

CONSTRUCTION INSIGHTS FOR GLOBAL OCCUPIERS

SPRING 2024

Project & Development Services

INTRODUCTION: Headwinds Remain in 2024

The construction sector continues to face challenges in 2024. Both construction and commodity costs have generally stabilized, but labor costs continue to apply upward pressure to overall costs. Despite a decline from its recent highs, the U.S. inflation rate has yet to reach desired levels, which implies that interest rates will remain elevated for an extended period. This situation continues to complicate and increase the cost of financing; however, robust fundamentals and demand for select markets and asset types ensure that companies will continue to plan projects.

Key Takeaways

- Globally, supply chain stress has receded from peak levels, but geopolitical tension is applying slight upward pressure.
- Construction and commodity cost increases have decelerated but remain elevated.
- Labor constraints persist in the sector, making it difficult to fill open positions and resulting in extended project timelines.
- Equipment lead times have eased, but some in-demand systems remain extended, which may be a new normal.
- Construction pipelines for industrial and office construction have fallen from peak levels, while retail construction remains restrained.

GLOBAL

TRENDS



SUPPLY CHAIN | Market Observations

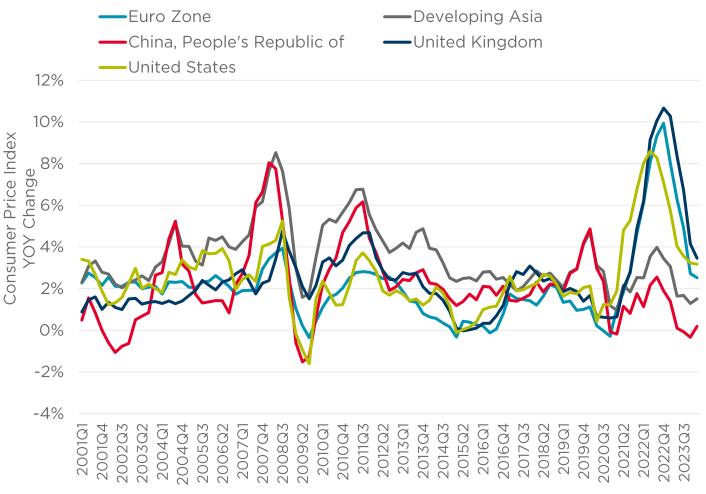
- Global supply chain stress levels have receded from their 2022 highs. Recent geopolitical tensions, including the shipping crisis in the Red Sea, caused stress levels to tick up, but it remains below 0, lower than January 2020.
- China's supply chain stress levels have increased by 6% year-over-year (YOY) as of March 2024.
- The level of supply chain stress in the U.S. reached its peak in September 2021, following the steepest rise ever recorded. As of February 2024, the stress levels have decreased by 23% from the peak but remain 22% higher than the levels in January 2020.



GLOBAL INFLATION | High Inflation Has Declined Across Major Global Regions

- Western countries experienced significant inflationary pressure during the last two years. The euro zone and the UK reached peak inflation rates in the second half of 2022, while the United States reached peak inflation in 2022 Q2.
- Monetary policy helped bring inflation down, and as of 2024 Q1 current inflation rates are closer to the 2.0% target. However, pricing volatility means that most central banks continue to keep an eye on inflation.

Inflationary Pressure Has Receded From Recent Highs



Source: The World Bank; Moody's Analytics

ENERGY & COMMODITIES Prices Have Fallen Globally From Recent Highs

- As inflation cools, prices for energy and commodities have fallen from 2022 highs.
- Energy prices are intricately linked to global political events, resulting in significant fluctuations in pricing.
 While there has been a 39% decrease in energy prices since Q3 2022, they remain 66% higher than the levels observed in Q1 2020. This delicate balance between geopolitical factors and energy markets continues to shape pricing dynamics.
- Over the past few years, global commodity prices have experienced a substantial increase. Although there has been a recent easing, with a 24% decline from Q1 2022, prices remain elevated—up 38% compared to Q1 2020 levels.

Energy Prices Commodity Prices Includes: copper, aluminum, iron Includes: crude oil. ore, tin, nickel, zinc, and lead natural gas, and coal 180 160 140 Index 2010=100, NSA 120 100 80 60 40 20 0 2015Q3 2016Q3 2020Q3 2021Q3 2023Q3 2015Q1 2017Q3 2018Q3 2019Q3 2016Q1 2017Q1 2018Q1 2019Q1 2020Q1 2021Q1 2022Q1 2022Q3 2024Q1 2023Q1

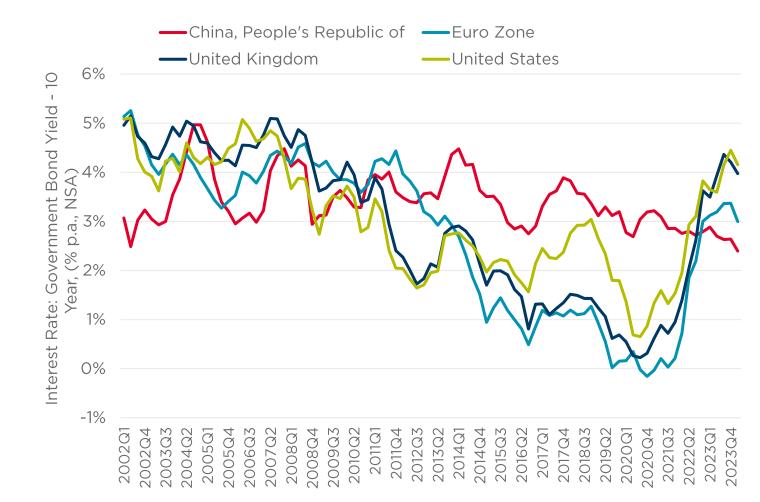
Source: The World Bank; Moody's Analytics

Pricing Has Receded

INTEREST RATES | Higher Interest Rates Have Cooled Inflation While Increasing Business Costs

- Rising interest rates have helped cool inflation in most countries. However, higher interest rates have resulted in decreased liquidity in the market and a higher cost of capital.
- Interest rates increased an average of 370 basis points (bps) from record lows across the euro zone, UK and the U.S. In the U.S., higher rates have made it more difficult to finance construction projects, but strong underlying fundamentals mean that most deals are still being done.
- Transacting in a higher-cost environment is the new norm; however, businesses are eagerly awaiting lower rates so that more deals can be planned.

