GLOBAL OCCUPIER SERVICES

CONSTRUCTION INSIGHTS

FOR GLOBAL OCCUPIERS

SUMMER 2024

Better never settles

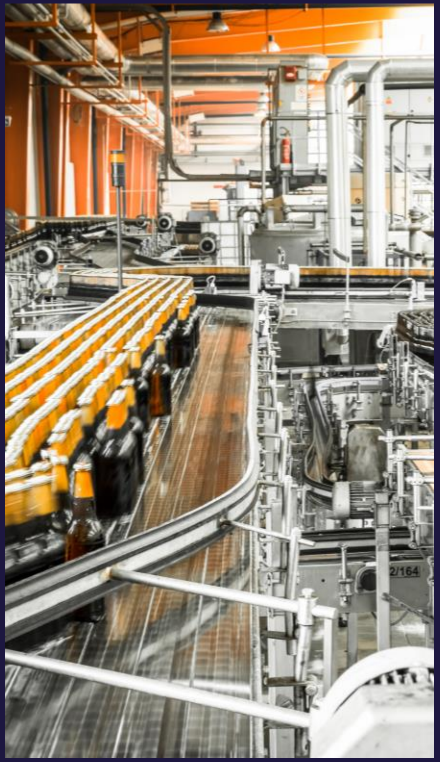
CONTENTS

INTRODUCTION

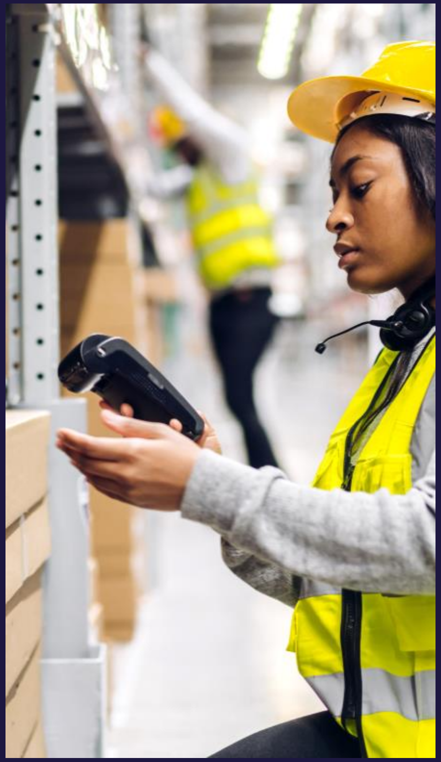
The global construction sector continues to face significant headwinds in 2024. High interest rates have dampened activity, but expectations of a lower interest rate environment in 2025 have improved the outlook.

Globally, costs have decreased from peak 2021-2022 levels; however, electrification-focused commodity prices are high.

Primary risks continue to be geopolitical and economic pressures, along with labor constraints, which are affecting construction projects globally.



Global supply chain stress receded from peak levels, but geopolitical tension is applying upward pressure across regions.



Labor constraints persist in the sector, making it difficult to fill open positions and resulting in extended project timelines.

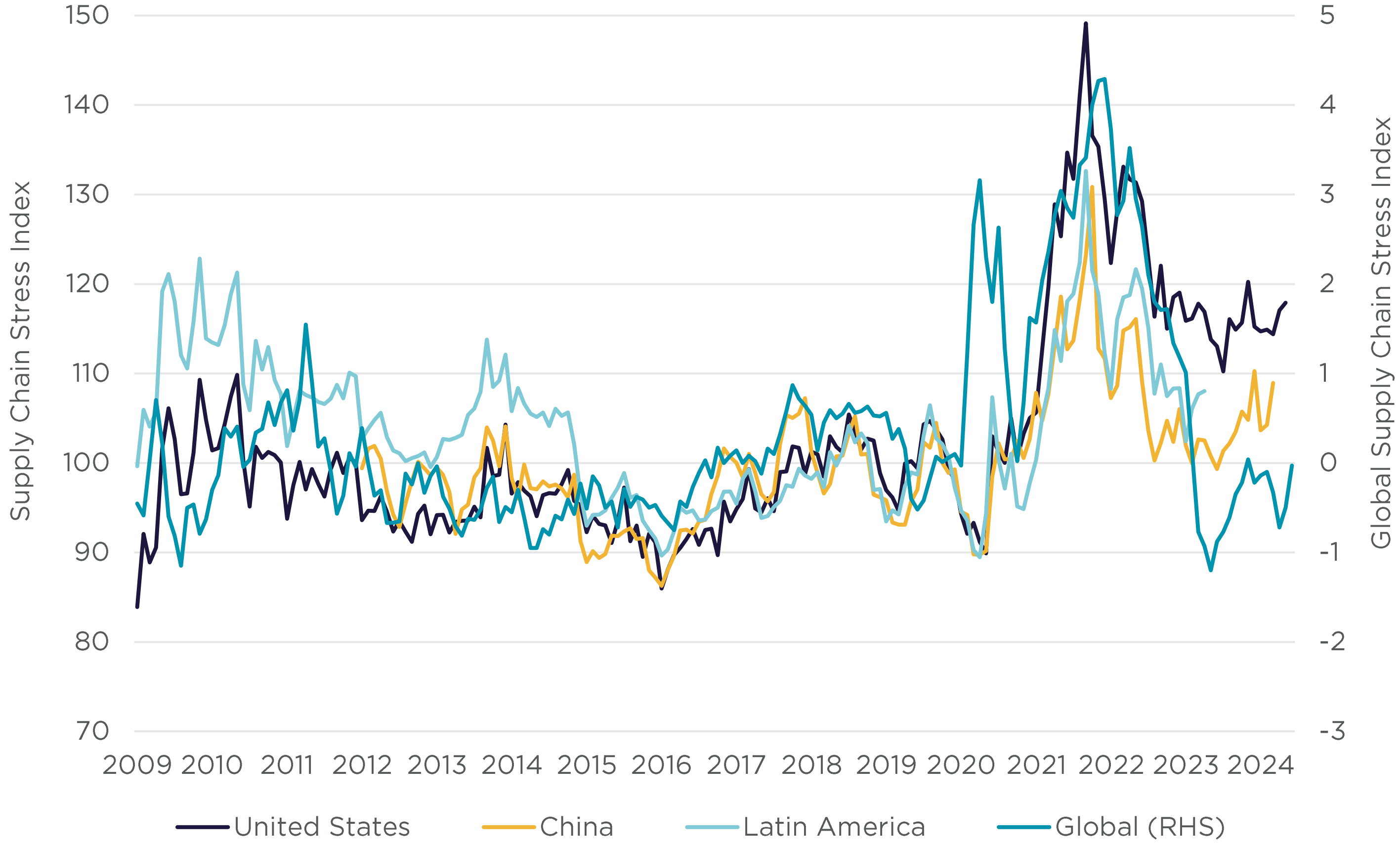
Construction pipelines for industrial and office construction have fallen from peak levels.

