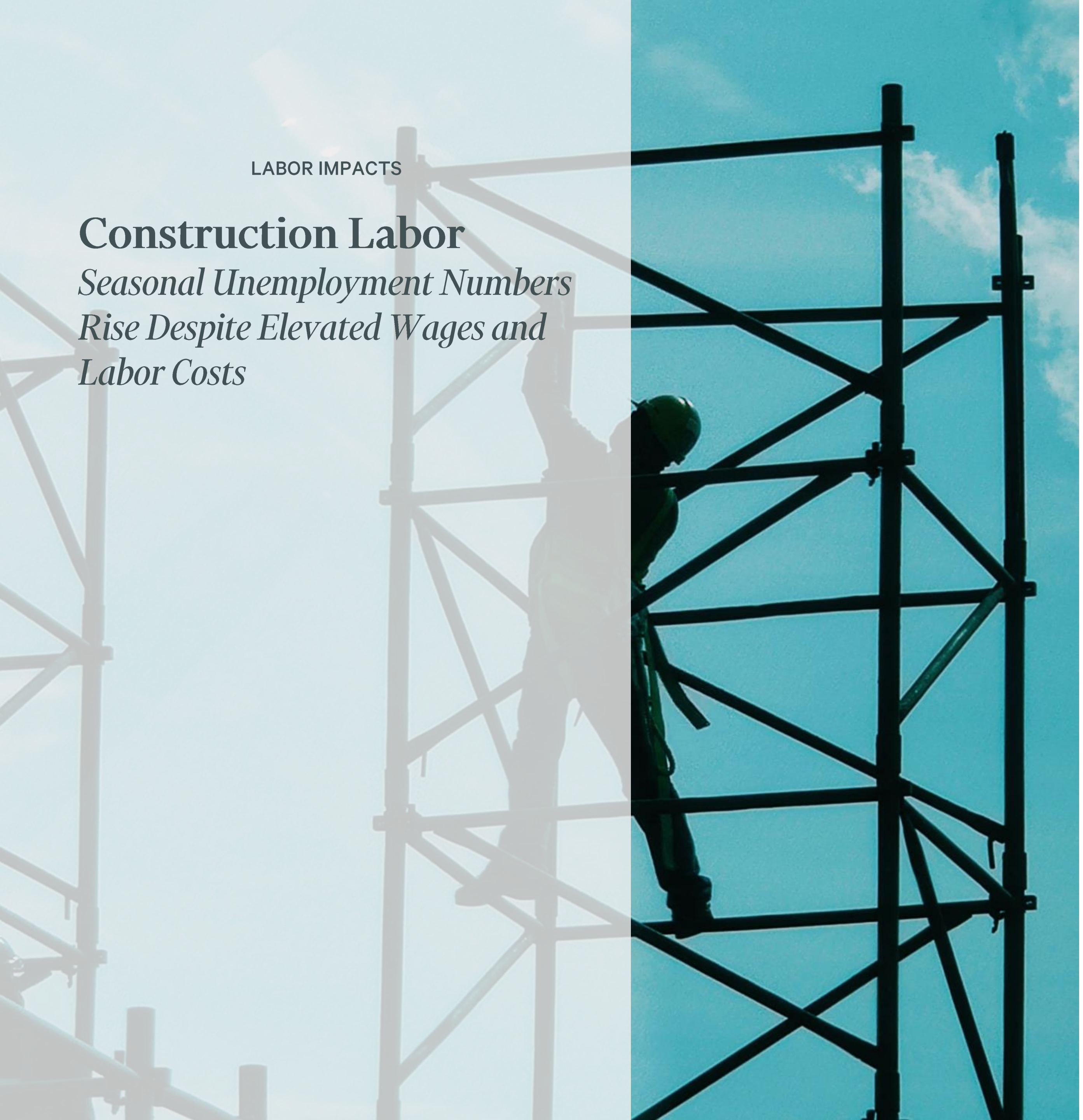
Labor

Construction Labor

Seasonal Unemployment Numbers Rise Despite Elevated Wages and Labor Costs



Construction Workforce Contracts Slightly

- The construction labor force continued to shrink for a second straight quarter as Q4 2022 numbers decreased by -3%.
- Non-seasonally adjusted construction unemployment increased to 6.9% in January (up from 4.4% the previous month) compared with a national unemployment average of 3.4%.

Construction Labor Remains Expensive

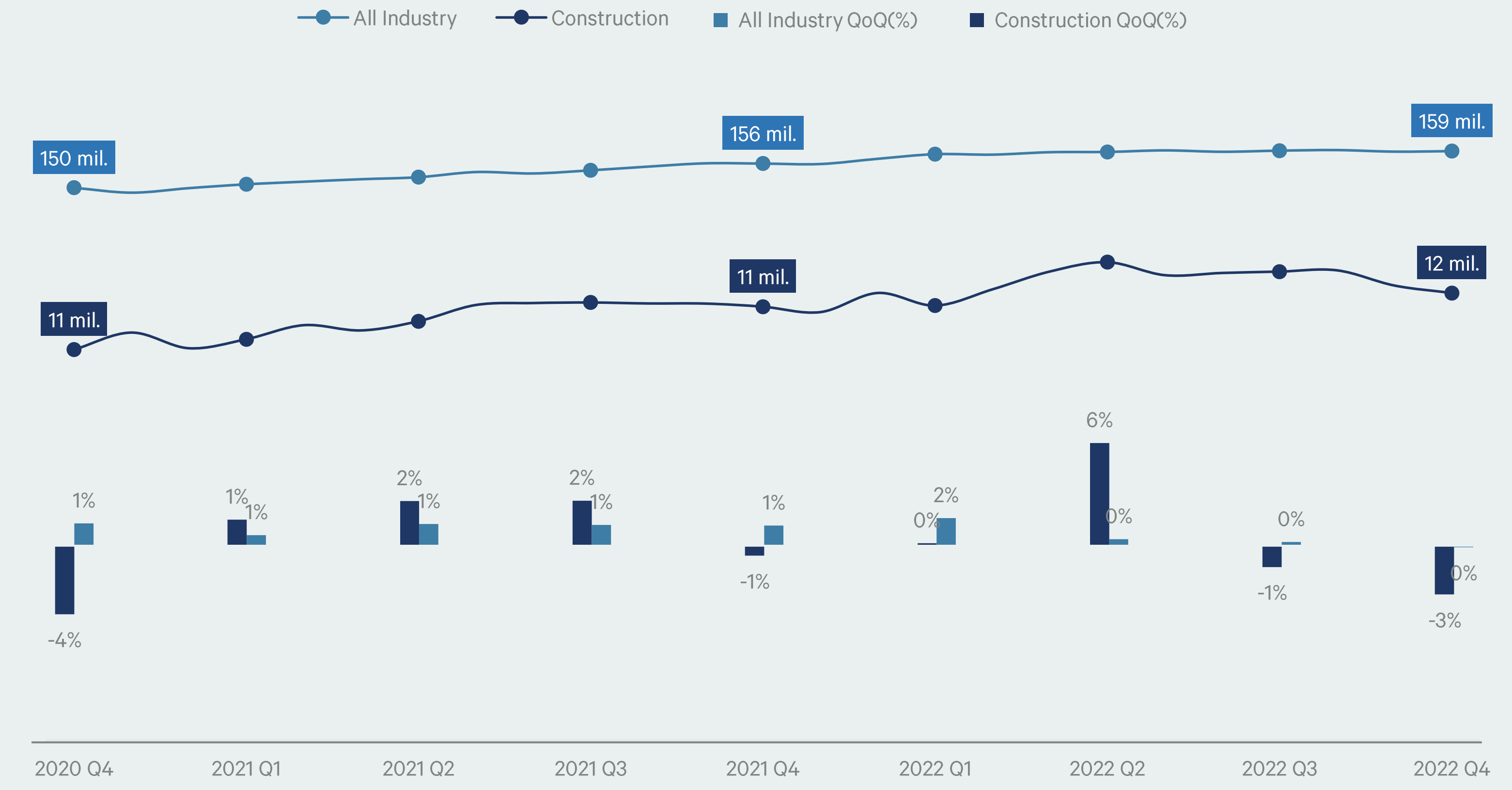
- The construction labor index is up 4.8% from this time last year. Q4 2022 had an increase of 1.3% compared to last quarter. Historically, this index has increased approximately 3.5% YoY since 2017. This trend was broken in 2022 with an increase of 4.8% compared to 2021.
- It is expected that 2023 construction labor will remain higher than normal due to the upward pressures of inflation.

Industry Labor Force

Quarterly Construction Drops -3% While All US Industry Stayed Flat

The entire US industry labor force remained level last quarter while the construction industry showed a slight contraction. This could be explained as seasonal as this trend was similarly represented in both Q4 of 2021 and 2020.

GRAPH: Employment Level All Industry vs Construction Industry



Source: BLS, CBRE Cost Consultancy

Unemployment Rates

Construction Unemployment Rates Jump Upward as Winter Marches On

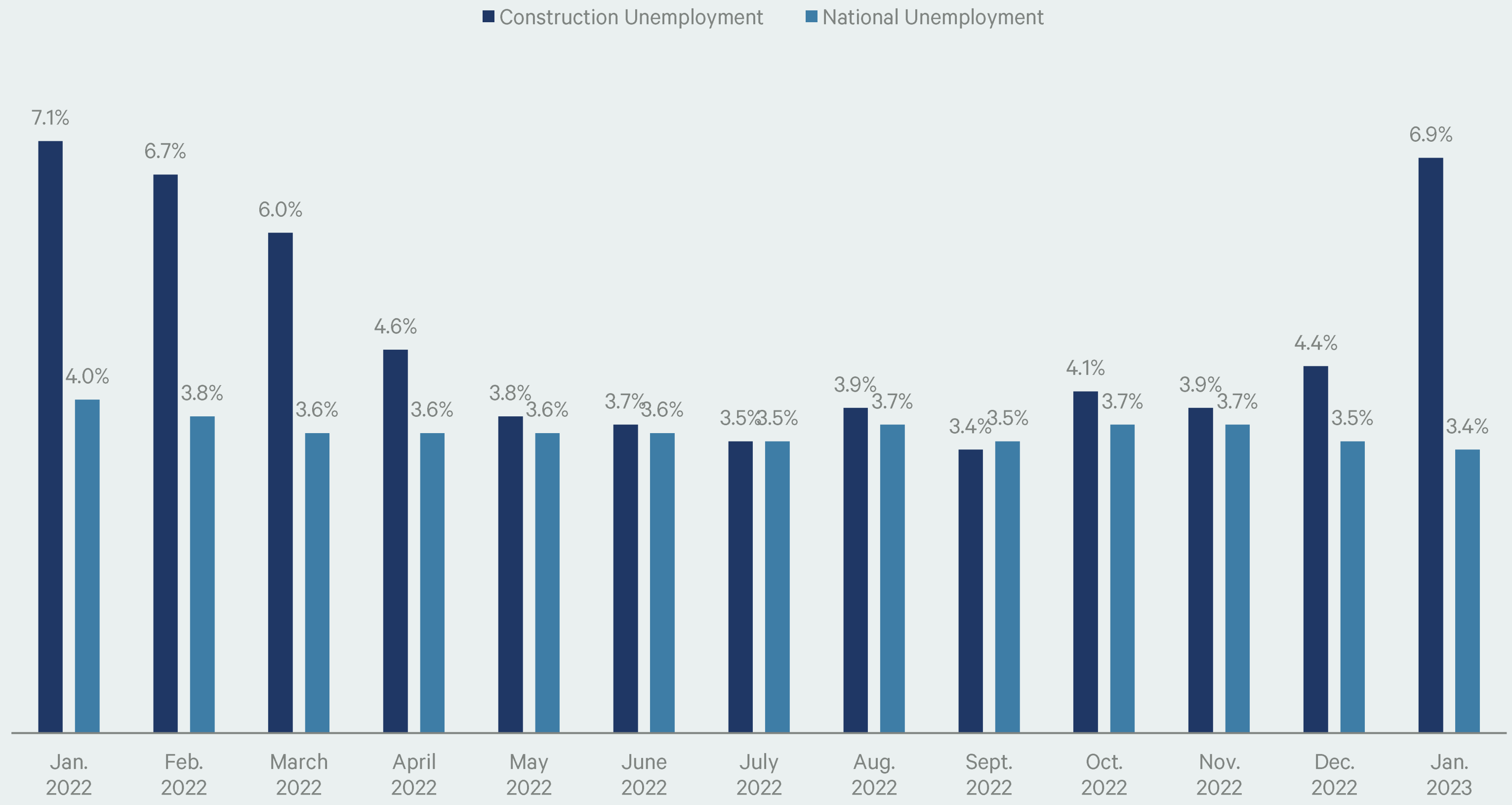
Data provided by the US Bureau of Labor Statistics shows that the national unemployment rate continued to trend downward since the beginning of last year, indicating significant recovery from the initial pandemic shutdowns.

Both national and construction unemployment have remained relatively flat, and closely tied since April 2022. However, construction unemployment crept upward in December and surged in January. This is most likely seasonally related as the USBLS does not adjust these rates for the construction industry.