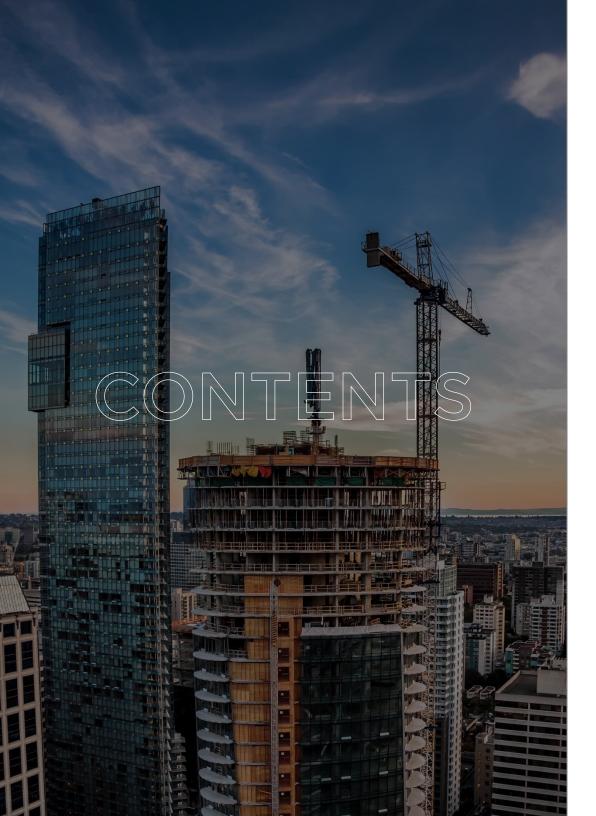
Central Banks Have Used Higher Interest Rates to Fight Inflation



Source: The World Bank; Moody's Analytics

NATIONAL TRENDS UNITED STATES







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SUPPLY CHAIN	

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O5 SECTOR SPOTLIGHTS

CONSTRUCTION COSTS

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CONSTRUCTION COSTS | Building Structures and Contractors

On a YOY basis, there is some relief in costs. Average structure costs declined by 0.9% YOY, with healthcare costs leading the decline at 1.5%. Contractor costs increased by 0.2% YOY, as robust increases in roofing contractor costs offset a significant decline in electrical contractor prices. In April, both structures and contractors saw price increases compared to March.

Data published by the Bureau of Labor Statistics (BLS) indicates the following as of April 2024.

New nonresidential construction costs are:

- **0.1%** compared to the **previous month**
- **0.9%** compared to April 2023
- 38.6% increase since January 2020

Nonresidential **contractor** costs, in aggregate, are:

- **0.2%** compared to the **previous month**
- **0.2%** compared to April 2023
- **33.7%** compared to January 2020

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	1-Month % Change	YOY % Change	% Change Jan-2020
STRUCTURES			
Nonresidential	O.1%	-1.0%	36.4%
Office	0.0%	-1.4%	41.1%
Industrial	-0.2%	-0.5%	39.5%
Warehouse	0.4%	-0.3%	43.3%
Healthcare	0.0%	-1.5%	32.7%
Average Change	O.1%	-0.9%	38.6%
CONTRACTORS			
Concrete Contractors	0.7%	0.3%	29.9%
Roofing Contractors	0.7%	1.4%	49.9%
Electrical Contractors	-0.6%	-2.4%	27.6%
Plumbing; HVAC Contractors	0.0%	1.7%	27.2%
Average Change	0.2%	0.2%	33.7%



Source(s): United States Bureau of Labor Statistics (<u>www.bls.giv/ppis</u>)

CONSTRUCTION COSTS | Commodities

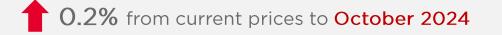
Commodity prices have risen significantly in the past four years due to supply chain constraints and inflation. However, future increases are expected to be more moderate.

As of April 2024, commodity costs averaged:

- **0.4%** compared to the **previous month**
- **1.5%** compared to April 2023
 - 43.9% increase since January 2020

Looking forward, costs are expected to remain stable or experience slight increases over the next three to six months, with select commodities seeing modest declines. On average, costs are projected to be:

0.2% from current prices to July 2024

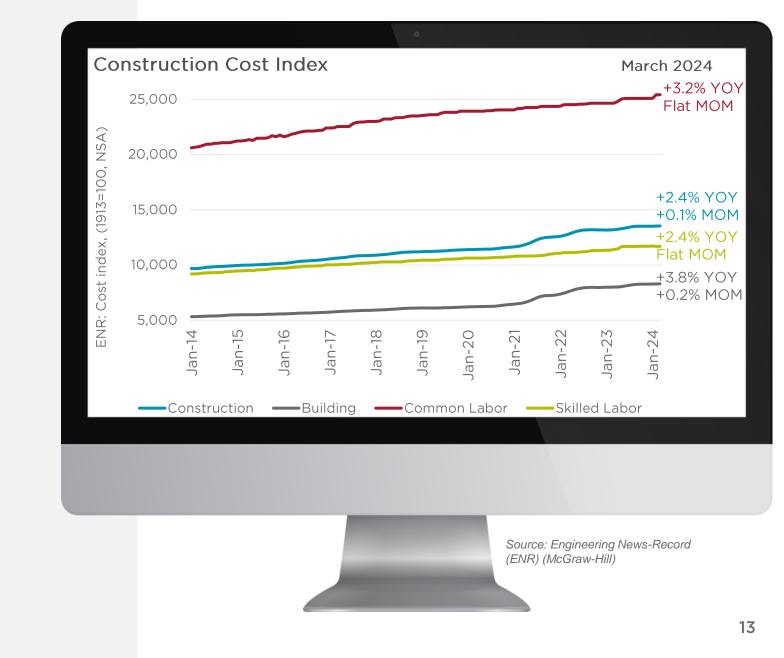


	1-Month % Change	YOY % Change	% Change Jan-2020	3-Month Forecast (Jun-2024)	6-Month Forecast (Sep-2024)
COMMODITIES					
Lumber	0.9%	-0.3%	26.4%	0.5%	-0.3%
Hot rolled bars; plates & structural shape	0.4%	-3.2%	53.6%	-0.4%	-0.5%
Steel pipe and tube	0.6%	-7.8%	44.7%	0.4%	0.8%
Nonferrous metals	0.7%	-2.1%	30.3%	0.5%	1.0%
Nonferrous wire and cable	0.5%	-0.8%	43.9%	0.3%	0.7%
Fabricated structural metal	0.0%	1.0%	62.1%	-0.7%	-1.1%
Fabricated steel plate	0.1%	O.1%	51.0%	-0.3%	-0.5%
Prefabricated metal buildings	0.0%	4.2%	63.5%	-0.5%	-0.7%
Miscellaneous metal products	0.4%	2.0%	28.4%	1.0%	2.0%
Glass	0.1%	0.4%	23.1%	0.4%	0.6%
Concrete ingredients and related products	-O.1%	7.0%	37.0%	0.4%	0.0%
Concrete products	0.3%	6.1%	39.2%	1.0%	1.2%
Asphalt felts and coatings	0.3%	4.5%	38.3%	0.6%	-0.5%
Other nonmetallic minerals	-0.2%	4.6%	29.0%	-0.3%	-0.5%
Copper Base Scrap	0.9%	1.6%	56.3%	-0.1%	0.3%
Aluminum Base Scrap	1.0%	6.6%	75.4%	0.3%	0.9%
Average Change	0.4%	1.5%	43.9%	0.2%	0.2%

Source(s): United States Bureau of Labor Statistics (<u>www.bls.giv/ppis</u>), Moody's Analytics Baseline Forecast

CONSTRUCTION COSTS | Market Observations

- Cost increases have decelerated and are more in line with 10-year averages, as measured by two cost indices produced by Engineering News-Record, Construction and Building.
- On a YOY basis, construction costs rose 2.4% and building costs increased 3.8%. The primary difference between indices are skilled and common labor assumptions.
- Total labor costs continue to increase. On a YOY basis, common labor grew by 3.2%, and skilled labor rose by 2.4%. Labor costs are expected to continue to increase through 2024 due to the constrained labor market.
- Core and shell commodities, including structural and fabricated metals, glass, switchgear, and mechanical, continue to increase.
- ENR's 2024 forecast calls for continued increases across the board.
 - Construction costs are projected to rise by 2.3%, with common labor increasing 1.9%.
 - Building costs are forecasted to increase 3.1%, with skilled labor increasing 2.2%.



CONSTRUCTION COSTS | Increasing Confidence

- The quarterly survey results from ENR, conducted among U.S.
 executives of leading general contractors, subcontractors and design firms, bounced back at the start of 2024.
- Executive confidence improved to 52 in Q1 2024, reaching its highest point in the past two years. The index measures sentiment regarding future market conditions and indicates that executives are generally optimistic about growth in 2024. This improvement in sentiment is partly due to the expectation that deals postponed in 2023 will now proceed in 2024.
- Sentiment varies by region. Firms in the Midwest are more optimistic,

with an overall confidence score of 55. Meanwhile, confidence among firms in the Northeast, New England, and mid-Atlantic regions was lower at

49, marking a significant improvement from 38 in Q4.

Executive Confidence Bounces Back



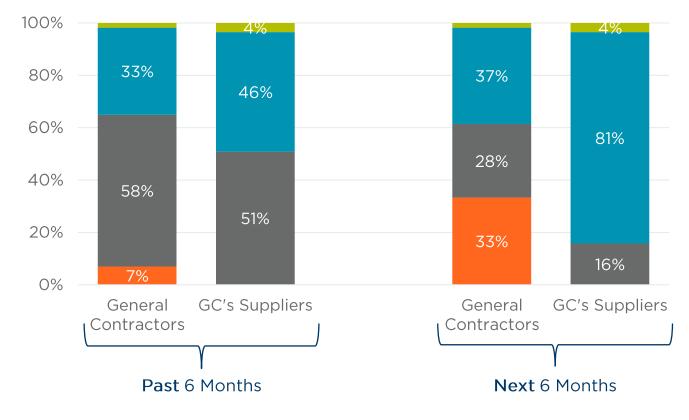
Source: ENR/BNP MEDIA

CONSTRUCTION COSTS | Contractors Not Anticipating Price Cuts From Suppliers

- According to Cushman & Wakefield's Construction Contractor Sentiment Survey conducted in the fall of 2023, 50% of general contractors (GCs) reported an increase in their supplier costs in the last six months.
 Conversely, 58% of GCs said their costs have stabilized and that they have not seen any change in pricing over the same period.
- Looking forward, most GCs expect to see additional cost increases from suppliers. Specifically, 81% of GCs expect to see a slight increase in costs, while 4% expect significant increases.
 Despite anticipated increases, most GCs plan to manage their costs internally and not pass the burden on to their customers. Approximately 28% of GCs expect their costs to remain unchanged in the next six months, while 33% anticipate a slight decrease in costs.