01

ECONOMIC DRIVERS

SUPPLY CHAIN STRESS TICKS UP

Strain on global supply chain increases from 2023 lows

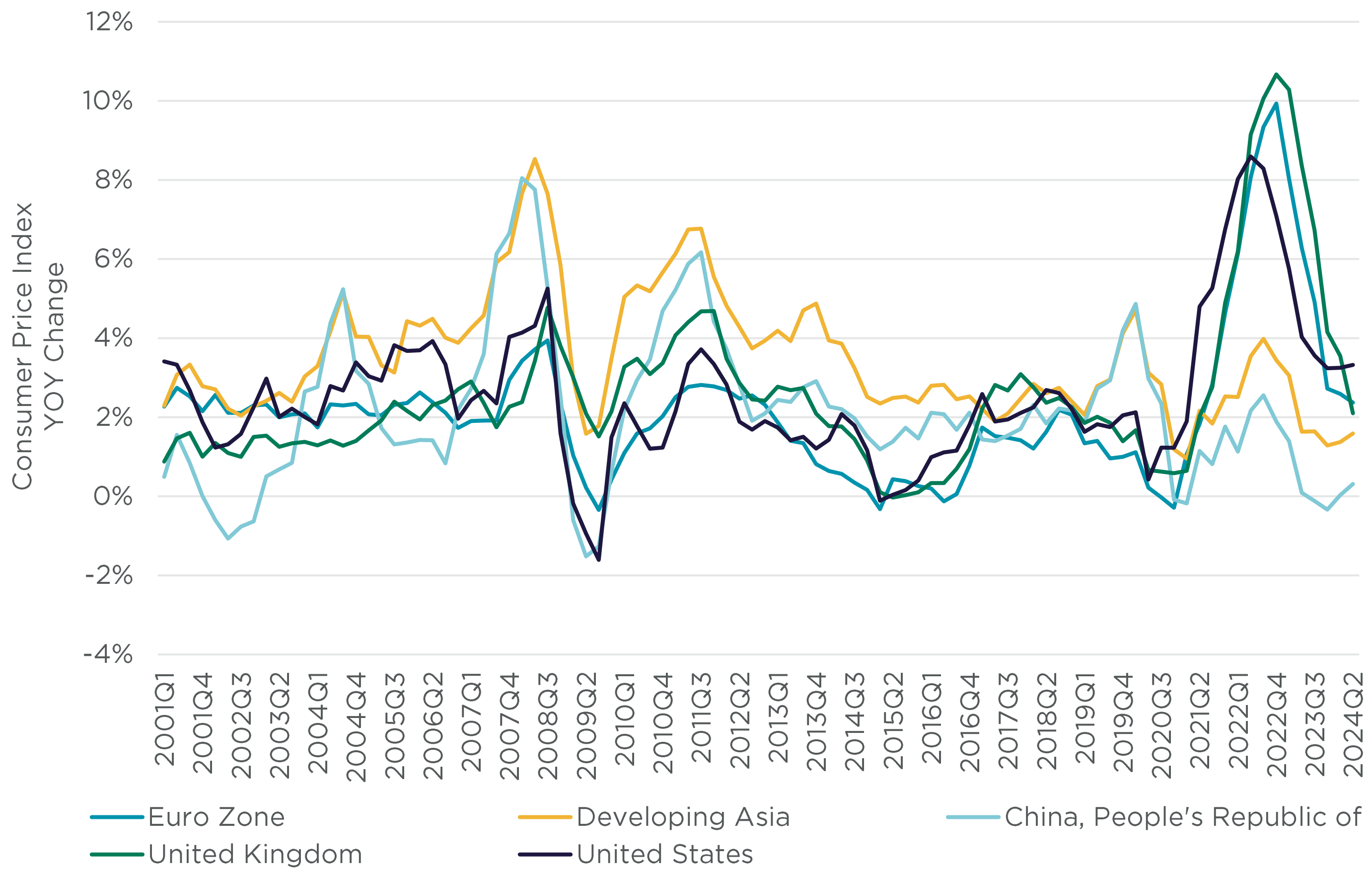


Source: Federal Reserve Bank of New York

- Recent global supply chain stress levels have ticked up from last year's lows. As of June 2024, the reading remains in negative territory at -0.03, but this is significantly higher on a year-over-year (YOY) basis. The ongoing crisis in the Red Sea and existing geopolitical tensions have caused the index to rise this year.
- China and the United States have also experienced an uptick in supply chain stress levels, rising 6.2% and 3.6% YOY, respectively. While both countries have seen levels drop considerably from 2021 peaks, current levels remain higher than January 2020.

GLOBAL INFLATION HAS DECREASED

Inflation is not decreasing as fast as governments would like



Source: The World Bank; Moody's Analytics

- Inflation has decreased significantly across major regions. However, the International Monetary Fund (IMF) recently stated that they expect global inflation to decrease slowly for the remainder of 2024. The IMF's outlook is based on the persistent high prices in the service sector, which includes housing and medical care.
- Additional risks to inflation include increasing trade tensions, which have the potential to increase prices further, as well as trade tariffs, which are likely to result in escalations.

INTEREST RATE HIKES SLOW

Quick rate cuts are no longer anticipated

Source: The World Bank; Moody's Analytics

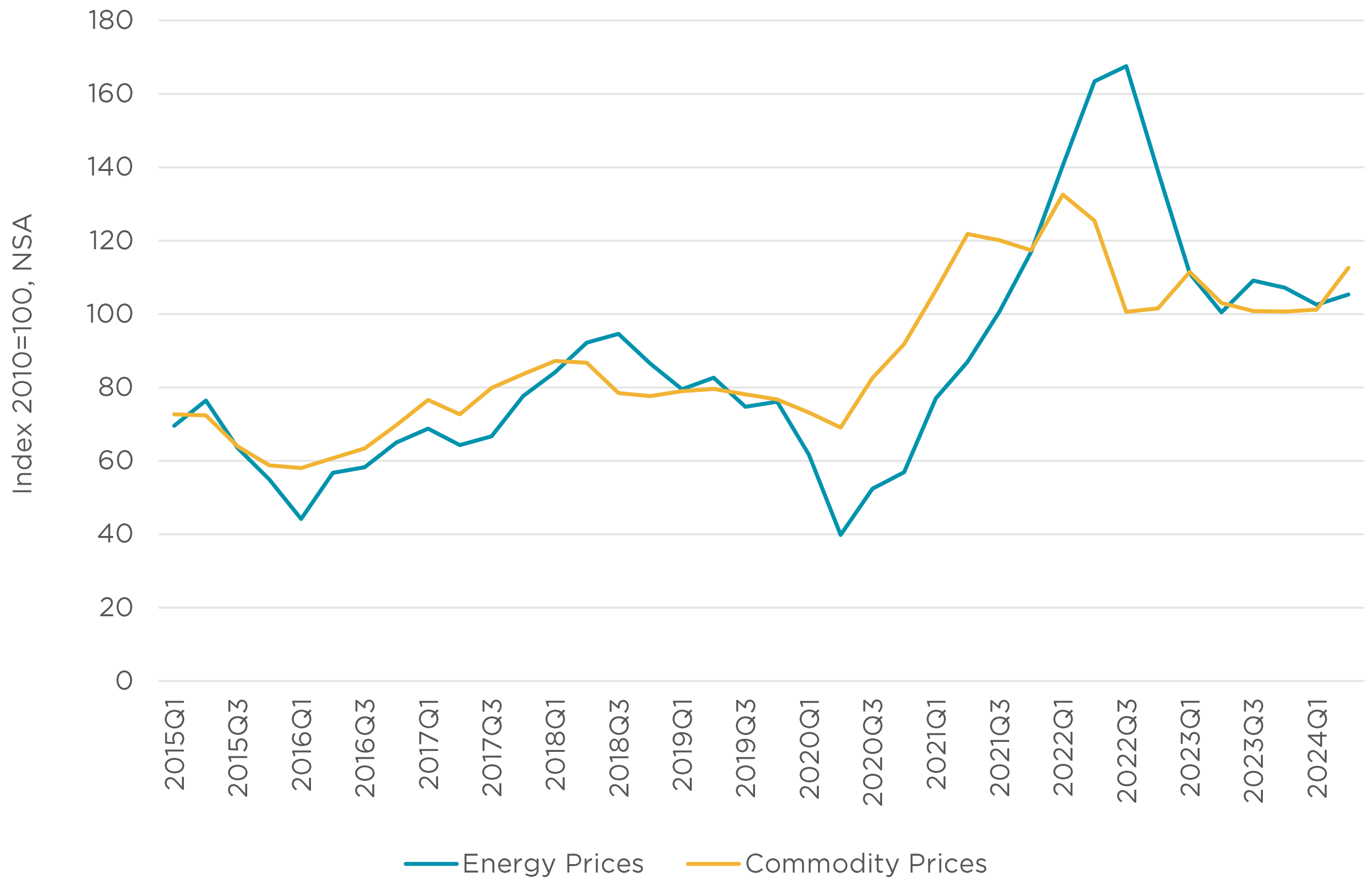
- The fiscal policy has been effective in controlling inflation in major global regions. However, because inflationary pressures are still present, the expectation of quick rate cuts has vanished. Rather, it is more likely that there will be a gradual approach to reducing rates, with the expectation of maintaining higher rates for longer periods of time.
- Higher interest rates continue to have an impact on construction deals that require financing. Looking ahead, it is anticipated that expectations of lower rates in 2025 will result in higher construction activity globally.