Construction Unemployment January 2023 (non-seasonally adjusted)

6.9%

GRAPH: US National vs Construction Unemployment Rates



Source: US National and Construction Unemployment Rates | US Bureau of Labor Statistics, CBRE Cost Consultancy

US Construction Unemployment by State

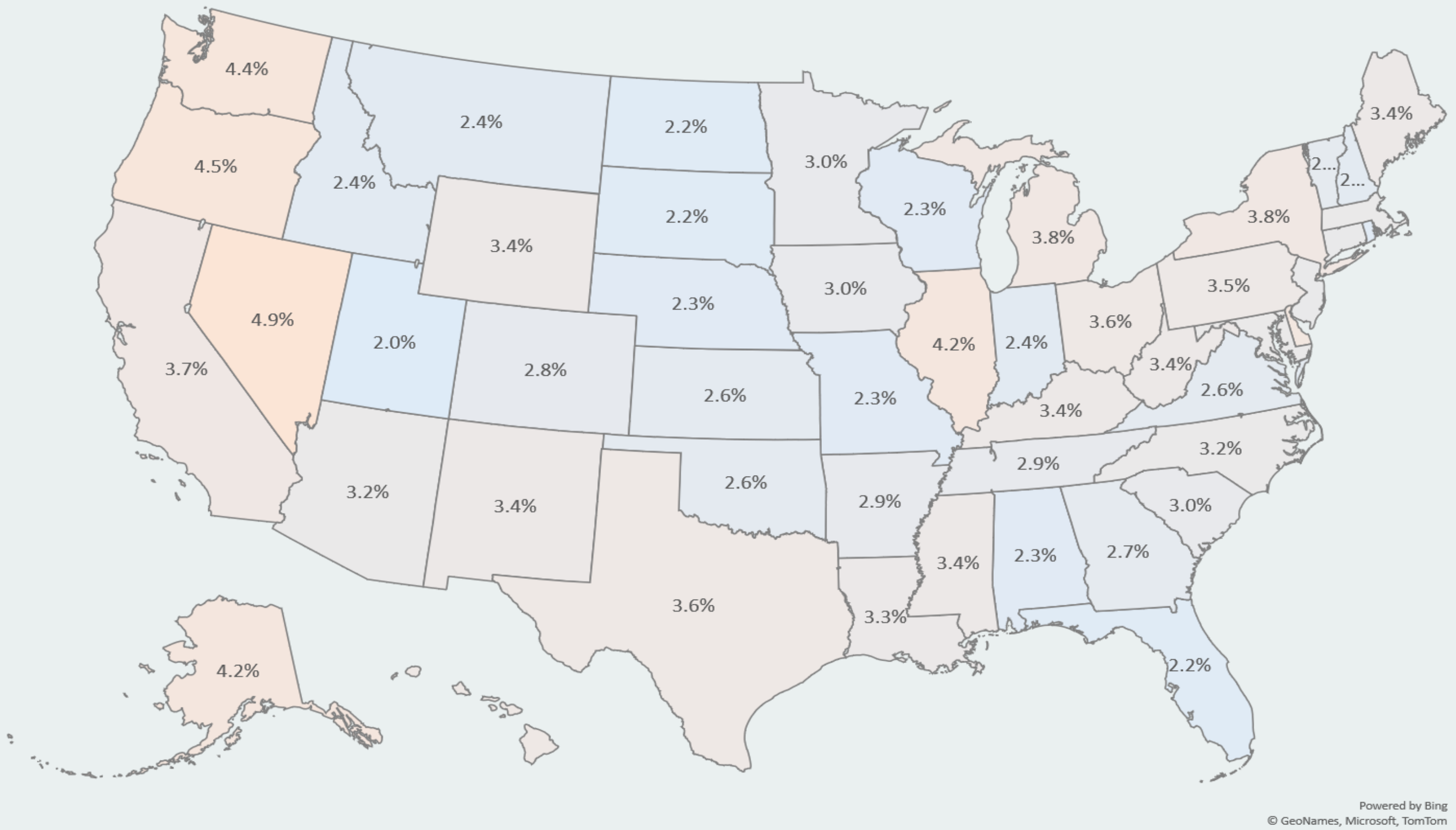
Midwest, New England and Southeast Workers Stay Busy

Construction unemployment remains relatively low nationwide and has been closely tied with the national rate for several months prior to year end fluctuations. Regionally, New England, Midwest, Mid-Atlantic, and Southeast remain strong with unemployment rates in the 2-3% range.

Unemployment Rate Major Movers

- New Mexico (-1.1%), Arizona (-1.0%), Rhode Island (-1.0%), Wisconsin (-0.9%), and Connecticut (-0.8%) showed the largest decreases in quarterly unemployment rates.
- Minnesota (+1.2%), Washington (+0.8%), Alaska (+0.7%), Vermont (+0.6%), and Iowa (+0.6%) increased the most in their quarterly unemployment rates since last quarter.

MAP: December 2022 Unemployment Rates (%)



Source: US National and Construction Unemployment Rates | US Bureau of Labor Statistics, CBRE Cost Consultancy

Construction Employment and Wage Rates

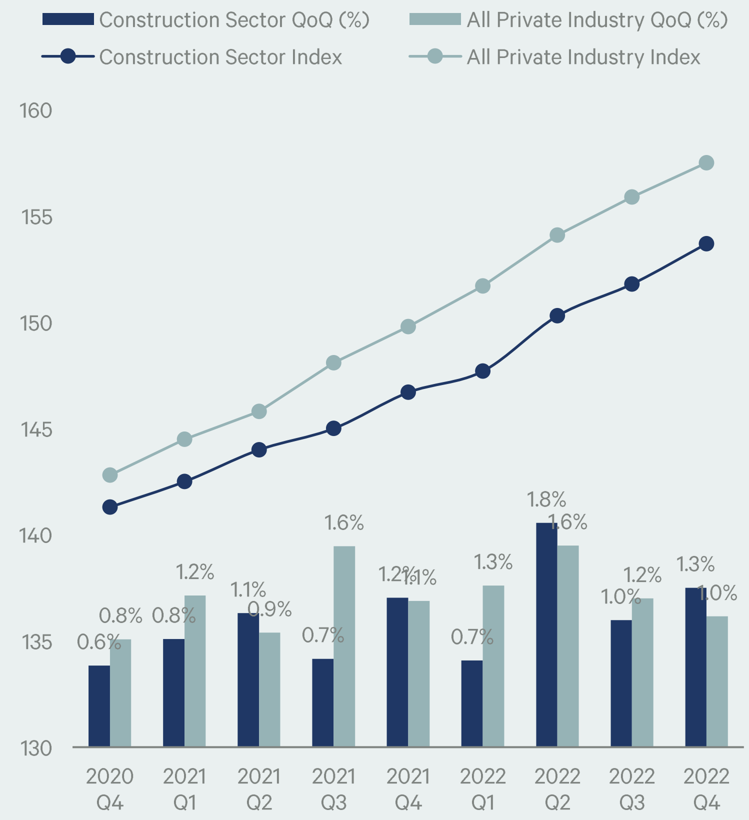
Labor Costs Continue Trending Upwards, Although Not as Fast as Inflation

Both construction and private industry employment costs rose through Q4 of 2022. Construction employment wages and salaries have continued to rise throughout the year due to sustained challenges in a tight labor market.

The quarterly change for hourly wages slightly declined by -0.5% in Q4.

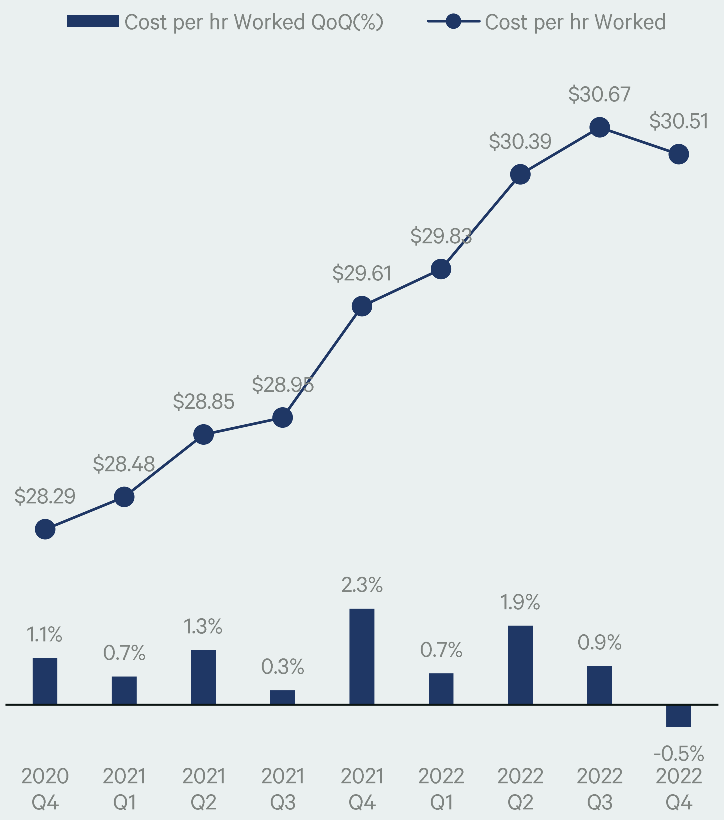
Labor costs will most likely continue to trend upwards as the market struggles to deal with a lack of talent and sustained volume of construction projects.

GRAPH: National vs Construction Employment Cost Index



Source: Employment Cost Index, Wages and Salaries, Index 2005=100 | St. Louise FRED,
Note: Line graph reflects trends | Bar graph reflects quarterly increase/decrease changes

GRAPH: Wage Cost per Hr Worked for Construction Workers



Source: Employer Cost for Employee Compensation, Cost per Hour Worked | BLS
Note: Line graph reflects trends | Bar graph reflects yearly increase/decrease changes

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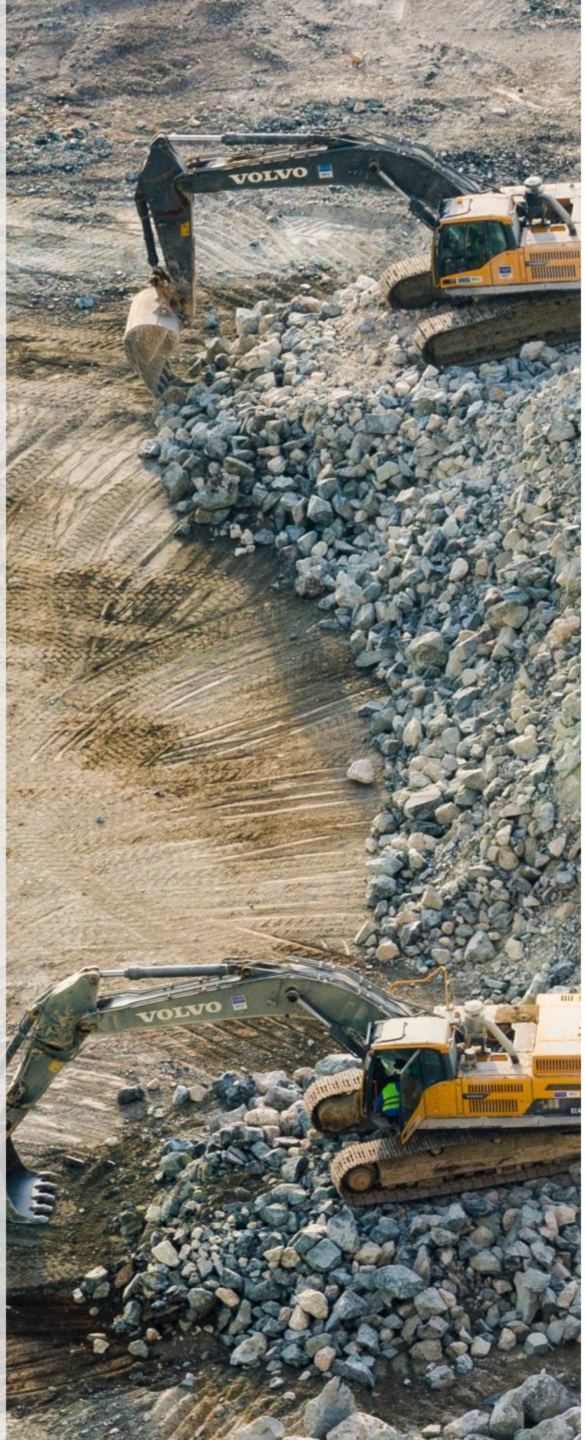
Construction Market Activity

Construction Activity

Contractor Backlog Remains High Despite Conflicting Messages on Future Spend



Contractors Continue to Stay Busy Despite Mixed Confidence

- A significant backlog of work for general contractors and trade subcontractors (9.0 months on average nationally) continued for another quarter.
- Architectural billings and contracts, often an indicator of future construction activity, both declined from Q3 to Q4 2022.