Cushman & Wakefield Construction Contractor Sentiment Survey, Fall 2023





Source: Cushman & Wakefield

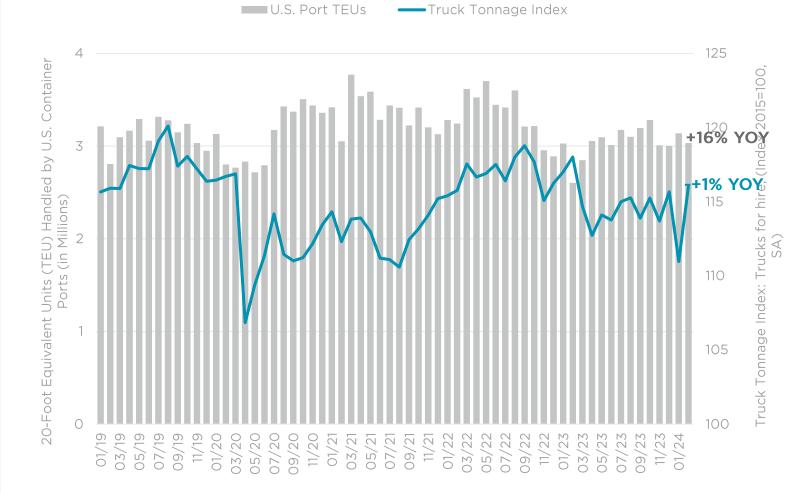


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SUPPLY CHAIN | Market Observations

- Since recovering from pandemic-related disruptions, transportation networks have faced challenges, yet continue to display resilience.
- Traffic through the Panama Canal has been affected by low water levels, with the current level being 80 feet, which is significantly below the five-year average of 83 for April. Daily transit through the canal has fallen to 24 from a typical average of 36. However, the Panama Canal Authority recently announced plans to increase daily transit back to 32 by June¹.
- The Baltimore Bridge collapse in March 2024 resulted in a potential source of strain. The port of Baltimore usually handles around 750,000 TEUs monthly, and all had to be rerouted to other ports. Due to this rerouting, the trucking industry has faced increased demand, while trains have increased capacity by adding more cars. Despite some minor delays, the movement of goods has continued without any significant disruption.

U.S. Transportation



Source: Bureau of Transportation Statistics (BTS), American Trucking Association (ATA)

SUPPLY CHAIN | Electrical Equipment and Components

- In February 2024, unfilled orders for electrical equipment, appliances and components increased by 0.4% YOY and 0.3% over January levels.
- According to a survey of manufacturers from the Institute of Supply Management (ISM), electrical, electronics, and semiconductors have been scarce for nearly 42 months.
- Based on census data, new orders for electrical equipment, appliances and components decreased by 2.1% monthover-month (MOM) in February 2024. However, orders remained up by 3.5% on a year-to-date (YTD) basis (January to February) in 2024 compared to 2023. This indicates that the backlogs for unfilled orders are likely to continue.

Advanced Durable Goods: Unfilled Orders - Electronic Equipment, Appliances and Components, (*Mil. USD, SA*)



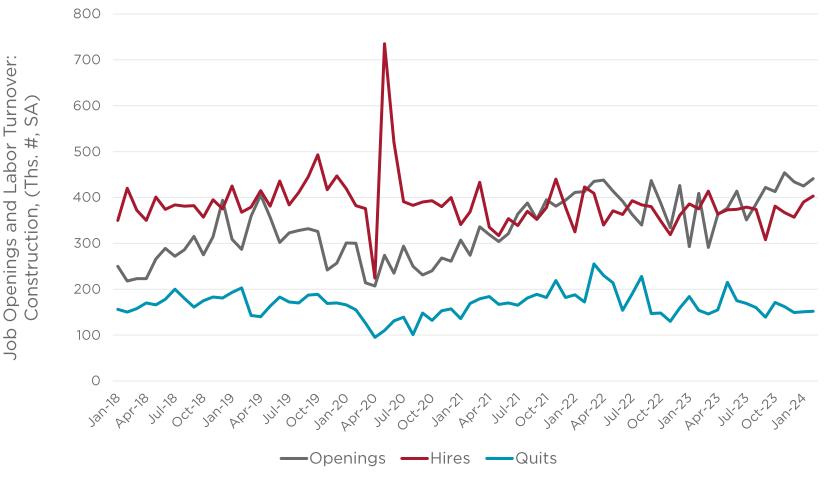
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LABOR | Market Observations

- In Q1 2024, the nonresidential construction industry saw an increase of 11,400 jobs. By March 2024, employment in this sector had risen by 5.1% on a YOY basis, a rate that notably surpasses the 1.9% YOY growth observed in total employment.
- In February, the gap between job openings and hires lessened a bit.
 Nevertheless, job vacancies still exceed the number of hires, indicating that positions remain challenging to fill.
- The hiring rate reached 4.9% in February, marking the peak in the past 11 months. The rate could have been even higher if more of the available vacancies were successfully filled.
- The unemployment rate among construction job seekers ticked up to 5.4% in February, higher than the 12month average of 4.6%.

U.S. Construction Job Openings, Quits and Hires



Source: U.S. Bureau of Labor Statistics (BLS)

LABOR | U.S. Spotlight

- The construction sector continues to add jobs despite the constrained labor market.
- The cities of Phoenix, Dallas-Fort Worth, and Miami have witnessed the most significant YOY growth in construction jobs. The surge in Phoenix's construction employment can be attributed to the robust expansion of its semiconductor industry.
- New York, Seattle and Portland experienced the most significant

decreases in construction employment YOY. The New York Metropolitan Statistical Area (MSA) saw a widespread loss of construction jobs throughout the region. The suspension of several major construction projects has affected the growth of construction jobs in the area.