02

CONSTRUCTION COSTS

ENERGY AND COMMODITIES

Global prices rose at midyear

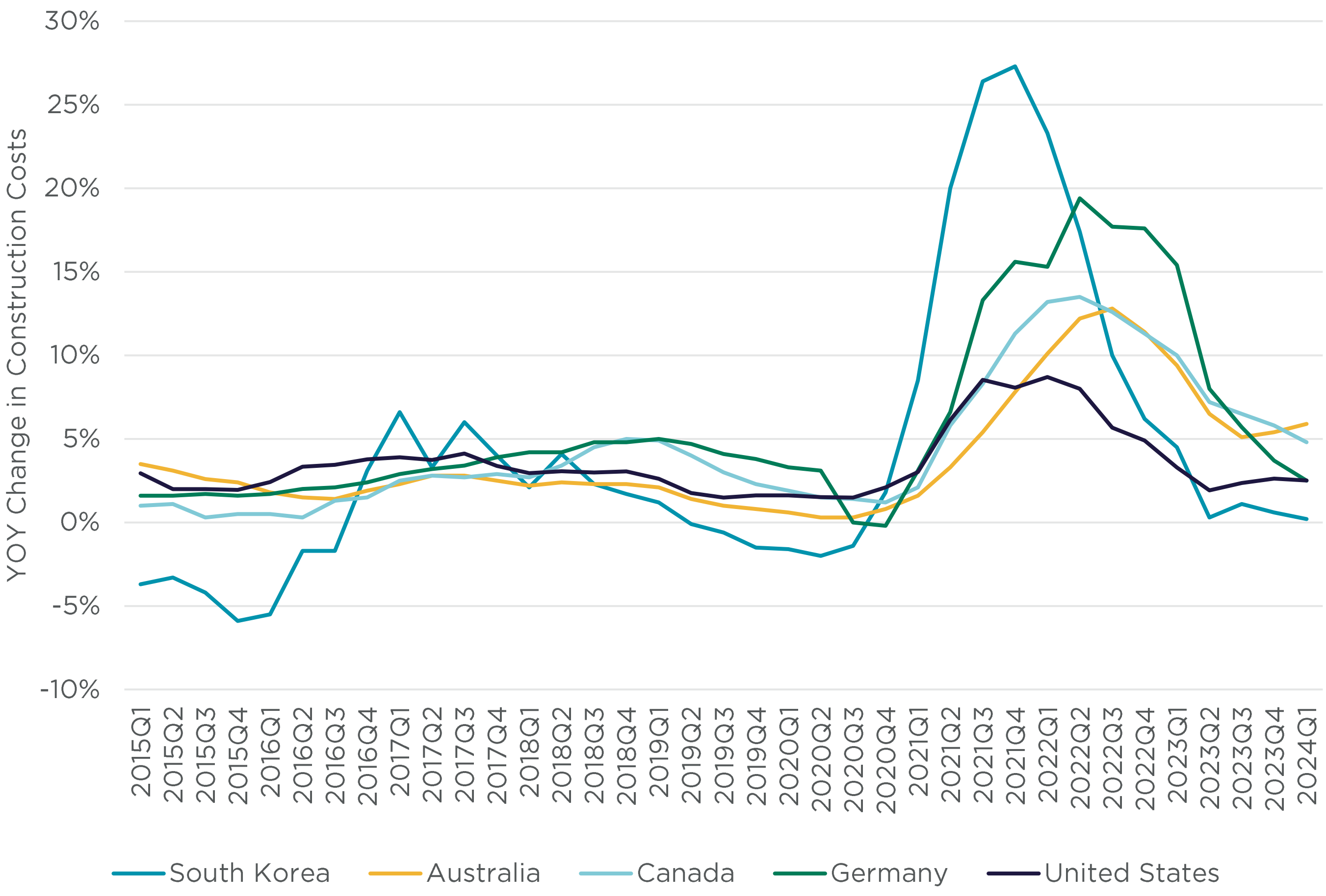


Source: The World Bank; Moody's Analytics

- Both energy and commodity prices have fallen from 2022 highs but have risen slightly as of midyear 2024.
- Energy prices rose 2.7% quarter-over-quarter (QOQ) and showed a more pronounced 4.9% increase on a YOY basis. According to the International Energy Agency's (IEA) July 2024 report, global heatwaves in the first half of the year contributed to the increase in energy consumption.
- Commodity prices increased more steeply at 9.3% QOQ and 11% YOY. The continued demand for commodities used in electrification efforts continues to place upward pressure on commodity prices.

CONSTRUCTION COSTS MODERATE

Cost increases have decelerated from 2021-2022 highs



Source: Moody's Analytics

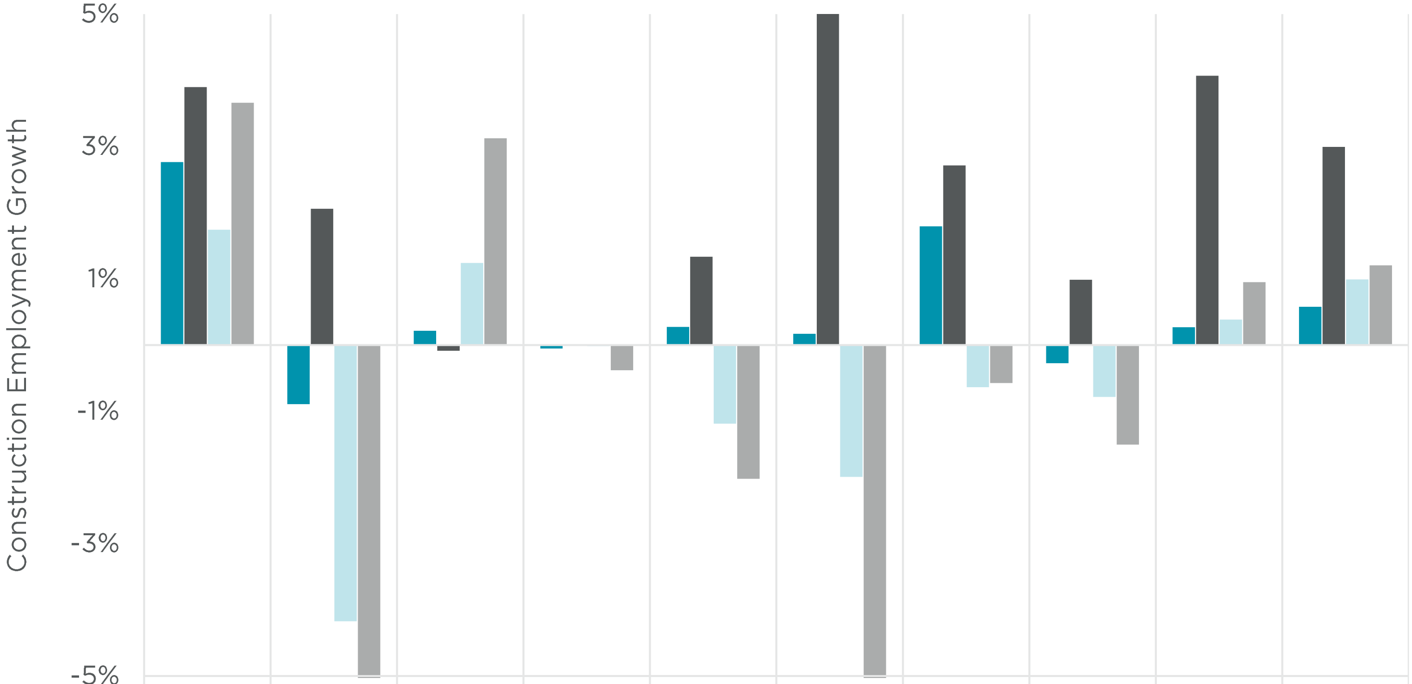
- Most global regions saw double-digit increases in construction costs in 2021 and 2022. While these increases have now moderated, they continue to exert upward pressure on costs.
- As of Q1 2024, costs across these representative countries rose an average of 3.2% YOY. This was a 530-basis point (bp) drop from cost increases during Q1 2023.
- Cost increases decreased QOQ in most countries, except for Australia, where construction costs rose 5.9% in Q1 2024, up from 5.4% in Q4 2023.

03

CONSTRUCTION EMPLOYMENT

MIXED EMPLOYMENT PICTURE

Labor constraints impact global firms



	Australia	Brazil	Canada	China	Euro Zone	Hong Kong	India	Japan	Mexico	United States
QOQ	2.8%	-0.9%	0.2%	-0.1%	0.3%	0.2%	1.8%	-0.3%	0.3%	0.6%
1-yr	3.9%	2.1%	-0.1%	0.0%	1.3%	10.9%	2.7%	1.0%	4.1%	3.0%
1-yr F	1.7%	-4.2%	1.2%	0.0%	-1.2%	-2.0%	-0.6%	-0.8%	0.4%	1.0%
2-yr F	3.7%	-11.1%	3.1%	-0.4%	-2.0%	-7.1%	-0.6%	-1.5%	1.0%	1.2%

Source: Moody's Analytics

- An aging global population, especially in mature economies, is placing stress on construction employment as firms struggle to attract talent.
- Based on a 2023 report from the International Trade Union Confederation (ITUC), Europe will need an additional 2 million construction workers by 2030 to support climate-related projects. Of that figure, 1.2 million are needed just to replace retiring workers. Similar trends are evident in other global regions.
- Recruiting these much-needed workers is difficult, as most countries are facing labor shortages in the construction sector.