Industry Surveys Mixed for A Second Straight Quarter

- Once again, Dodge Data & Analytics and the Associated Builders & Contractors (ABC) represent growth, while Engineering News Record (ENR) and the American Institute of Architects (AIA) show uncertainty in their most recent publications.

Varied Construction Sector Volume Over the Past Quarter

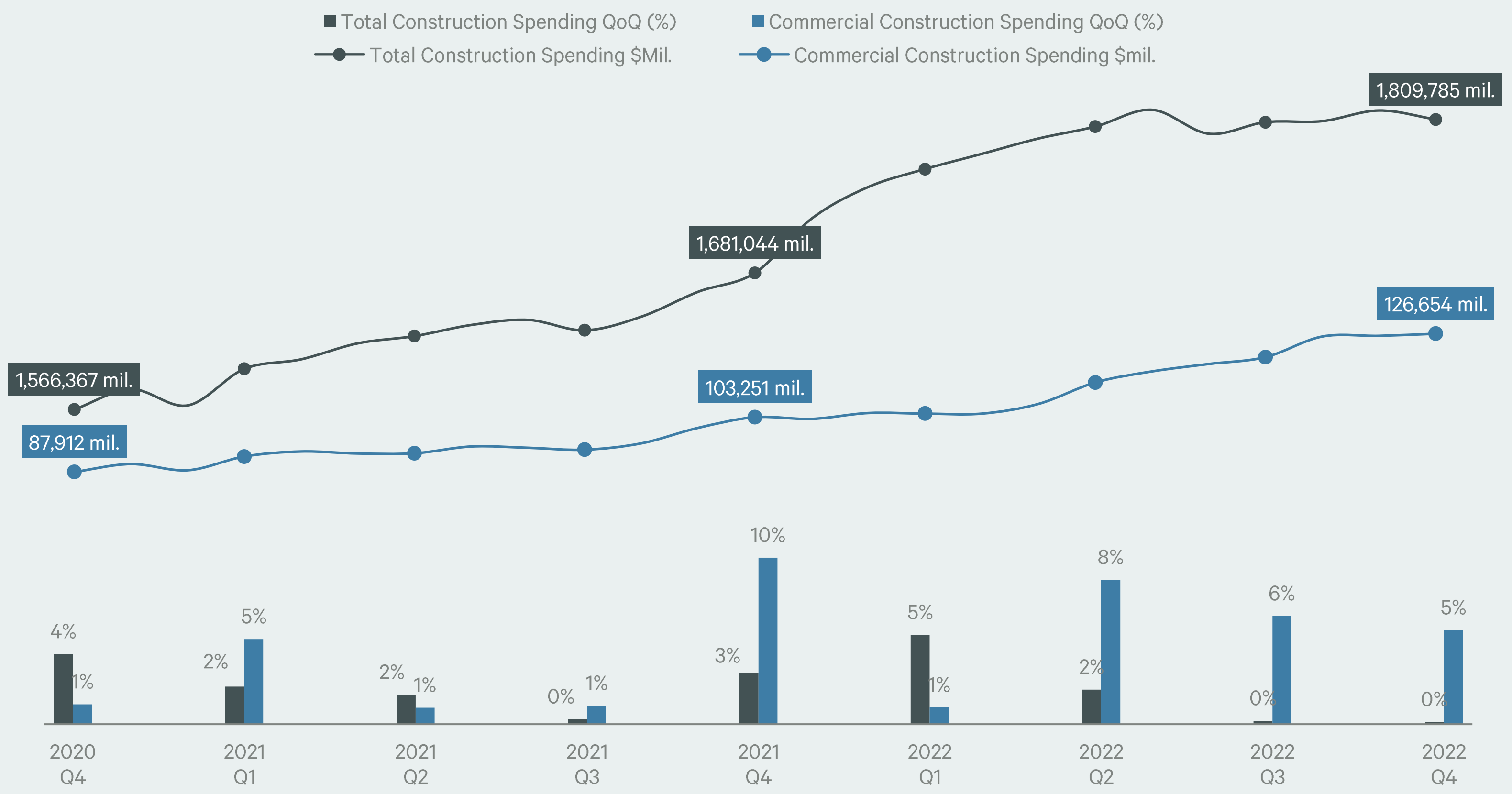
- According to data from the US Census, office and commercial construction volume are still up considerably from this time last year (13.3% and 32.9% respectively) and up moderately (4.7% and 8.7%) on a quarterly basis. This coincides with the total commercial volume represented by the St. Louis FRED that shows a 5% gain this past quarter.
- Residential construction volume is still slightly higher than last year, but down 14.3% since last quarter showing recent uncertainty in the housing market due to elevated interest rates and a glut of new homes. New home starts have now fallen for five (5) consecutive months.

Construction Market Activity

Commercial Volume Continues to Grow

In Q4 2022, commercial construction spend showed 5% growth after an increase of 6% the previous quarter. Total construction spending remained relatively flat for two consecutive quarters after a slight increase of 2% in Q2 2022.

GRAPH: Construction Spending Nation vs Commercial



Source: Total Construction Spending (Public and Private), Commercial Spending (Public and Private), Millions of Dollars | St. Louis FRED, CBRE Cost Consultancy
Note: Line graph reflects trends | Bar graph reflects quarterly increase/decrease changes

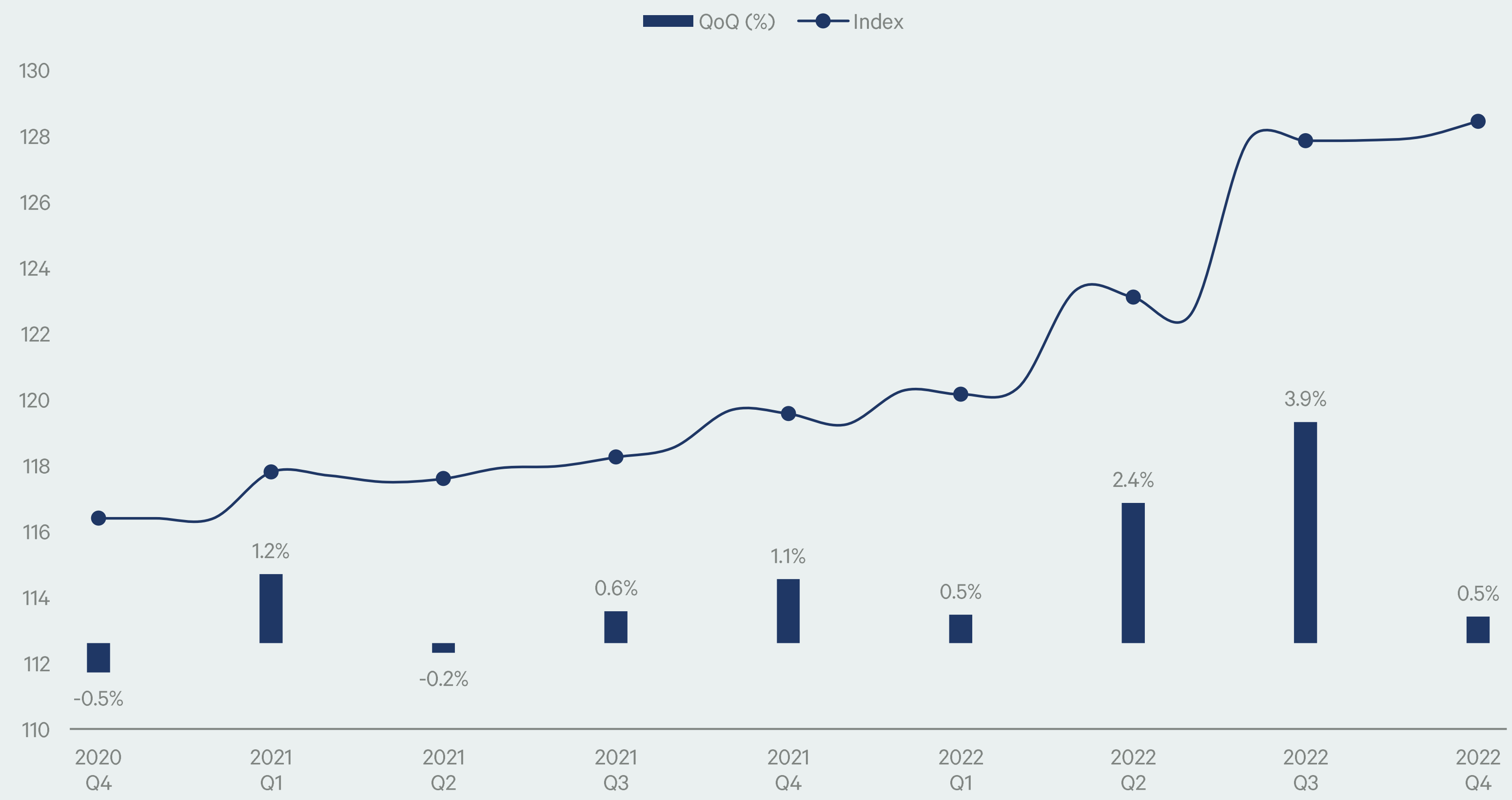
Equipment Rental & Leasing Index

Construction Rental Market Shows a Slight Increase After Q3 2022 Jump

The Construction Equipment Rental and Leasing Index has seen a steady increase since Q1 2021.

Q4 2022 showed a slight increase of 0.5% reflecting continued higher demand.

GRAPH: Construction Equipment Rental and Leasing Index



Source: Construction Equipment Rental and Leasing Index 2003=100 | Bureau of Labor Statistics, CBRE Cost Consultancy
Note: Line graph reflects trends | Bar graph reflects quarterly increase/decrease changes

Construction Volume

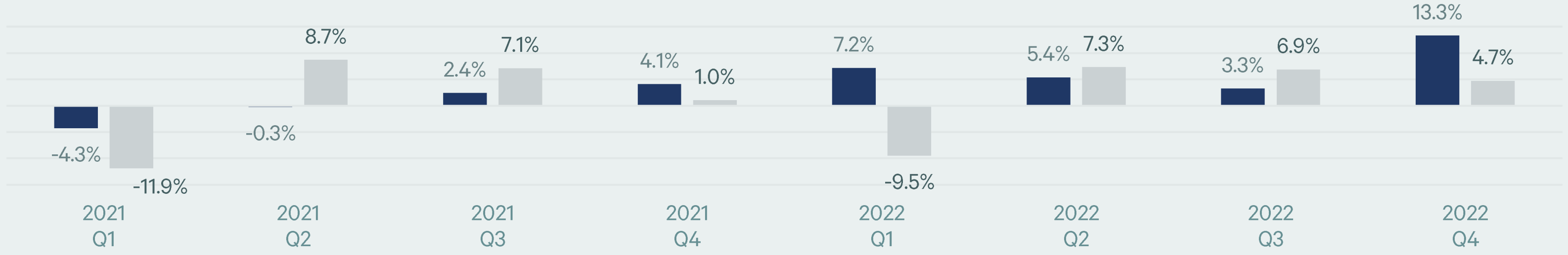
Office and Commercial Sectors Tick Up as Residential Slides to Punctuate the End of 2022

Total year-to-year Office construction volume has remained positive since Q3 of 2021. The quarterly differences have remained generally level for the past three quarters after a sharp decline to start 2022.

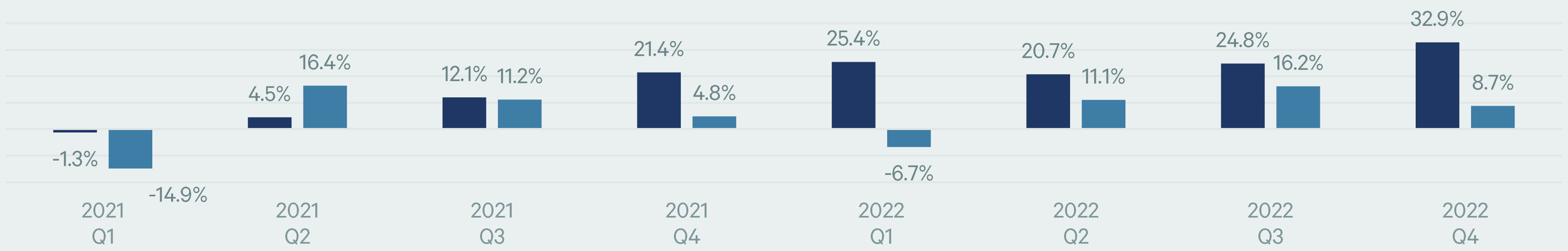
Commercial construction volume has primarily followed Office construction trends for the last two years albeit at a significantly higher rate. Volume is up **8.7%** since last quarter and **32.9%** compared with last year.

Residential construction volume is down significantly compared with last quarter but is still positive compared with Q4 2021. According to the US Census Bureau, “Privately-owned housing starts in February 2023 were at a seasonally adjusted annual rate of 1,450,000. This is 9.8 percent (+/- 15.5%)* above the revised January 2023 estimate of 1,321,000.” This will most likely be reflected when the new data is released in April.