U.S. Construction Jobs - Top 10 Metros Total Gain/Loss as of Q1 2024

YOY Change	%	Q1 2020 Change
8,149	5.0%	25.1%
8,057	3.7%	11.3%
7,925	5.3%	9.9%
6,396	5.7%	7.9%
4,753	10.2%	8.0%
4,226	5.8%	4.7%
3,924	2.8%	10.6%
3,831	1.5%	-1.4%
3,653	6.0%	14.8%
3,594	4.5%	16.4%
	Change 8,149 8,057 7,925 6,396 4,753 4,226 3,924 3,831 3,653	Change % 8,149 5.0% 8,057 3.7% 7,925 5.3% 6,396 5.7% 4,753 10.2% 4,226 5.8% 3,924 2.8% 3,831 1.5% 3,653 6.0%

Loss

Metro	YOY Change	%	Q1 2020 Change
New York, NY	-12,204	-3.2%	-6.6%
Seattle, WA	-5,696	-4.3%	-2.7%
Portland, OR	-2,594	-3.1%	3.5%
Baltimore, MD	-2,572	-3.3%	-4.2%
Minneapolis, MN	-2,319	-2.6%	1.4%
Pittsburgh, PA	-1,582	-2.8%	-14.6%
Lake Charles, LA	-1,150	-9.9%	-48.7%
San Jose, CA	-1,132	-2.1%	-3.1%
Denver, CO	-1,070	-1.0%	0.6%
New Orleans, LA	-1,021	-3.6%	-4.5%

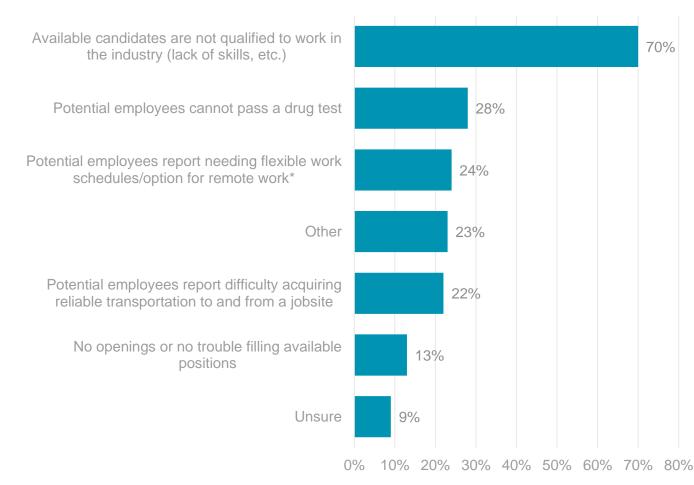
Source: U.S. Bureau of Labor Statistics (BLS)

Gain

LABOR | Building Construction Workforce

- Of the nearly 700 building contractors surveyed by the Association of General Contractors of America (AGC) and Autodesk in the summer of 2023, 86% still face challenges in filling vacant positions.
- A more recent AGC survey on the 2024 outlook indicates that 69% of contractors anticipate expanding their workforce in 2024. Among them, 47% predict growth of up to 10%, while 18% foresee a workforce increase of 11-25%.
- Most companies expect challenges in expanding their staff. Currently, 77% of contractors are struggling to fill vacancies, and 55% anticipate continued or increased hiring challenges in 2024.

Construction Worker Shortage Persists



If you are having a hard time filling available positions, what are the reason(s)?

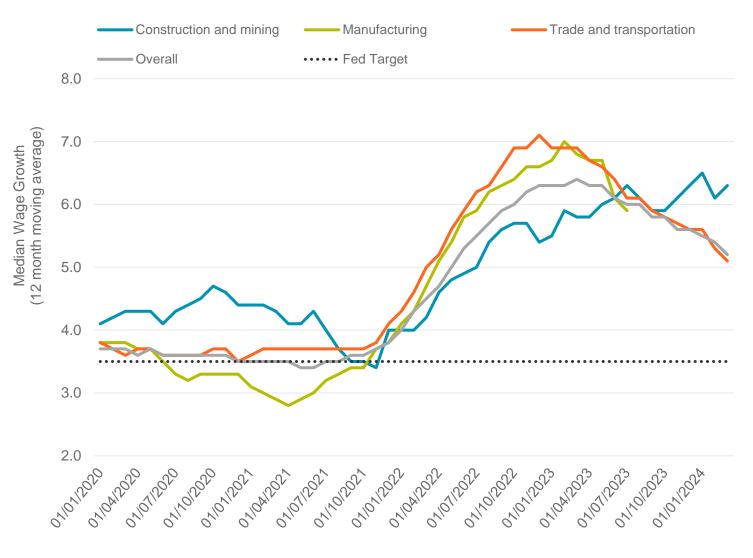
*(e.g., to stay home to care for a loved one)

Source: The Association of General Contractors, Autodesk Construction Cloud

LABOR | Construction Wages

- Construction industry wages are outpacing those in comparable sectors and the overall market. While overall median wage growth has dropped to 5.2% as of March 2024, wages in the construction and mining sector have risen 6.3%. This higher wage growth rate is expected to continue throughout 2024.
- The construction sector continues to raise wages to attract talent. Hourly wages in construction averaged \$35 per hour in March 2024, 19% higher than private employment hourly wages.
- Construction wage growth continues to outpace construction employment growth. As of March 2024, the average hourly earnings in construction have seen a YOY increase of 4.9%, whereas the overall employment in construction has seen a YOY increase of 3.4%.