TALENT SHORTAGE IS A TOP RISK

Future construction projects face labor constraints

Top 10 Current Risks

1. Economic Slowdown or Slow Recovery
2. **Failure to Attract or Retain Top Talent**
3. Cyber Attack or Data Breach
4. Commodity Price Risk or Scarcity of Materials
5. Cash Flow or Liquidity Risk
6. Workforce Shortage
7. Major Project Failure
8. Regulatory or Legislative Changes
9. Property Damage
10. Supply Chain or Distribution Failure

- Based on AON's 2023 survey of global real estate and construction firms, one of the top concerns is the attraction and retention of top talent.
- Construction projects worldwide are at risk of labor shortages due to an aging population and an increase in projects.
- The increase in construction projects is being fueled in great part by climate-focused construction and regional infrastructure spending.

Source: AON's 2023 Construction and Real Estate Global Risk Management Survey (GRMS)

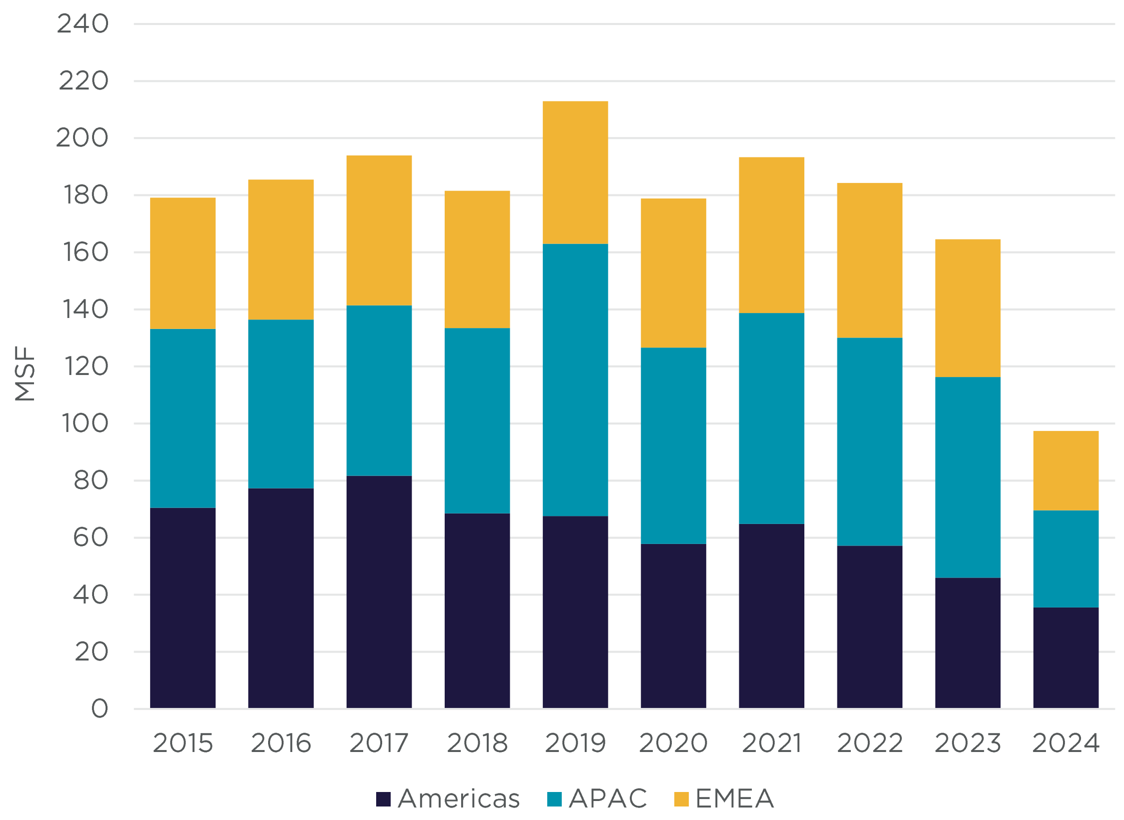
04

SECTOR SPOTLIGHTS

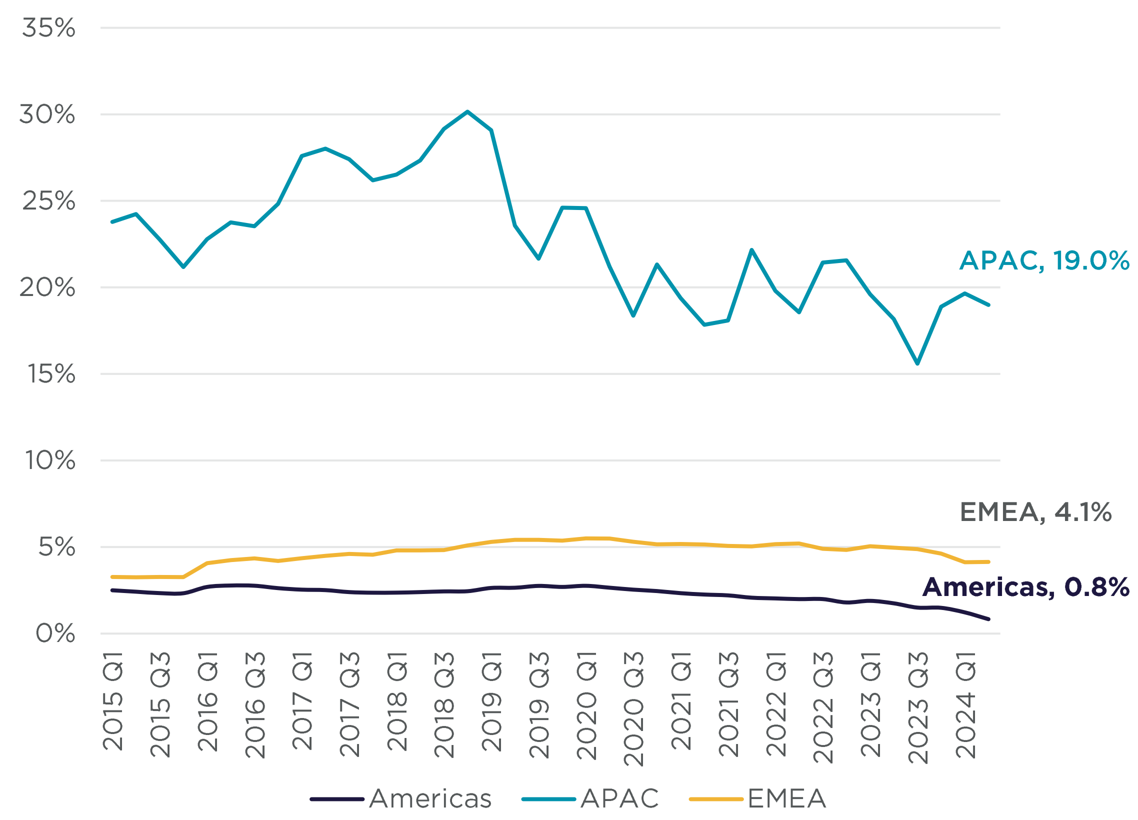
OFFICE DELIVERIES HAVE FALLEN

The construction pipeline has shrunk, as leasing, costs and labor challenges continue