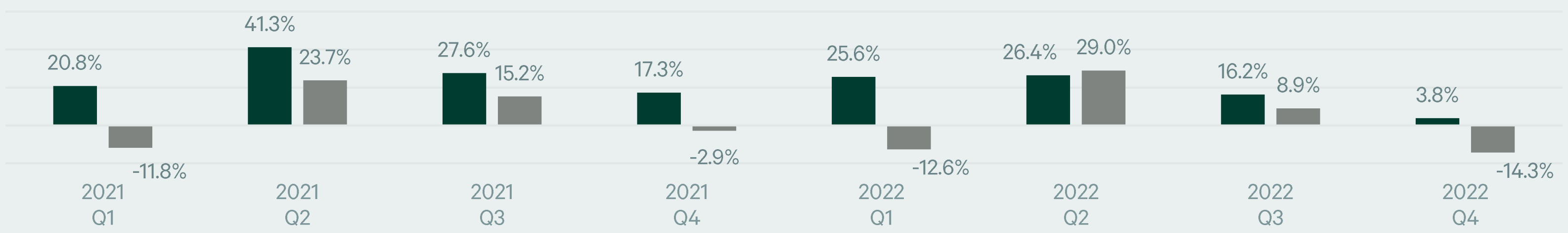
GRAPH: US Office Construction Volume



GRAPH: US Commercial Construction Volume



GRAPH: US Residential Construction Volume



Source: US Non-Seasonally Adjusted Private Construction Volume | US Census, US Department of Commerce

Regional Construction Backlog

Strong Backlog of Work Nationwide Despite Fears of an Industry Slowdown

Associated Builders and Contractors (ABC) reported that its Construction Backlog Indicator went slightly down to 9.0 months in January, according to an ABC member survey conducted January 20 to February 3, The reading is up +1.0 month from January 2022.

Higher demand for construction and fewer General Contractors and Subcontractors to build has led to a reduced number of bidders per project.

Construction Margins, such as OH&P, GR/GC have been somewhat inflated over the past two quarters due to reduced competitiveness in the market.

9.0 MONTHS

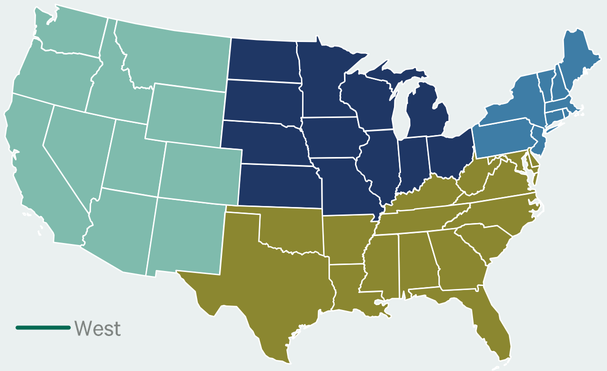
(-0.2 MONTH)

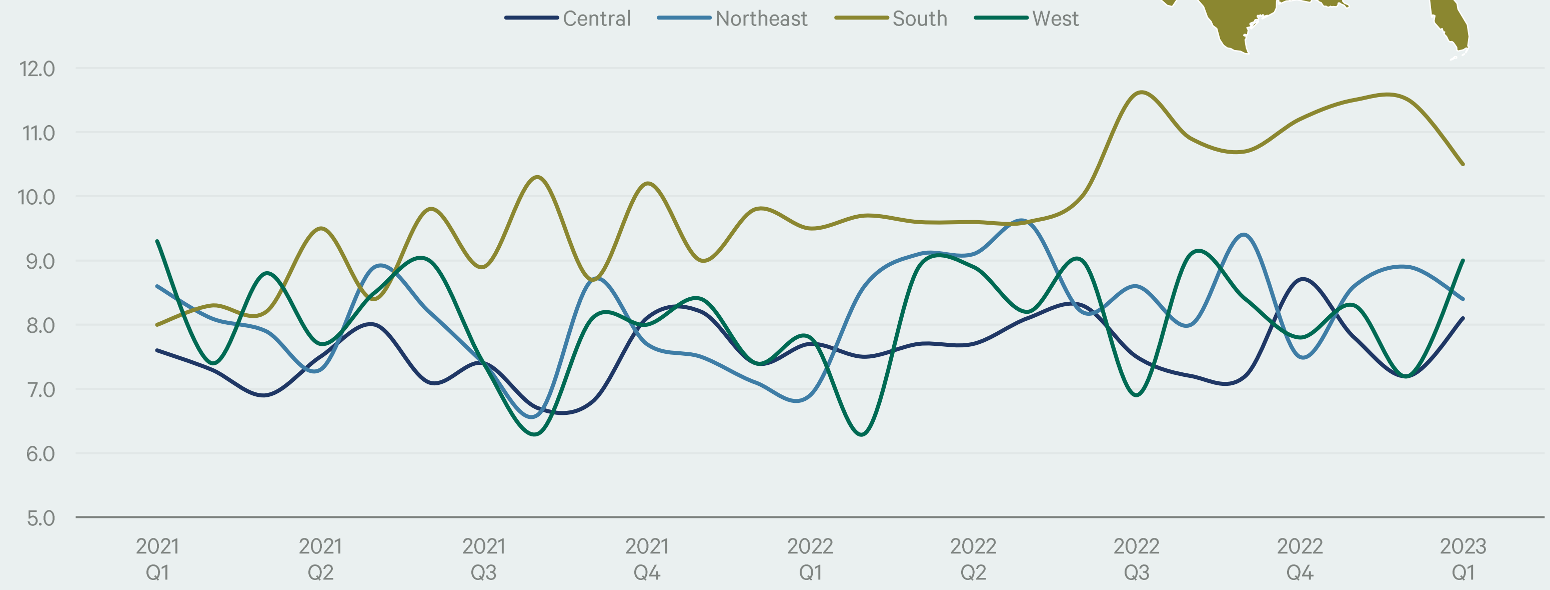
NATIONALLY

GRAPH: ABC Construction Backlog

WEST 9.0M (+1.8M) | **CENTRAL 8.1M (+0.9M)**

SOUTH 10.5M (-1.0M) | **NORTHEAST 8.4M (-0.5M)**





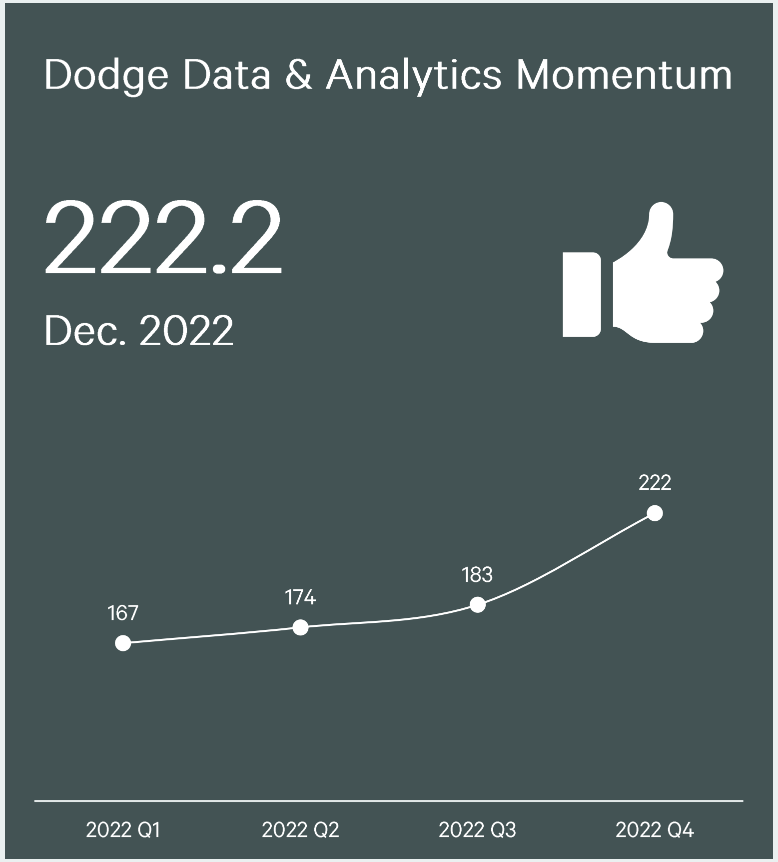
Source: ABC Construction Backlog Indicator | Associated Builders and Contractors, CBRE Cost Consultancy

Construction Activity

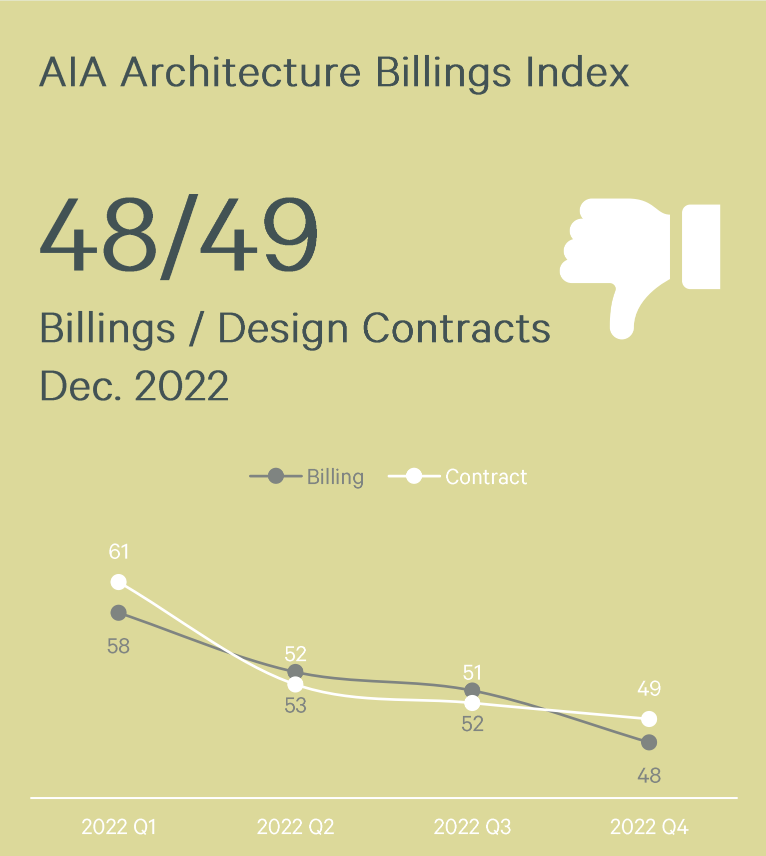
Industry Analysts Expect Continued Growth in the Construction Market

The Dodge Data and Analytics Momentum Index is a measure of the initial reporting for projects in planning, which in turn lead to construction spending.

The AIA Architecture Billings Index is an economic indicator for nonresidential construction activity, with a lead time of approximately 9–12 months out. Anything above 50 represents growth.



(Index 2000 = 100)



(Ratings above 50 indicate an improvement in the construction market)

Source: Momentum Index, Dodge Data and Analytics | Architecture Billings Index, American Institute of Architects | CBRE Cost Consultancy

Planned Construction Projects

Index Continues to Predict Sustained Growth

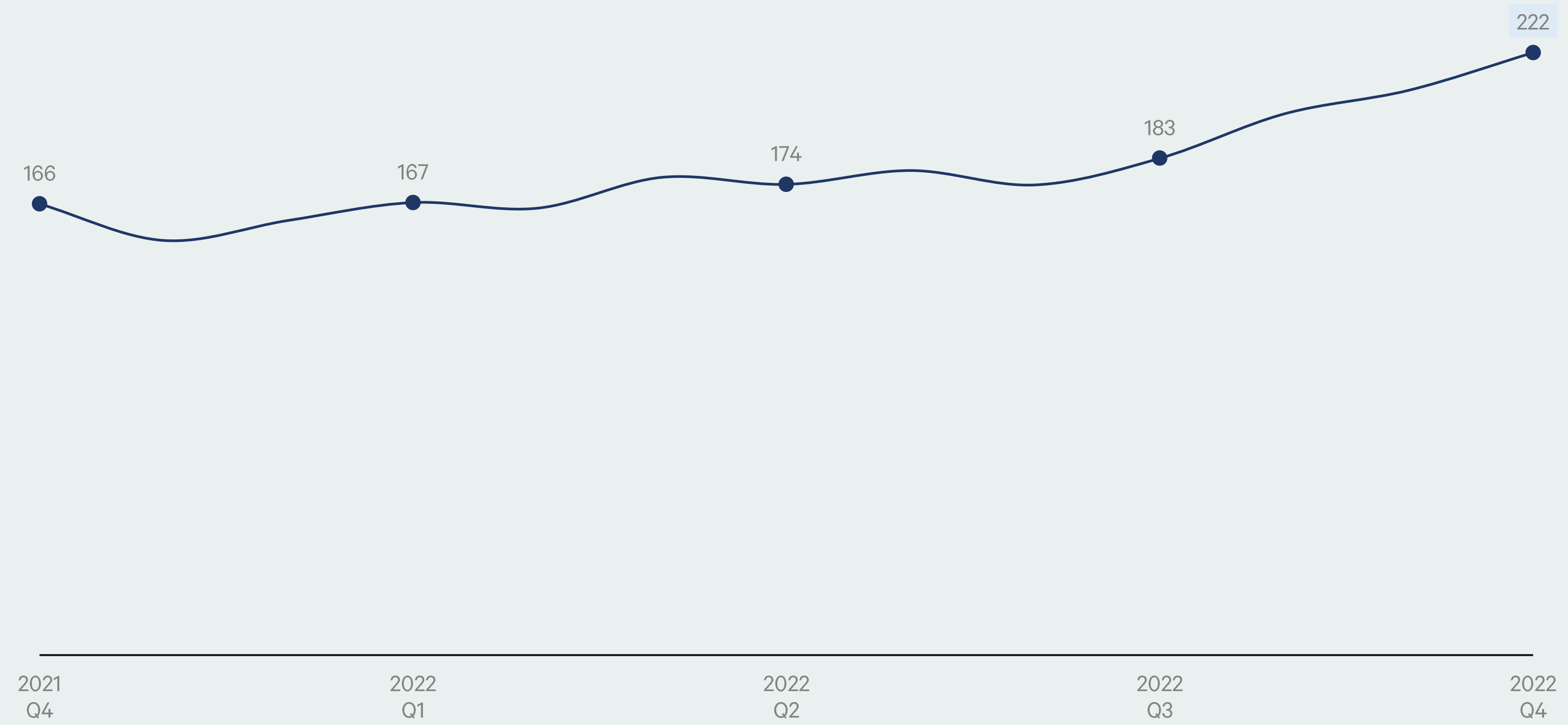
The Dodge Momentum Index wavered over the past year but maintained an overall positive trend.