Construction Wage Growth Surpasses Other Sectors



Source: Bureau of Labor Statistics, Federal Reserve Bank of Atlanta

LABOR | Costs Expected To Improve Over Next Six Months

- According to Cushman & Wakefield's sentiment survey in the fall of 2023, GCs observed some improvement in labor costs in October compared to January's survey results.
- In the fall survey, 32% of GCs anticipated a minor rise in labor costs over the next six months. This outlook was more positive compared to the January survey, where 63% predicted a minor increase and an additional 4% expected a substantial increase.
- With many GCs expecting a softening in the labor market, 33% foresee labor costs decreasing over the next six months. However, staffing shortages have led to several projects being put on hold, and these ongoing challenges are expected to contribute to continued increases in labor costs.

Cushman & Wakefield Construction Contractor Sentiment Survey, Fall 2023



Source: Cushman & Wakefield

PROJECT TIMELINES

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PROJECT TIMELINES | Equipment Lead Times

- Throughout the pandemic, extended project schedules were largely due to delays in materials. While most material delays have abated, mechanical and electrical equipment lead times continue to be extended.
- Electric switchboards are among the items with the most extended lead times, which can exceed 60 weeks in certain cases.
- Due to ongoing electrification initiatives across various sectors, the heightened demand for electrical components is unlikely to diminish anytime soon. This means that the longer lead times for electrical equipment could continue to affect project schedules for the foreseeable future.

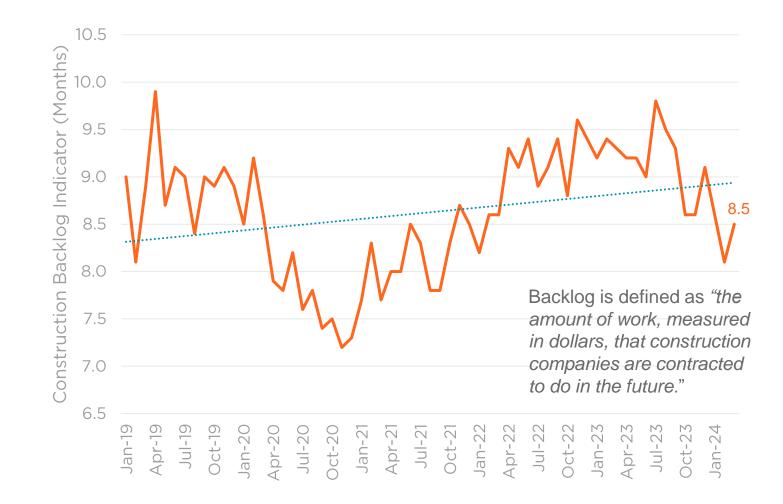
Equipment Lead Times

EQUIPMENT	SIZE	WEEKS
CRAC Units	Small format	8-35+
CRAC Units	Large format	32-40+
Supplemental AC	Supplemental AC	16
Fan Coil Units	Fan Coil Units	16
VAV Boxes	VAV Boxes	10
FPB	FPB	10
Air Handlers	Water Cooled DX Semi-Custom	20-30
Modular Chillers	Modular Chillers	24-35
Roof Top AHUs	Roof Top AHUs	24-34+
Centrifugal Chillers	Centrifugal Chillers	30
UPS	80 kva	16-39
UPS	100-150kva	20-26
UPS	225; 300; 500 kva	24-28
PDU	80; 100-150; 225 kva	40-54
PDU	300 kva	24-28
PDU	500 kva	22-26
Switch Boards	100; 200; 400; 800 Amp	15-20
Switch Boards	1200 Amp	17-20
Switch Boards	1600; 2000; 2500 Amp	45-60
Cat Generators	100-500kw	32-34 Weeks
Cat Generators	750-1250 kw	62-65 Weeks
Cat Generators	1500 kw	Over 65 weeks
Detroit Diesel Generators	30-200 kw	35-37
Detroit Diesel Generators	230-400 kw	61-63
Detroit Diesel Generators	450-600 kw	35-37
Detroit Diesel Generators	1000-1250; 1500-1750; 2000-2500 kw	92-96

PROJECT TIMELINES | Construction Backlog

- The Associated Builders and Contractors (ABC) construction backlog for commercial and institutional projects totaled 8.5 months as of March 2024. This is a 0.4-month increase from February, but nearly a month below March 2023 levels.
- Starting in the latter half of 2023, the backlog indicator began to trend downward, with an average duration of 8.9 months over the past year—a 28% decrease compared to the preceding year. As of March 2024, the South holds the record for the longest backlog at 9.7 months, although this is a significant reduction from the 11.4 months recorded in March 2023.
- The sector's confidence remains strong, as reflected by the ABC's Construction Confidence Index, which averaged 59.2 in March, surpassing February's average of 56.5. This increase in confidence suggests anticipation of growth in the next six months.

Commercial and Institutional Construction Work Under Contract - Forward Look



Source: Associated Builders and Contractors

PROJECT TIMELINES | Project Execution Not Expected To Shorten in Next Six Months

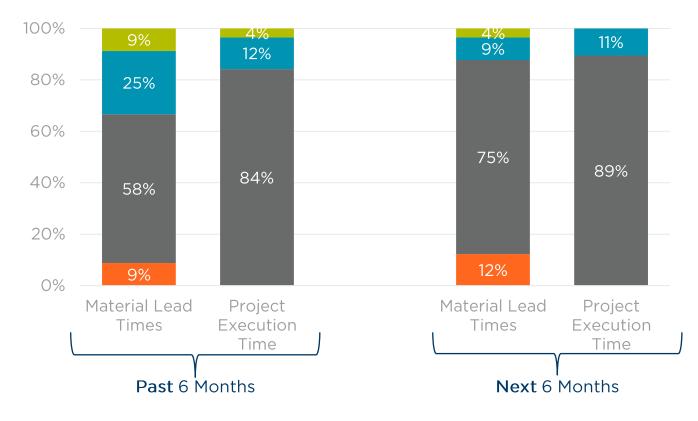
- Labor constraints and longer equipment lead times continue to extend project timelines.
- Cushman & Wakefield's fall 2023 sentiment survey reflects GCs' expectations of continued extended timelines. In the last six months, 84% of GCs experienced no change in project execution times. However, since timelines are already extended, this means that longer times are the status quo.
- In the next six months, 75% of GCs anticipate that lead times for materials will continue to be prolonged. While 13% expect an increase, a slightly more hopeful 12% predict a minor decrease.