Office Deliveries by Region



Under Construction as a % of Inventory

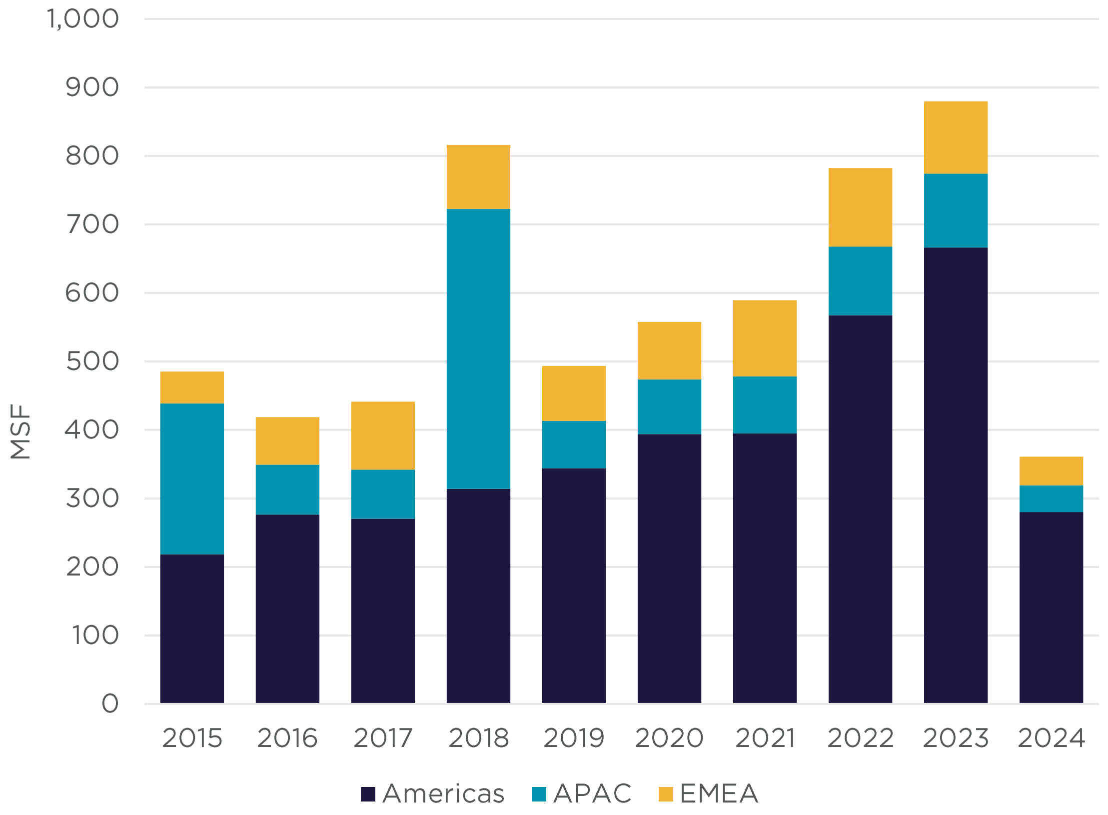


Source: Cushman & Wakefield Research

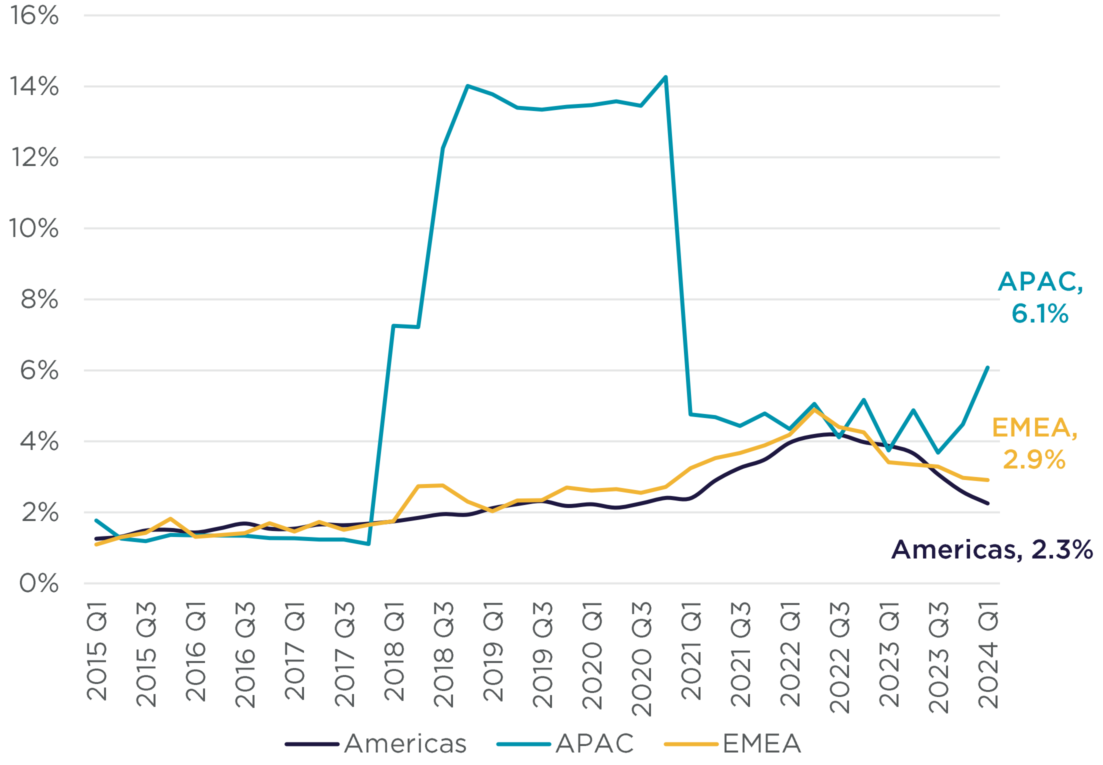
INDUSTRIAL DELIVERIES REACHED A NEW PEAK IN 2023

The construction pipeline shrank in some regions as a response to shifting market fundamentals

Industrial Deliveries by Region



Under Construction as a % of Inventory



Source: Cushman & Wakefield Research

05

COUNTRY DEEP DIVE

UNITED STATES

MACRO ECONOMIC OUTLOOK

The rising burden of interest rate costs is significant across the economy. Credit card and auto loan delinquency rates are increasing.

The softening in employment is expected to continue in the near term and will impact growth in 2025.

Interest rate cuts are expected to spur economic activity and lead to a stronger performance in 2026.

	2022	2023	2024	2025	2026
U.S. Economy					
Real GDP	1.9	2.5	1.9	1.1	2.3
Unemployment Rate	3.6	3.7	4.4	4.2	3.9
Job Growth, mils	4.9	2.9	1.0	0.9	0.9
CPI Inflation	8.0	4.1	2.9	2.6	2.3
Fed Funds Rate	3.6	5.3	4.6	3.9	3..1
10-year Gov't Bond	3.8	4.4	4.2	4.1	4.0

Source(s): U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, Cushman & Wakefield Research

CONSTRUCTION COSTS

Prices have slowed from recent highs, but pockets of high increases persist. Cooling inflation suggests upcoming interest rate cuts, which are expected to boost activity but also lead to additional cost increases.

JUNE PRICES FOR STRUCTURES INCREASED NOMINALLY

Structure prices are lower than a year ago but saw a slight increase on a one-month basis

YOY prices for nonresidential construction have fallen consistently for the last six months. Average structure prices fell 0.8% YOY, while the one-month change increased 0.4%. Contractor prices have increased both on a one-month and YOY basis, up 0.1% and 0.2%, respectively. Electrical contractors posted a 1.9% YOY price decrease.

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

New nonresidential construction costs are:

- ⬆ 0.4% compared to the previous month
- ⬇ 0.8% compared to June 2023
- ⬆ 39.1% increase since January 2020

Nonresidential contractor costs, in aggregate, are:

- ⬆ 0.1% compared to the previous month
- ⬆ 0.2% compared to June 2023
- ⬆ 33.9% compared to January 2020

	1-Month % Change	YOY % Change	% Change Jan-2020
STRUCTURES			
Nonresidential	0.4%	-0.7%	36.8%
Office	1.1%	-0.6%	42.3%
Industrial	0.1%	-1.1%	39.1%
Warehouse	0.0%	-0.4%	43.9%
Healthcare	0.1%	-0.9%	33.3%
Average Change	**0.4%**	**-0.8%**	**39.1%**
CONTRACTORS			
Concrete Contractors	0.0%	0.4%	30.0%
Roofing Contractors	0.0%	0.8%	49.3%
Electrical Contractors	0.3%	-1.9%	28.2%
Plumbing; HVAC Contractors	0.1%	1.3%	27.9%
Average Change	**0.1%**	**0.2%**	**33.9%**

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

COMMODITIES CONTINUE TO FACE PRICING INCREASES

Pricing for select commodities eased on a YOY basis, but most continued to increase

Demand for copper and aluminum pushed pricing higher, with June prices posting a 19% and 20% increase YOY, respectively.

As of June 2024, commodity costs averaged:

- 0.3% compared to the previous month
- 3.6% compared to June 2023
- 46.4% increase since January 2020

Looking ahead, prices are expected to increase for most commodities, with some easing in others. Specifically, copper prices are expected to decrease from current levels by year-end.