The second half of 2022 had an average index of 194 which reflects a significant amount of construction planning.

By December 2022, the Index reached 222, an increase of 14 points from previous month, showing signs of continued construction market growth.

The Q4 2022 momentum index increased a massive **21%** from last quarter.

GRAPH: Dodge Momentum Index



Source: Momentum Index | Dodge Data and Analytics, CBRE Cost Consultancy

Architectual Billings

Billings Hover Around the 50-Mark As Confidence Remains Mixed

Often seen as the "canary in the coalmine", architectural billings and contracts have historically been viewed as a solid indicator of where the market is moving.

The American Institute of Architects' latest data which was current as of January 2023 shows that the Architectural Billing Index (ABI):

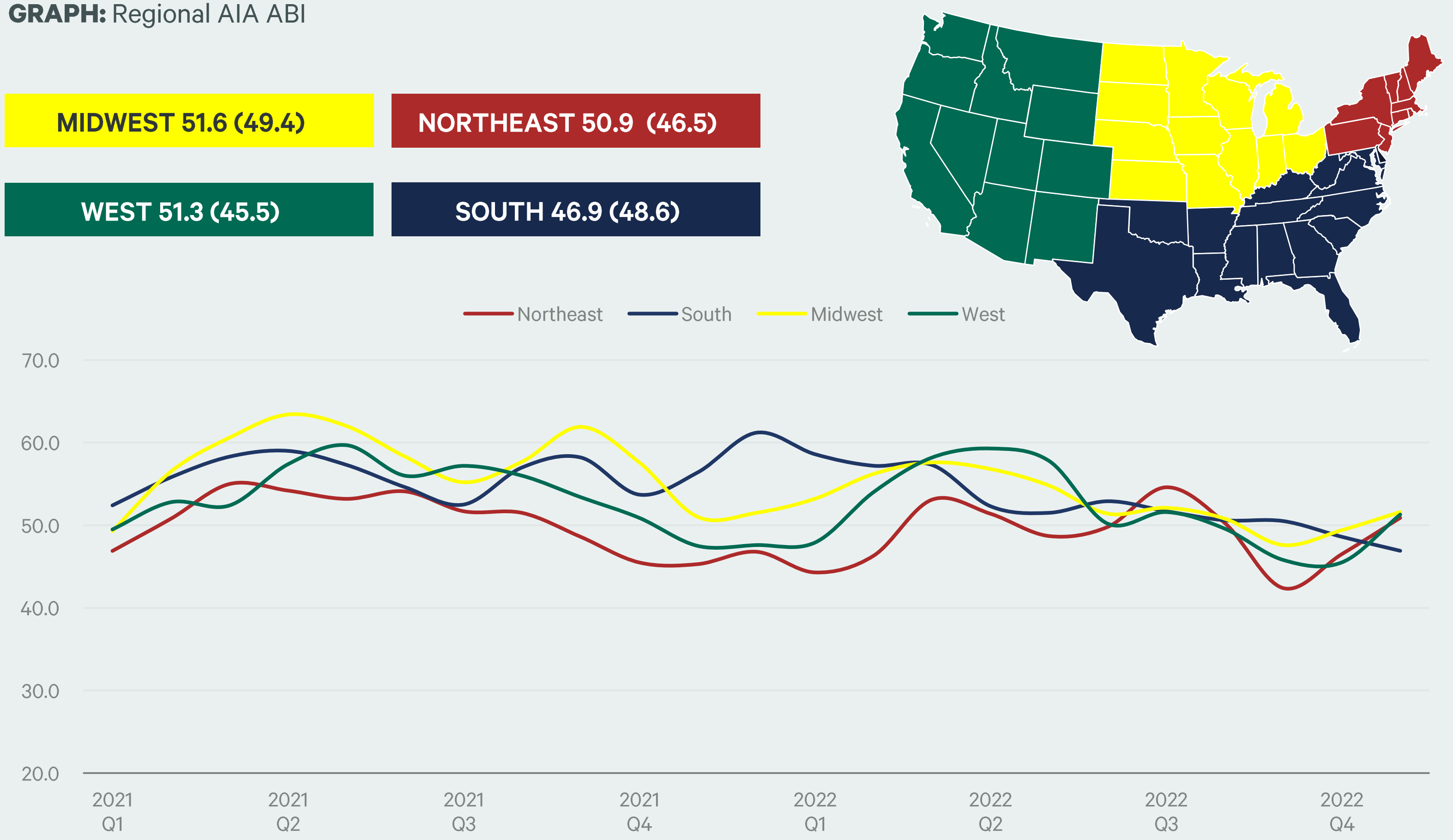
- Fell to 46.9 in the South (down from 48.6),
- Rose in the Northeast to 50.9 (up from 46.5),
- Increased to 51.6 in the Midwest (from 49.4).
- And rose in the West to 51.3 (previously 45.5).

Scores over 50 indicate an increase in firm billings.

49.3 (48.4 IN DEC)

NATIONALLY

GRAPH: Regional AIA ABI



Source: AIA Architectural Billing Index | American Institute of Architects, CBRE Cost Consultancy

Construction Spending

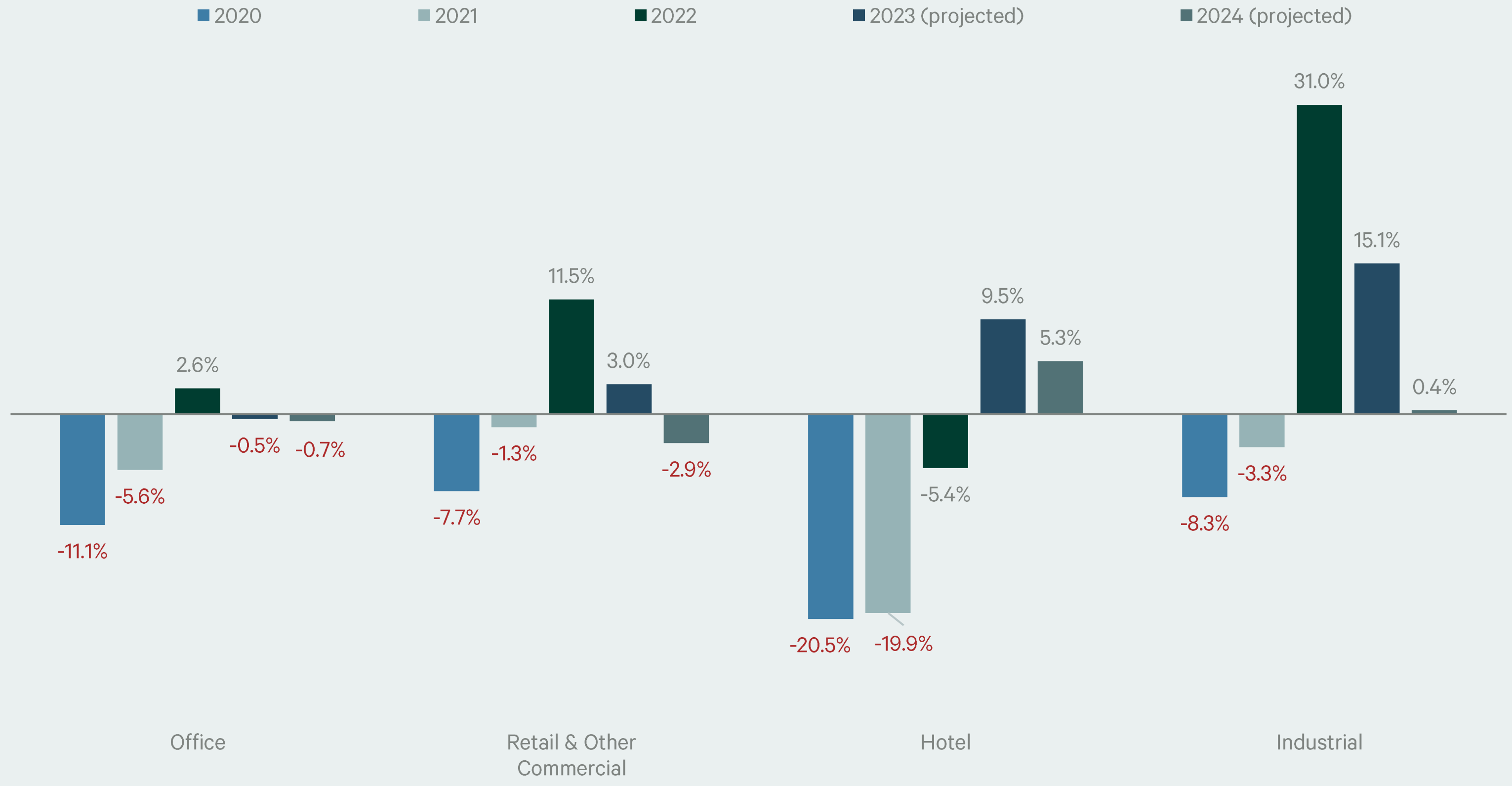
Mixed Projections for Varied Project Types; Anticipated Growth This Year With Cooling in 2024

The American Institute of Architects' (AIA) Consensus Projected Spending shows previous years spend volume and projected future years spend on recent data.

Adjusted projections for the next two years are mixed; Office is anticipated to remain relatively flat through 2024 while Retail & Other Commercial, Hotel and Industrial construction are expected to grow in 2023 before slowing down in 2024. These projections are aggregated from several trusted industry publications by AIA.

Both Industrial and Hotel construction are expected to make the biggest gains over the next two years.

GRAPH: AIA Consensus Projected Spending



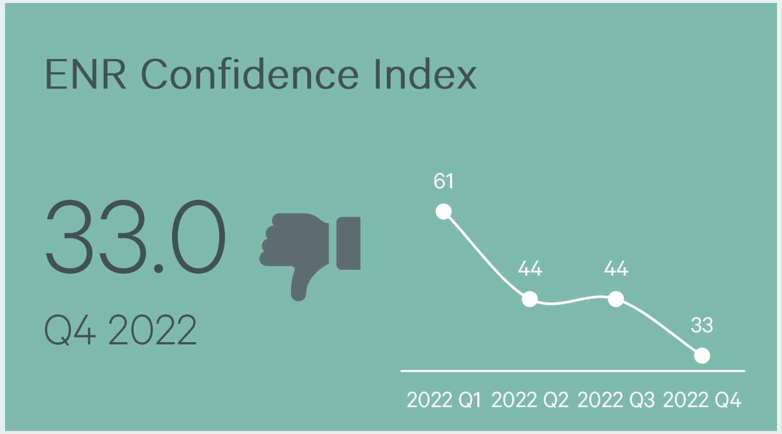
Source: AIA Consensus Projected Spending | American Institute of Architects, CBRE Cost Consultancy

Construction Contractor Confidence

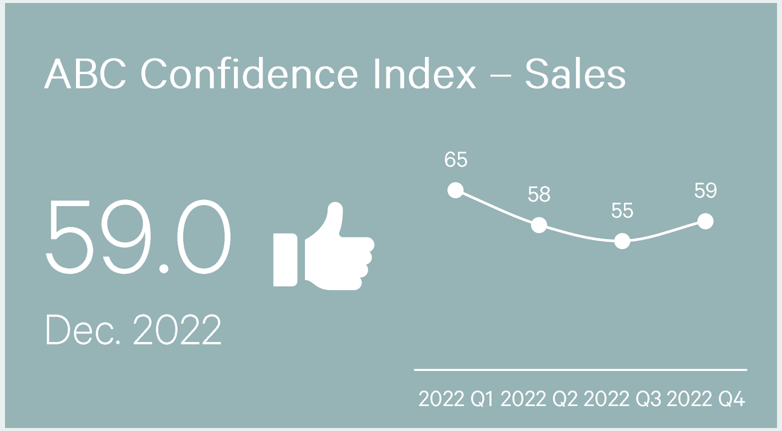
Confidence Indicators Show Significantly Different Outlooks

The ENR Confidence Index measures executive sentiment about where the current market will be in the next three to six months and over a 12- to 18-month period, on a 0-100 scale. Ratings above 50.0 indicate a growing market.