Not surprisingly, 89% of GCs foresee that the timelines for project execution will continue to be extended over the next six months.

An additional 11% anticipate an increase in pressure on these timelines.

Cushman & Wakefield Construction Contractor Sentiment Survey, Fall 2023





Source: Cushman & Wakefield

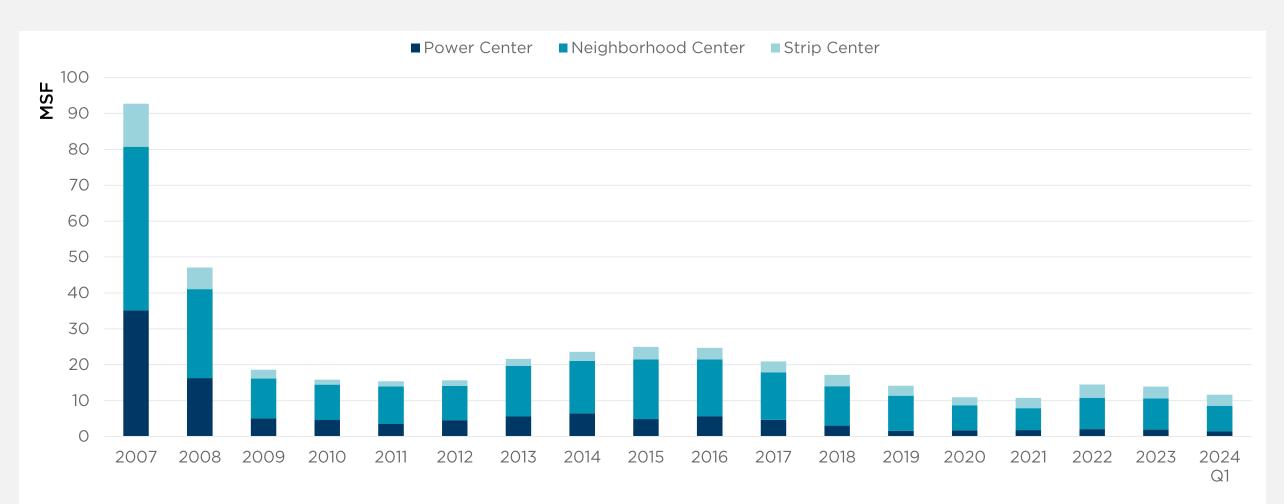
05 SECTOR SPOTLIGHTS



RETAIL

Retail construction remains restrained

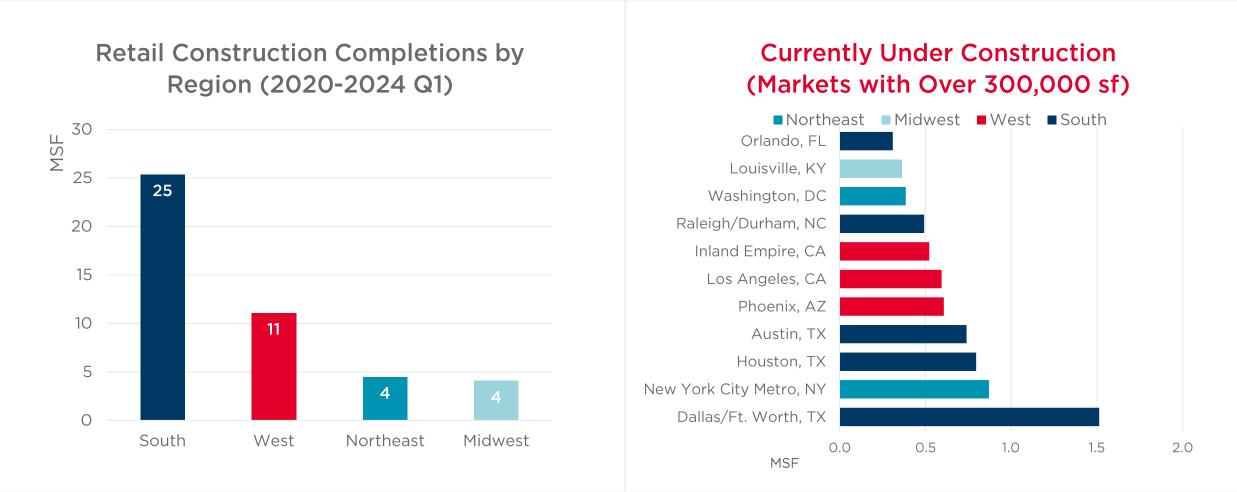
Nearly 12 MSF of retail space under construction as of Q1 2024