On average, costs are projected to be:

- 0.3% from current prices to September 2024
- 0.3% from current prices to December 2024

	1-Month % Change	YOY % Change	% Change Jan-2020	3-Month Forecast (Jun-2024)	6-Month Forecast (Sep-2024)
Lumber	0.0%	-1.3%	24.6%	-0.5%	-0.8%
Hot rolled bars; plates & structural	0.0%	-6.9%	49.4%	1.3%	0.5%
Steel pipe and tube	0.0%	-9.0%	37.6%	2.3%	2.0%
Nonferrous metals	0.9%	6.3%	38.0%	-0.1%	0.5%
Nonferrous wire and cable	0.9%	8.6%	54.2%	-0.4%	0.2%
Fabricated structural metal	-0.2%	-0.4%	59.4%	0.2%	-0.4%
Fabricated steel plate	0.0%	0.0%	50.9%	0.1%	-0.1%
Prefabricated metal buildings	0.0%	1.3%	62.3%	0.3%	-0.1%
Miscellaneous metal products	0.3%	2.1%	28.7%	1.2%	2.1%
Glass	0.1%	1.2%	23.4%	0.4%	0.8%
Concrete and related products	0.2%	7.1%	37.4%	0.2%	0.5%
Concrete products	0.3%	5.4%	39.6%	0.8%	1.1%
Asphalt felts and coatings	0.1%	1.3%	37.2%	-0.2%	-1.6%
Other nonmetallic minerals	-0.3%	2.4%	24.9%	0.8%	0.5%
Copper Base Scrap	1.6%	19.0%	80.3%	-1.1%	-0.7%
Aluminum Base Scrap	1.4%	20.2%	94.4%	-0.1%	0.3%
Average Change	**0.3%**	**3.6%**	**46.4%**	**0.3%**	**0.3%**

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

CONSTRUCTION COST INCREASES DECELERATE

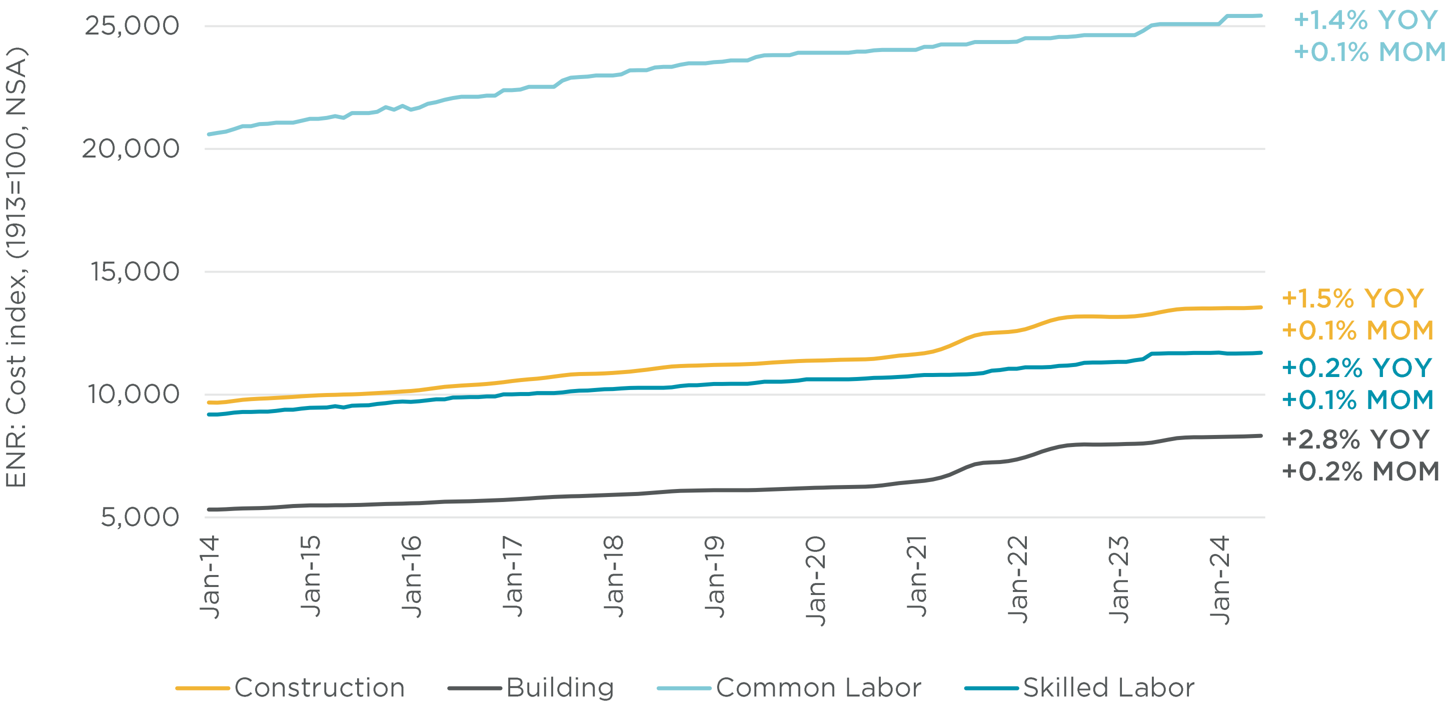
June costs experienced smaller increases than previous years

Costs in June fell below their 10-year increase averages, as measured by the two cost indices produced by Engineering News-Record, Construction and Building.

On a YOY basis, construction costs rose 1.5%, and building costs increased 2.8%. The primary difference between indices are skilled and common labor assumptions.

While labor costs continue to increase, June increases were nominal when compared to past months. On a YOY basis, common labor costs grew by 1.4%, and skilled labor increased slightly by 0.2%.

Core and shell commodities, including structural and fabricated metals, glass, switchgear and mechanical, continue to increase.



Source: Engineering News-Record (ENR) (McGraw-Hill)

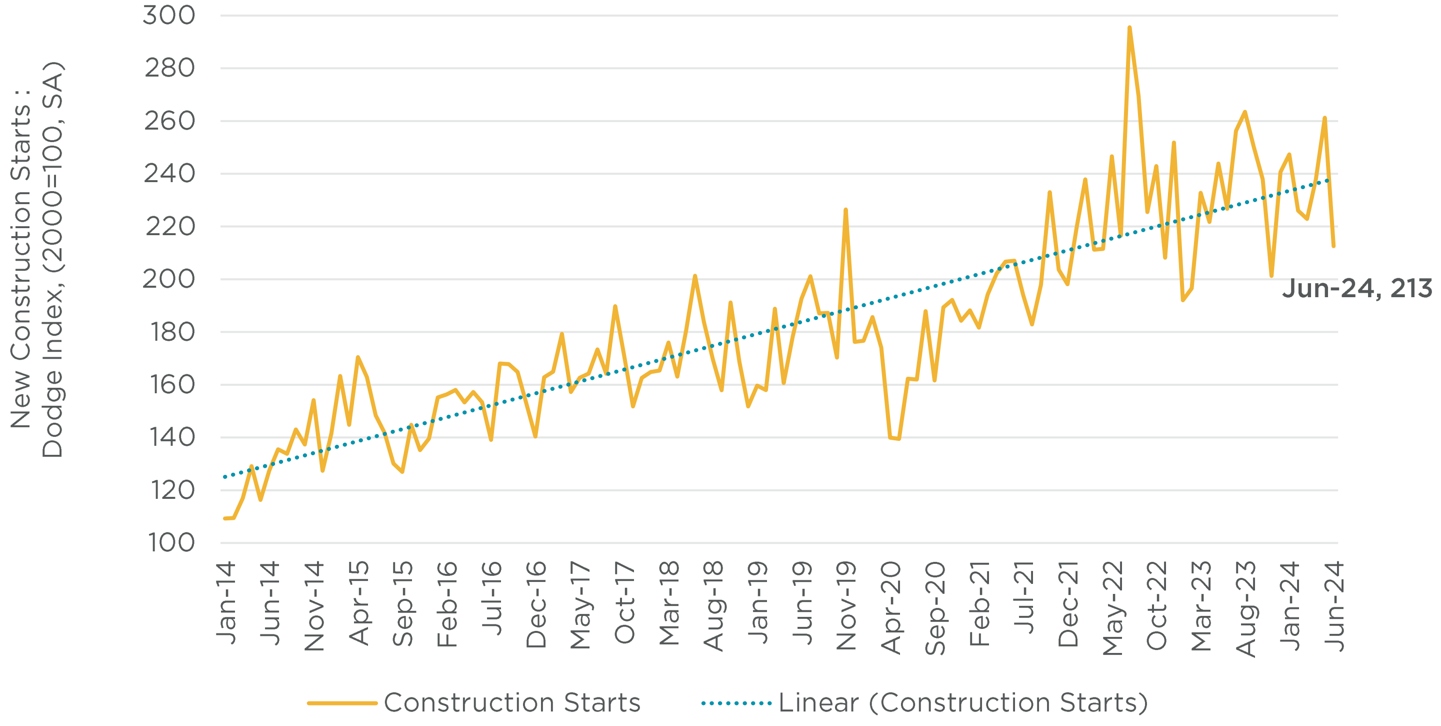
NEW CONSTRUCTION STARTS FALL IN JUNE

Data centers and retail drive commercial construction starts higher

Following a robust May, there was a 19% month-over-month (MOM) decrease and a 6.2% YOY decrease in new construction starts. The monthly starts in the Dodge Index exhibit significant fluctuations, but an analysis of the trendline indicates that the current starts are below their long-term trend.