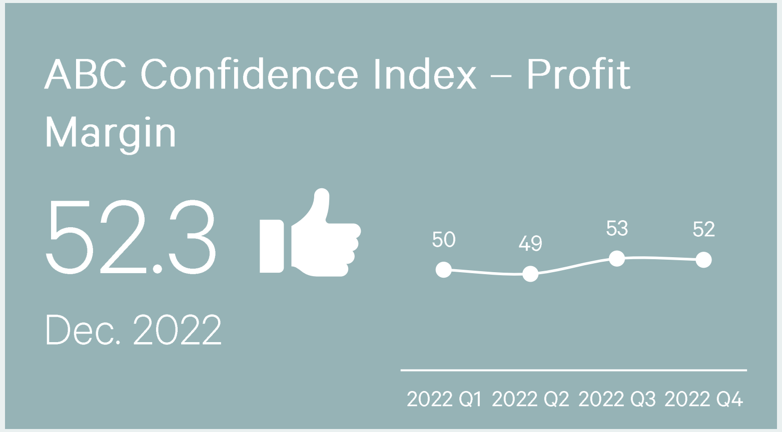
The ABC Construction Confidence Index measures contractors' outlooks for the coming quarters in three categories: Sales, Profit Margin, and Staffing Levels. Ratings above 50.0 indicate an expectation of growth in the market.

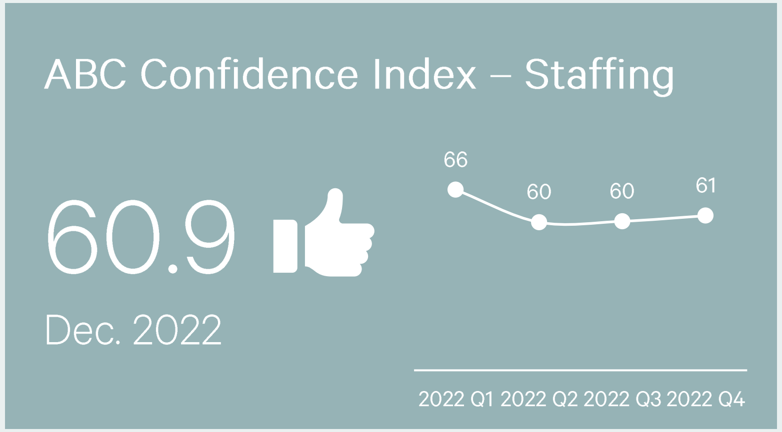


(ENR Confidence Index Rating above 50 is considered a growing market)



(ABC Confidence Index Rating above 50 is considered a growing market)





Source: Confidence Index, Engineering News Record | Confidence Index, ABC | CBRE Cost Consultancy

Contractor Confidence

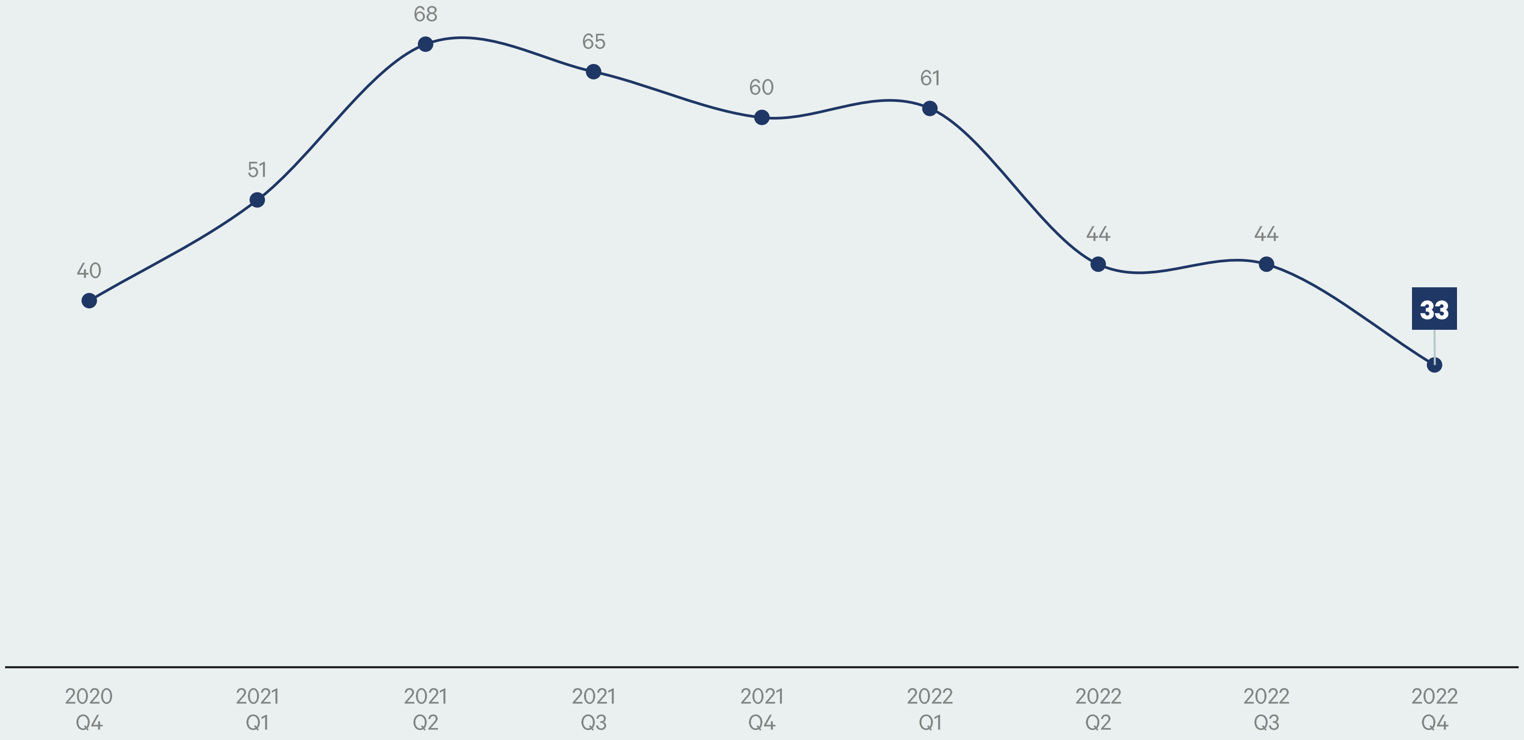
ENR Confidence Surveys Elicit Industry Distress from Construction Executives

The ENR Construction Confidence Index decreased last quarter to 33 points from 44 the previous quarter.

Inflation and mixed economic news are both factors in how the confidence index is generated.

A rating above 50 reflects higher confidence within general contractors.

GRAPH: ENR Quarterly Confidence Index



Source: ENR Construction Confidence Index | ENR, CBRE Cost Consultancy

Contractor Confidence

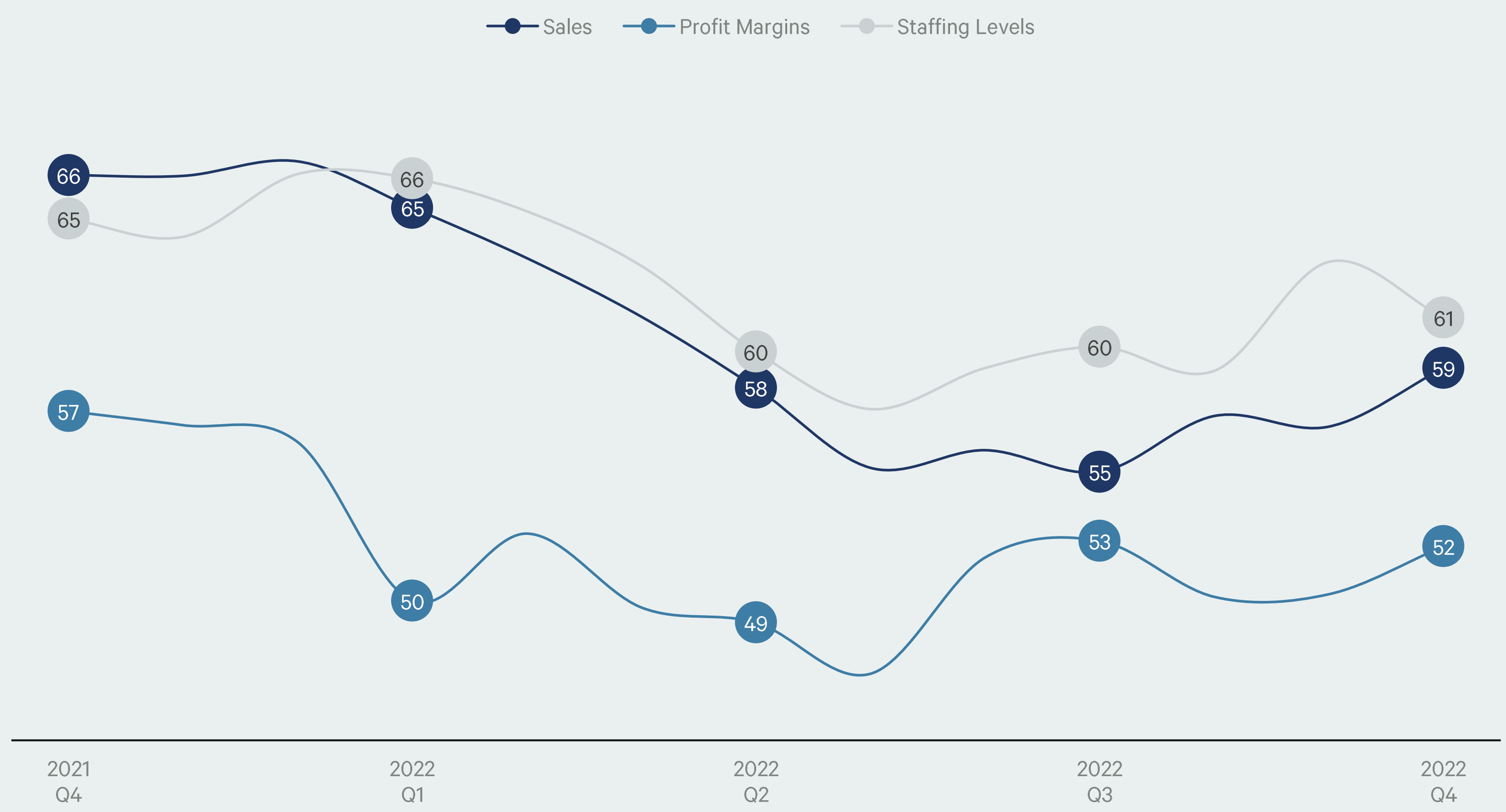
ABC Confidence Represents Optimism In Sales, Profits and Staffing

All three categories of the ABC Construction Confidence Index show indications of growth in the market over the next six (6) months.

The Sales Index is up two (2) points, the Staffing Level Index is down two (2) points, and the Profit and Margin index is up one (1) point compared with the previous month.

Ratings above 50 are considered positive levels.

GRAPH: ABC Monthly Confidence Index



Source: ABC Construction Confidence Index | ABC, CBRE Cost Consultancy

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Construction Escalation

CONSTRUCTION ESCALATION

Construction Escalation

Escalation Appears to Have Slowed With Previous Peaks Now in the Rearview

Consumer Price Index (CPI) and Elevated Inflation Persist

- The CPI inflation has come down to 6.4% YoY from it's 40-year high 9.1% back in June 2022. That said, it is only halfway there from returning to the US 40-year average of 3.8%.
- Since March 2022, the Federal Open Market Committee (FOMC) raised interest rates eight times by 4.5 percentage points which is the quickest and steepest pace since the 1980s. As inflation has appeared to have peaked, monetary policy makers will begin close-up monitoring of the situation and fine tuning of the rate over the next year. It is anticipated that further changes to borrowing costs will still be required to return inflation to the targeted 2% range.

2022 is Over, but Escalation Isn't

- 2022 will be remembered as having some of the highest cost escalations in decades due to material cost increases, supply chain shortages and elevated labor wages combined with reduced competitiveness and significant backlogs of work.
- As 2023 begins, some previous issues (energy costs, material availability, etc.) are showing signs of normalizing while others remain persistent (labor shortages, rising wages, etc.).
- It is anticipated that 2023 escalation rates shouldn't be as aggressive as 2022 but are also not expected to retreat to "historic" yearly rate range averages.