SECTOR SPOTLIGHTS | RETAIL

Retail construction varies by region

Highest activity in Southern U.S., followed by Western markets



Source: CoStar Group; Cushman & Wakefield Research

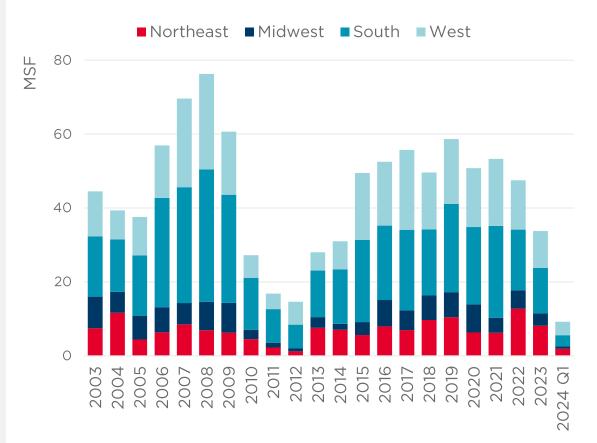
O5 SECTOR SPOTLIGHTS

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OFFICE

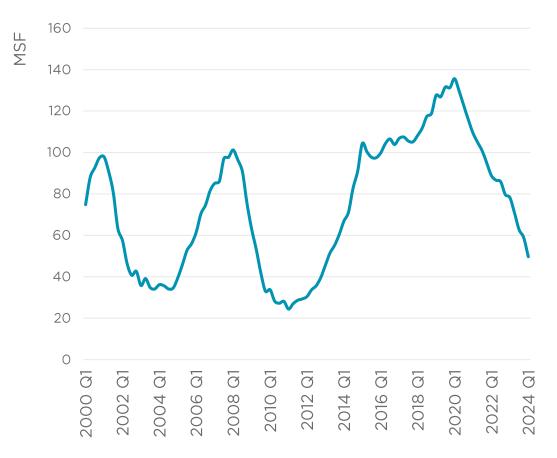
Office deliveries have fallen from recent highs

Pipeline continues to shrink as leasing, costs and labor challenges continue



Office Deliveries by Region

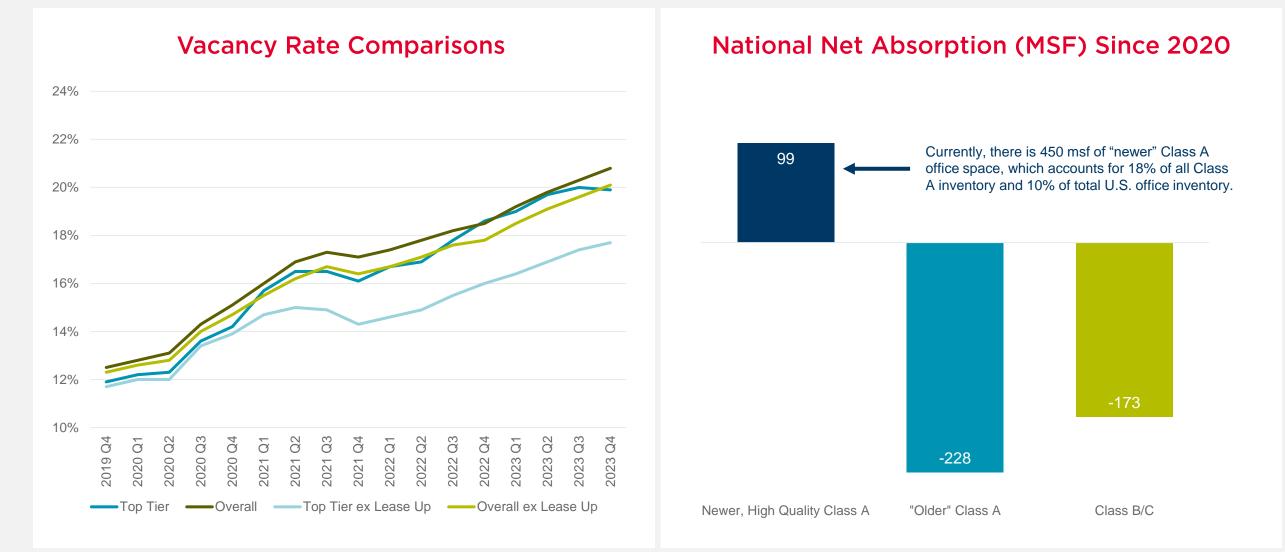
Under Construction – U.S. Office



SECTOR SPOTLIGHTS | OFFICE

Demand accruing to the best and newest office assets

"Newer" Class A office vs. everything else



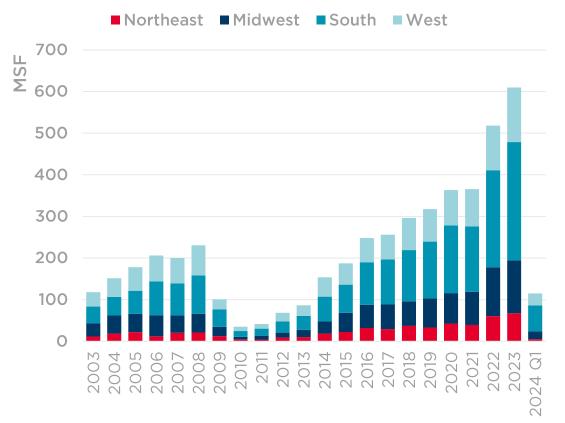
SECTOR SPOTLIGHTS

INDUSTRIAL

SECTOR SPOTLIGHTS | INDUSTRIAL

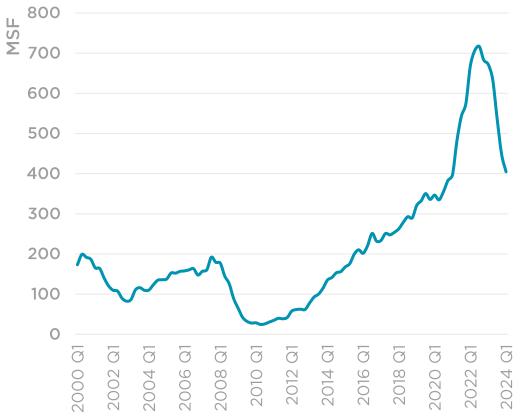
Industrial deliveries reached a new peak in 2023

Construction pipeline shrank in response to market fundamentals



Industrial Deliveries by Region

Under Construction – U.S. Industrial





Thank You

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