Nonresidential building starts decreased by 13% MOM and 7% YOY. The decline was largely due to a 34% drop in manufacturing construction and a 19% decrease in institutional projects.

A bright spot in construction activity continues to be data centers, which, along with retail, drove the 4% MOM increase in commercial starts in June.



Source: Dodge Data & Analytics

COSTS INCREASES HAVE DECELERATED

Most metros saw smaller construction cost increases with some exceptions

On a QOQ basis, construction costs increased the most in San Francisco at 1.6% and Chicago at 1.4%. Denver and New York saw smaller QOQ increases at 0.8% for both.

YOY costs increased the most in Chicago at 7.7% and Seattle at 6.5%. San Francisco and Denver had the smallest cost increase at 4.0% for both.

Cost increases in most metro areas slowed down compared to the previous 12-month period, with the exceptions being Honolulu and New York. In Honolulu, costs increased by 5.8% YOY as of Q2 2024, up from 4.5% the previous year. Similarly, costs in New York increased by 6.1% YOY in Q2 2024, compared to a 5.3% increase in the previous year.

Metro	QOQ % Change	YOY % Change (Q2 2024 vs. Q2 2023)	(Q2 2023 vs. Q2 2022) % Change	% Change Q1 2020
Boston	1.3%	6.0%	8.5%	33.0%
Chicago	1.4%	7.7%	9.2%	32.5%
Denver	0.8%	4.0%	6.7%	23.4%
Honolulu	1.3%	5.8%	4.5%	18.1%
Las Vegas	1.1%	5.1%	6.9%	24.9%
Los Angeles	1.1%	4.9%	6.5%	27.2%
New York	0.8%	6.1%	5.3%	28.9%
Phoenix	0.9%	4.2%	7.6%	26.0%
Portland	1.1%	6.3%	8.6%	29.4%
San Francisco	1.6%	4.0%	6.1%	23.6%
Seattle	1.0%	6.5%	8.9%	33.6%
Washington D.C.	1.2%	5.3%	6.8%	27.5%

Source: Rider Levett Bucknall

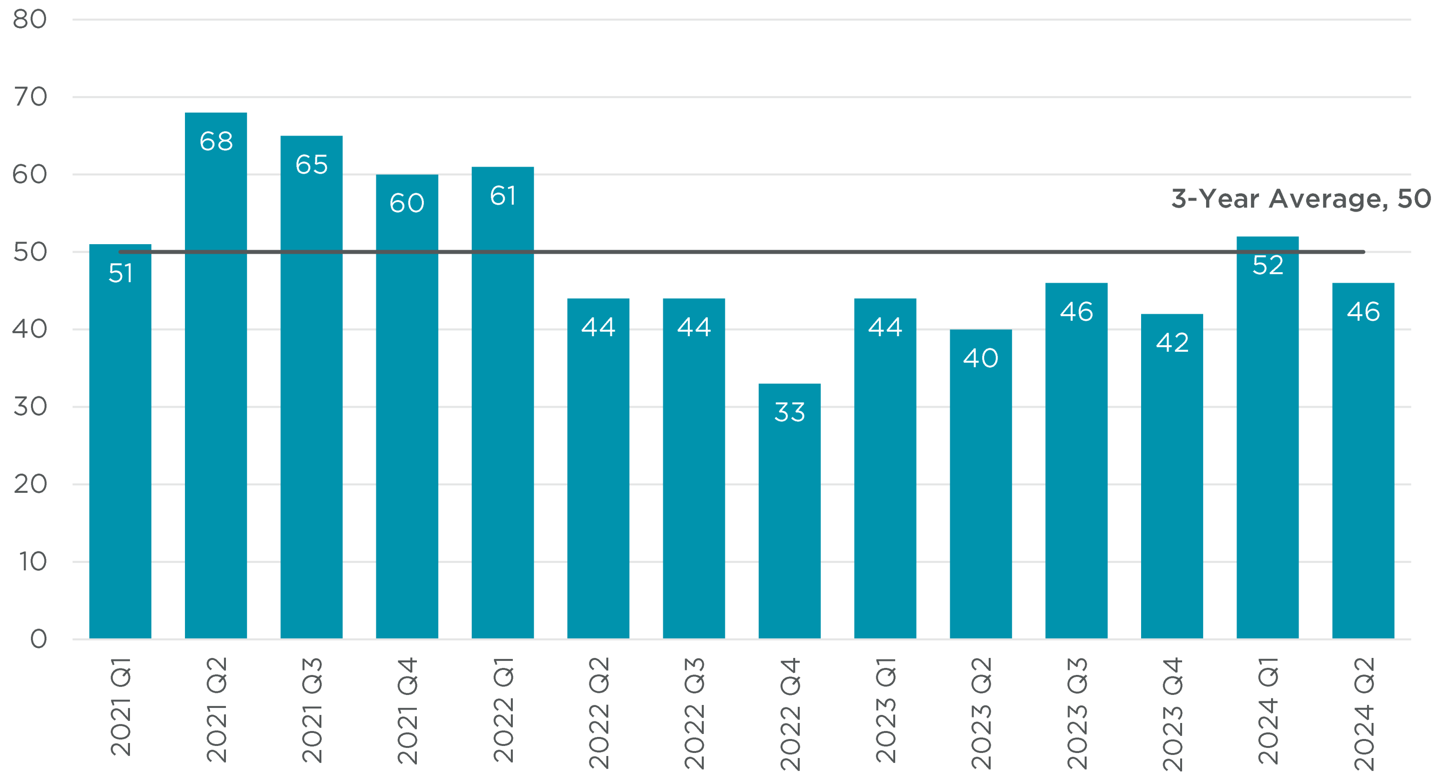
EXECUTIVE CONFIDENCE DIPS MIDYEAR 2024

Persistently high interest rates dampened an increase in confidence at the start of the year

The quarterly survey results from ENR, conducted among U.S. executives of leading general contractors, subcontractors and design firms, took a dip in the second quarter of 2024.

Expectations for interest rate cuts in the first half of the year fizzled, leading the most recent confidence levels to drop. The index measures sentiment regarding future market conditions and indicates that executives are somewhat pessimistic about growth in 2024, as high interest rates continue to hamper activity.

Sentiment varies by region. Firms in the Midwest are more optimistic, with an overall confidence score of 49. Meanwhile, confidence among firms in the West and Pacific Northwest was lowest at 40, a significant drop from 52 in the first quarter.



Source: ENR/BNP MEDIA

LABOR

Hiring and wages in the construction sector are growing. However, the sector still faces hurdles, and labor constraints will continue to affect the sector in the short term.

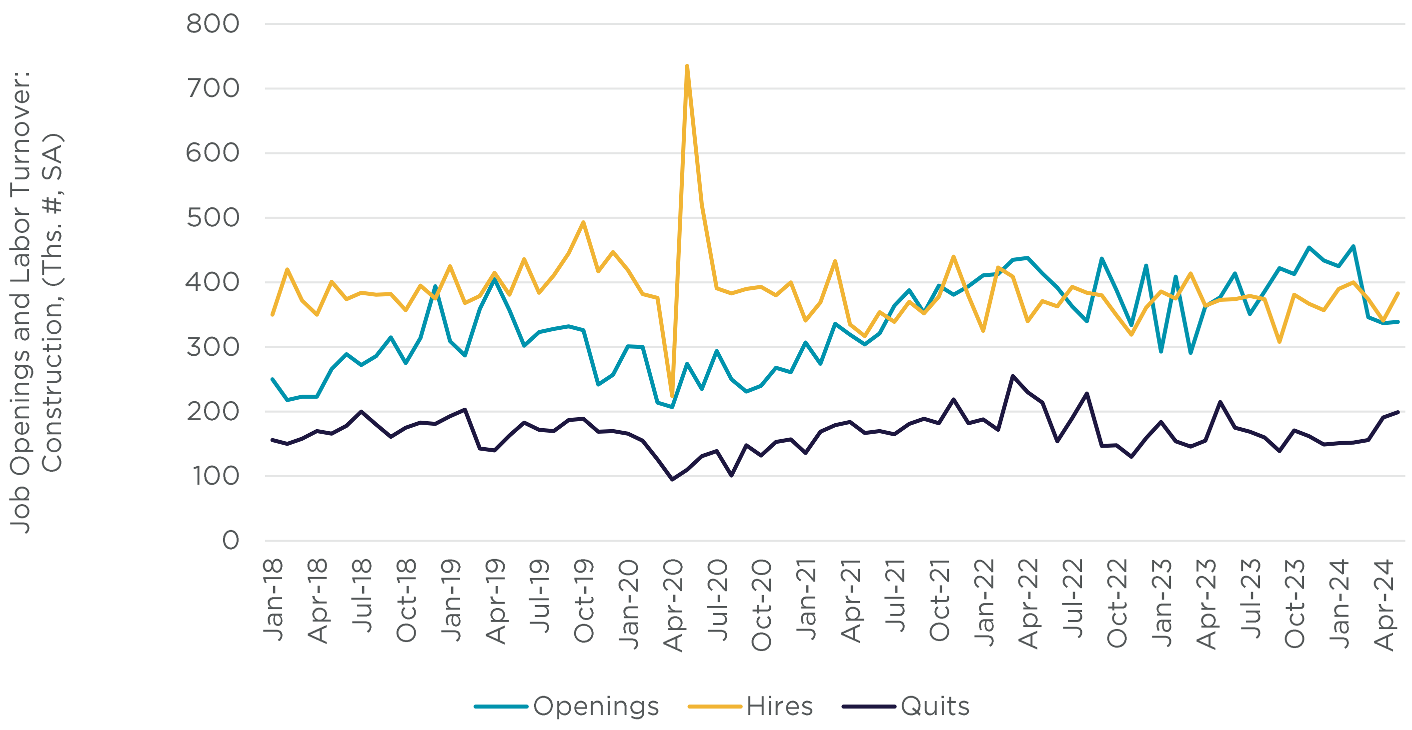
HIRING WAS STRONG IN THE FIRST HALF OF THE YEAR