US Inflation Rate

FED Rate Increases Have Helped to Decelerate Inflation

***Inflation** is a decrease in the purchasing power of money, reflected in a general increase in the prices of goods and services in an **economy**.*

In February 2023, the US BLS Consumer Price Index YTD was 5.99%, which continued its downward trend by -3.1% from the 40-year high of 9.1% in June 2022.

Since March, the Federal Open Market Committee (FOMC) has repeatedly set a higher federal funds rate target to influence economic activity and reduce inflation pressures.

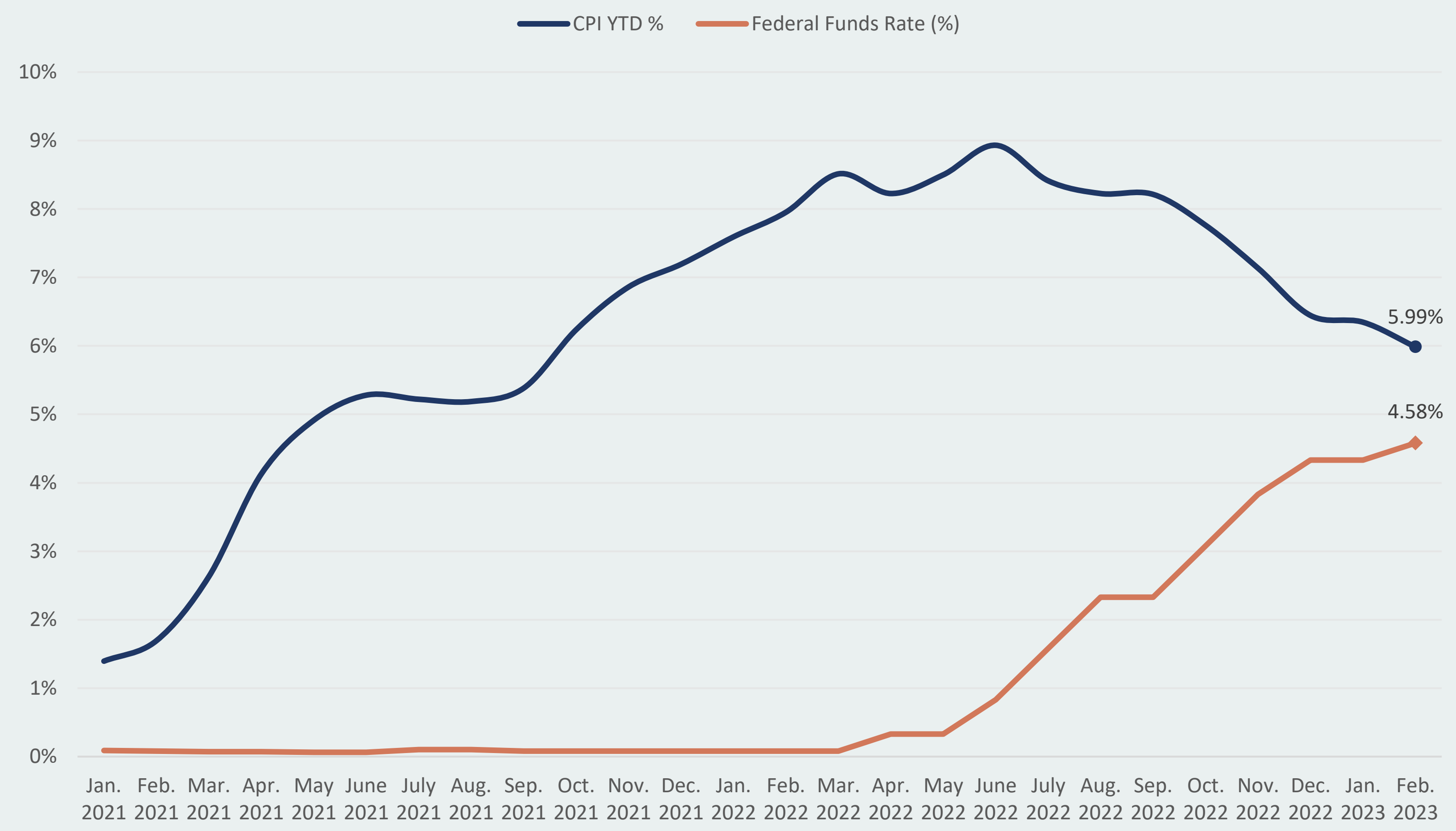
+6.0%

INFLATION

February 2023

June's CPI of 9.1% was the highest since Nov. 1981

GRAPH: CPI Inflation % (YTD) & FFR %



Source: US Bureau of Labor Statistics

Construction Escalation

Multiple Sources of Indices Reporting Varied Rates of Escalation

Construction Escalation refers to a rise in the price of construction commodities or services due to a combination of inflation, supply/demand, and other effects such as environmental and engineering changes.

The graphs to the right represent the consensus index values from several trusted industry and government sources.

Differences in results are caused by monitoring different construction components such as labor, material, and overhead or a weighted mix.

2022 had an atypical increase with double to quadruple the average of regular years' escalation. All escalation values passed a full year's average within a half years' time.

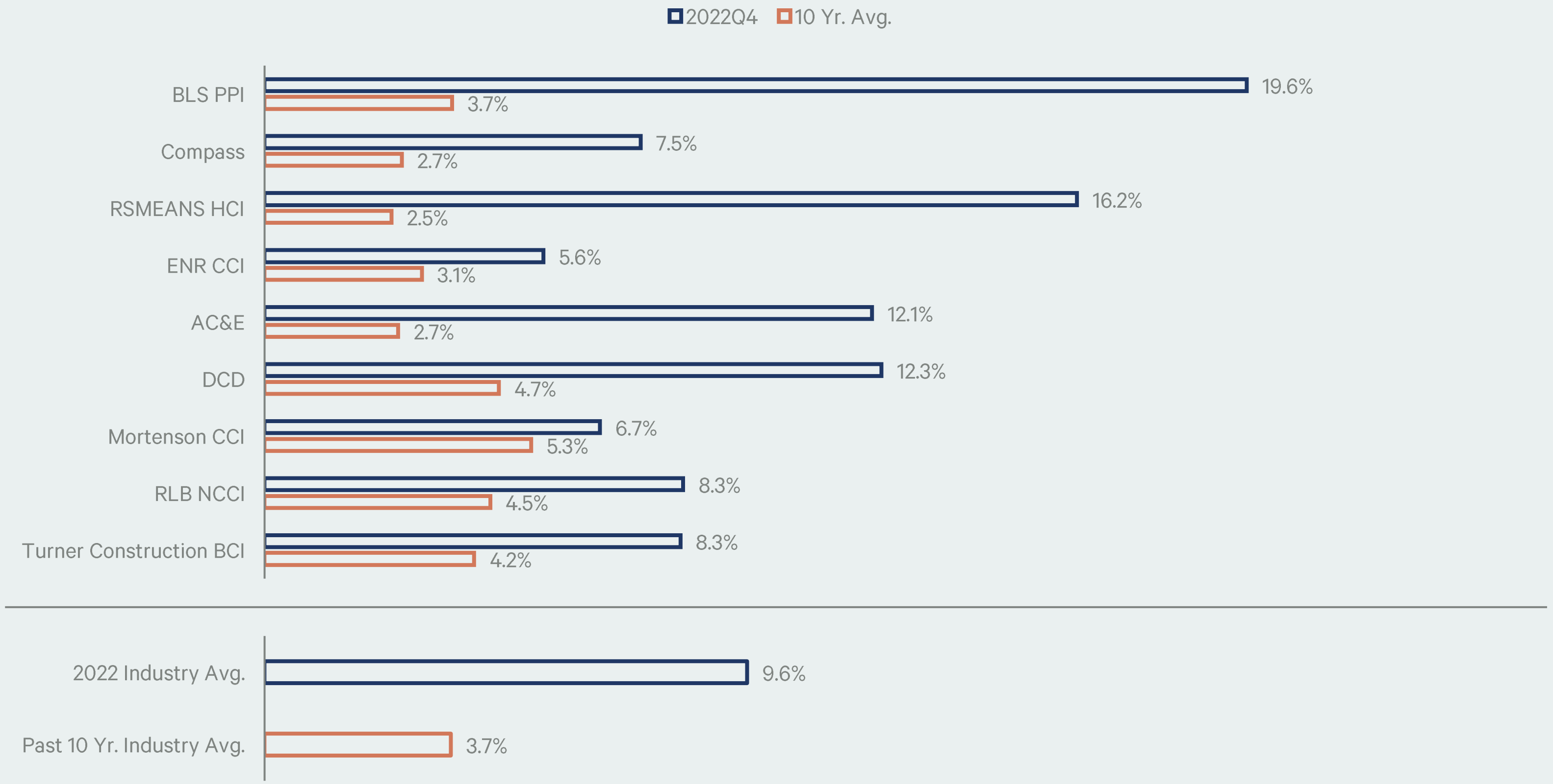
+3-4% /year

Construction Escalation
10 year avg. range

+9-11% /year

Construction Escalation
Avg. escalation range for 2022

GRAPH: Past 10Yr. Industry Avg. vs 2022



Source: Engineering News Record, Rider Levett Bucknall, RS Means, Turner Construction, AC&E, DCD, Mortenson, Compass International, Bureau of labor statistics

Construction Escalation by Market

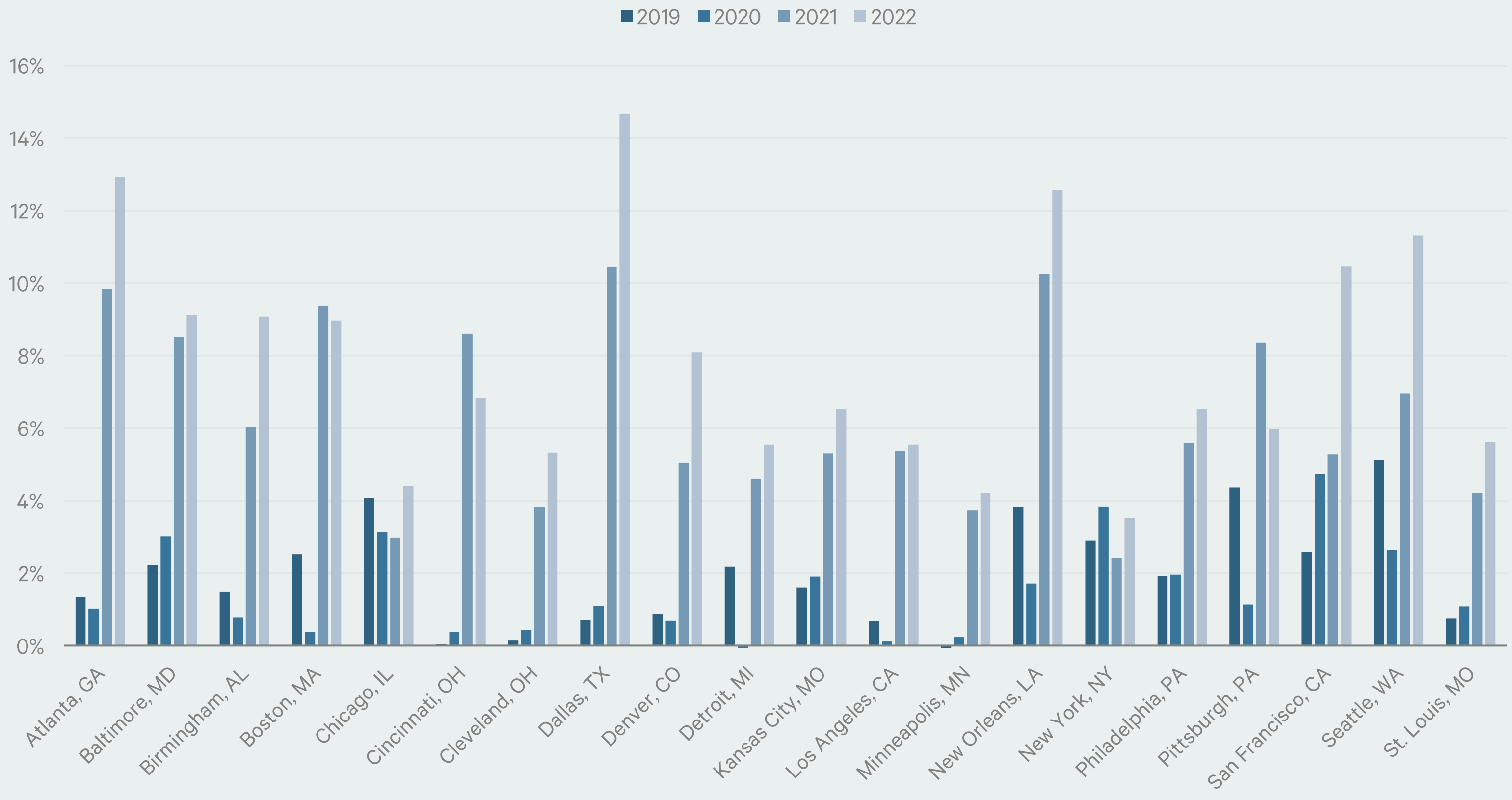
Pacific Northwest and Sunbelt States Continue to Report Some of the Highest Escalation Rates Nationwide

Market trends behave differently from city to city. Some have more established construction economies causing less volatility in construction costs. Others are more susceptible to fluctuations caused by outside pressures.

2020 had a clear slowdown for most markets nationwide with few exceptions. 2021 represented a rebound for the industry as costs recovered. The general trend for 2022 was that of hyper-escalation in most markets.

Overall, Q4 shows lower escalation rates compared to Q3 2022.

GRAPH: ENR 20 City Historical CCI YTD (%)



Source: ENR City Historical Indices | ENR, CBRE Cost Consultancy

CBRE Construction Index

2023 Escalation Projections Regress from 2022's Historic Highs

The CBRE Construction Cost Index reached a record high in 2022 exceeding 2021's spike and peaking near 11%. The 2023 forecast appears to be heading back towards "typical" rates closer to historical averages.

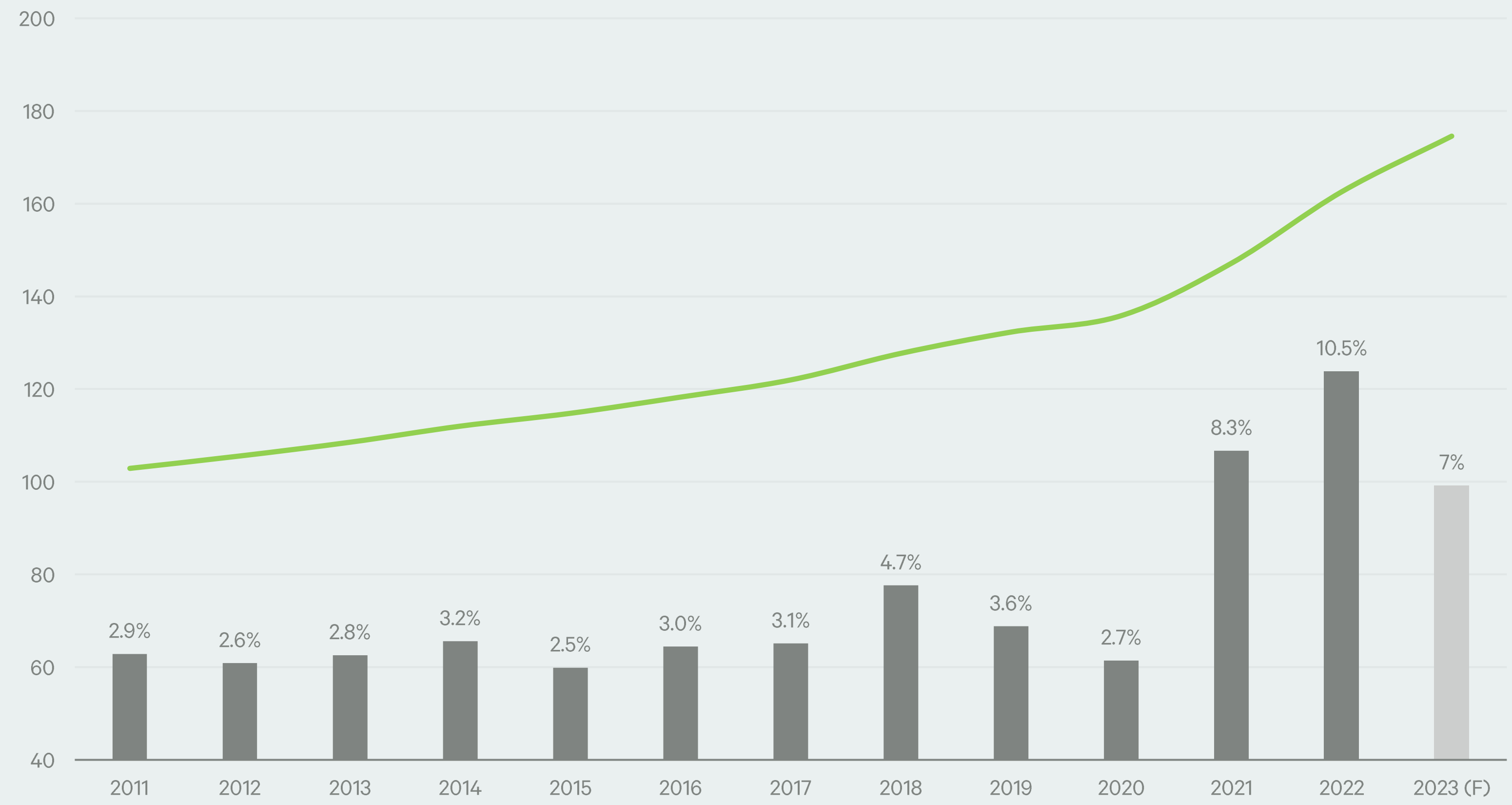
10.5% (+/- 2%)

CBRE Index
2022 YoY Escalation

+6-9%

CBRE Index
2023 Escalation Forecast

GRAPH: CBRE Construction Cost Index and Cost Escalation Per Year



Source: CBRE Cost Consultancy
Note: (F) is for forecasted values

CBRE Construction Index Forecast

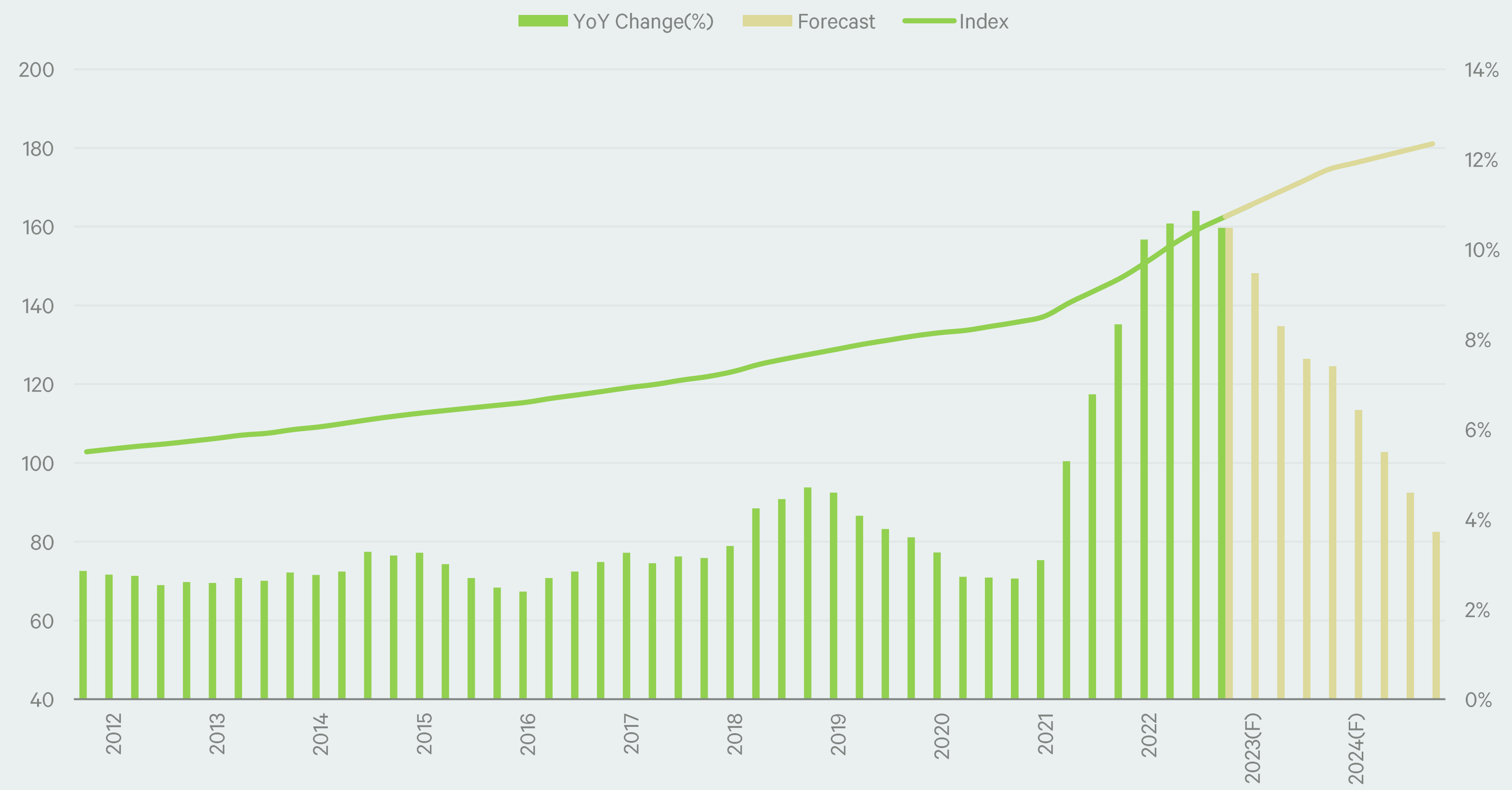
While Not Completely Out of the Woods, 2023 Should Show Signs of A Return to Normalcy

There are multiple scenarios that could potentially occur over the next two years.

CBRE expects escalation to slow down to historically "typical" rates by the end of 2024. The decline of this rate is dependent upon both the Federal Reserve Bank interest rate changes, as well as the construction market supply and demand cycles.

Another possible scenario would be a mini-recession across some sectors, which could accelerate the decline of construction cost escalation rates earlier than anticipated.

GRAPH: CBRE Construction Cost Index and Quarterly YoY Change



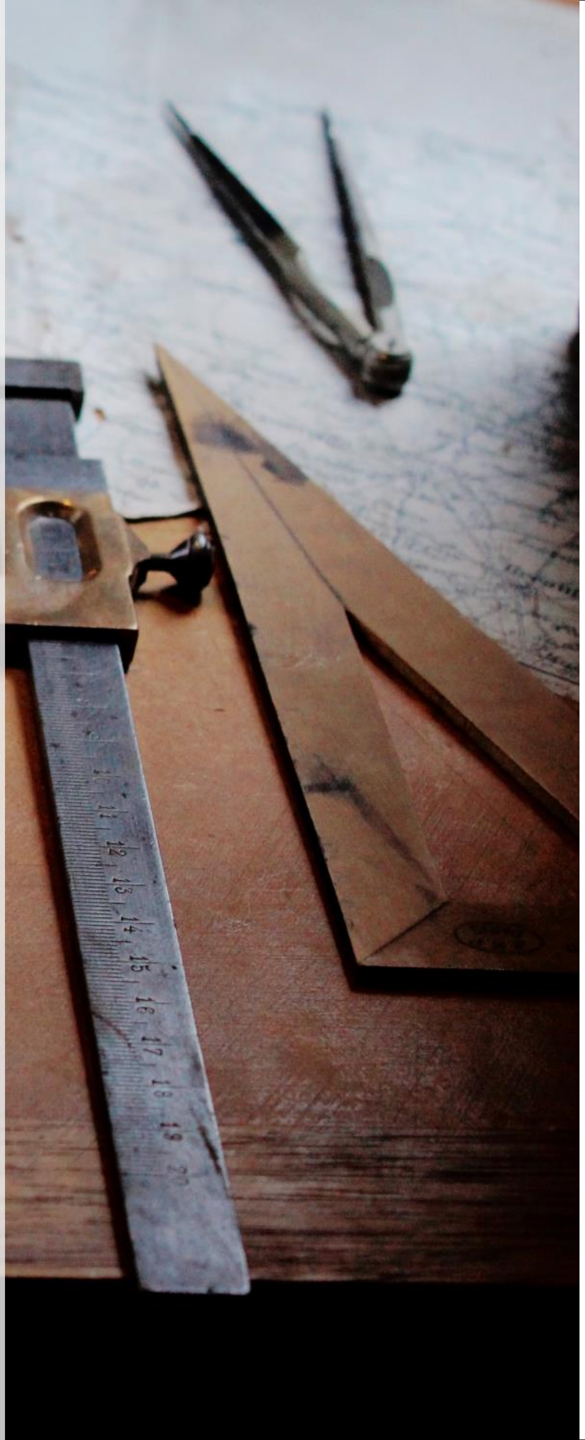
Source: CBRE Cost Consultancy
Note: (F) is for forecasted values

7

Thoughts & Analysis

FINAL THOUGHTS & ANALYSIS

CBRE Findings & Analysis



Material

- It is still recommended to allow for creative substitutions where applicable and advisable to help alleviate material availability challenges.

Supply Chain

- Suggestions include planning ahead and looking further out to help guarantee project funding and material availability where possible.

Labor

- Continue to plan on labor costs remining high with reduced availability.

Construction Market Activity

- Reduced bid competition due to increased backlog and volume continues driving up fees and profitability, and in turn overall project costs.
- Owners should continue to consider a broader supplier pool and alternative procurement routes.

Construction Escalation

- Escalation is anticipated to remain elevated this year with a return to “normal” rates by the end of 2024. However, this does not mean costs are anticipated to de-escalate to pre-pandemic levels.

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