U.S. construction firms continue to add jobs at pace higher than the overall economy

The nonresidential construction industry added 22,800 jobs in the first half of the year, through June 2024. This is a 5.2% YOY increase that exceeds the overall employment sector's growth of 1.7%

Construction job openings have dipped significantly in 2024, leading hirings to outpace openings for the first time in six months. However, quits have recently accelerated, indicating that there still isn't enough slack in the construction labor pool.

The unemployment rate among construction job seekers dropped precipitously to 3.3% in June, significantly lower than the 12-month average of 4.7%.



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

SOUTHERN U.S. MARKETS POST STRONG JOB GROWTH

Texas has shown remarkable growth, boasting three metropolitan areas in the nation's top 10

Seven of the top 10 metros are in the South. The metropolitan areas of Miami, Dallas-Fort Worth and Baton Rouge have seen the most significant YOY growth in construction jobs. Miami has experienced a notable increase in construction projects, as companies aim to capitalize on its changing demographics.

In the second quarter, Denver, Minneapolis and Baltimore saw the highest job losses on a YOY basis. Denver's job losses are attributed to a recent slowdown in construction projects, partially due to shifting demographics and regulatory changes at the local government level.

Total Gain/Loss as of Q2 2024

GAIN

Metro	YOY Change	%	Q1 2020 Change
Miami, FL	9,946	6.6%	12.3%
Dallas-Fort Worth, TX	8,125	3.6%	12.8%
Baton Rouge, LA	7,801	16.8%	13.7%
Detroit, MI	7,450	9.0%	14.3%
Las Vegas, NV	6,821	8.4%	21.1%
Houston, TX	6,329	2.7%	0.5%
Atlanta, GA	5,472	3.8%	12.2%
Austin, TX	3,845	4.9%	22.7%
Urban Honolulu, HI	3,381	12.5%	12.0%
Indianapolis, IN	3,277	5.3%	14.8%

LOSS

Metro	YOY Change	%	Q1 2020 Change
Denver, CO	-5,109	-4.9%	-3.0%
Minneapolis, MN	-3,976	-4.5%	-1.9%
Baltimore, MD	-3,552	-4.5%	-7.3%
Chicago, IL	-3,323	-1.8%	-0.1%
San Francisco, CA	-3,031	-2.5%	-8.5%
Seattle, WA	-2,561	-1.9%	-1.1%
Washington, DC	-2,494	-1.5%	-3.4%
Pittsburgh, PA	-2,260	-4.0%	-16.9%
Cincinnati, OH	-2,044	-4.1%	-1.5%
San Jose, CA	-1,833	-3.4%	-5.1%

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

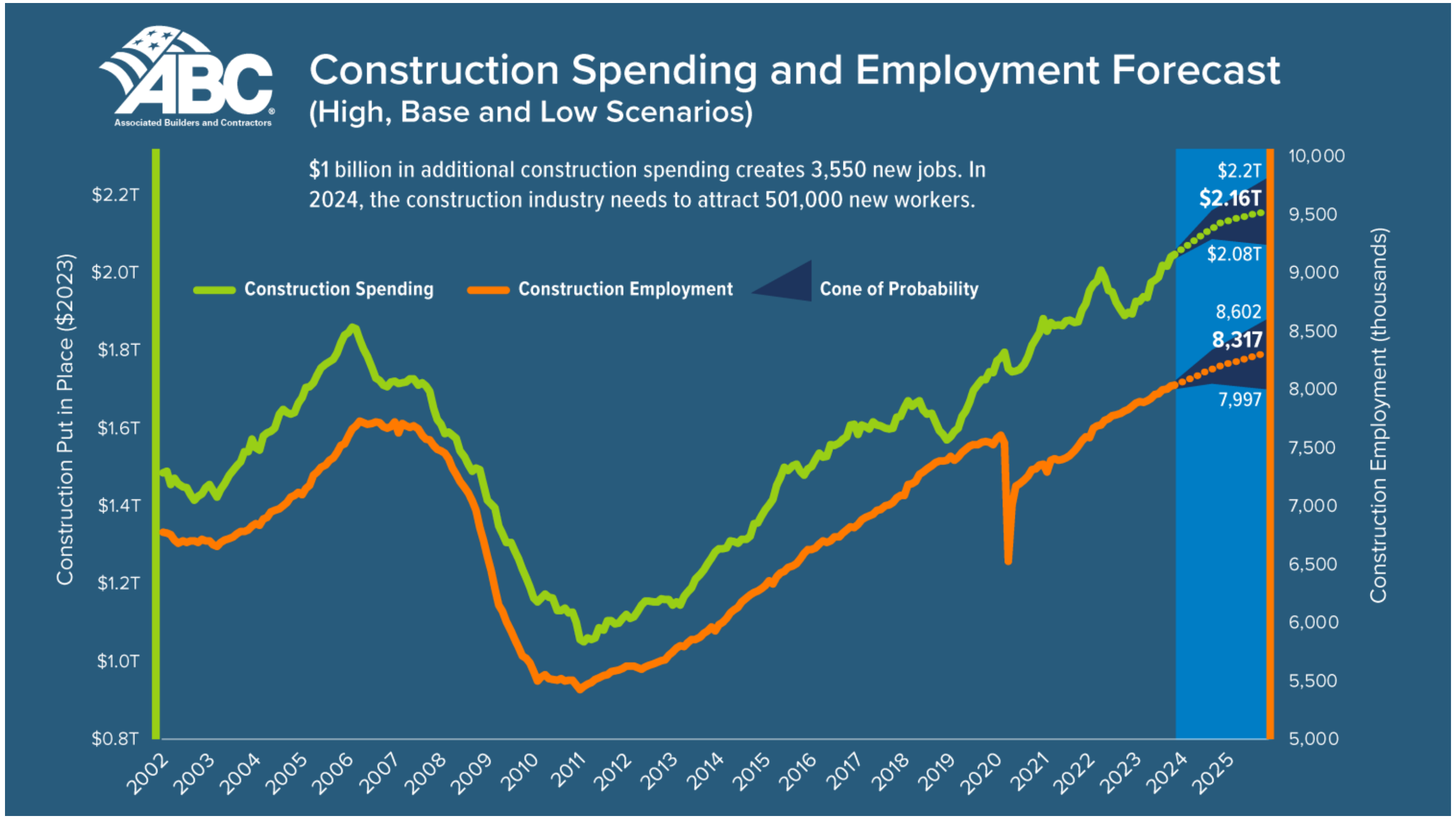
STAFFING PROJECTS WILL CONTINUE TO FACE HURDLES

Nearly 1 million construction jobs need to be added through 2025

Labor constraints in the construction sector will continue to impact projects. Expectations of interest rate cuts in the U.S. are likely to spur additional construction projects, increasing competition for talent.

Additionally, a coming wave of retirements will put additional pressure on a sector that has historically not attracted young workers. To bridge this gap, construction companies have put in place several incentives, including:

- Training programs at the high school level
- Training of existing staff for high-demand positions
- Competitive compensation and benefit packages
- Investments in technology



Source: Associated Builders and Contractors

PROJECT TIMELINES

Timelines for some systems are still limited due to high demand. However, the backlog of projects has leveled off, allowing for some breathing room.

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	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

Source: Turton Bond

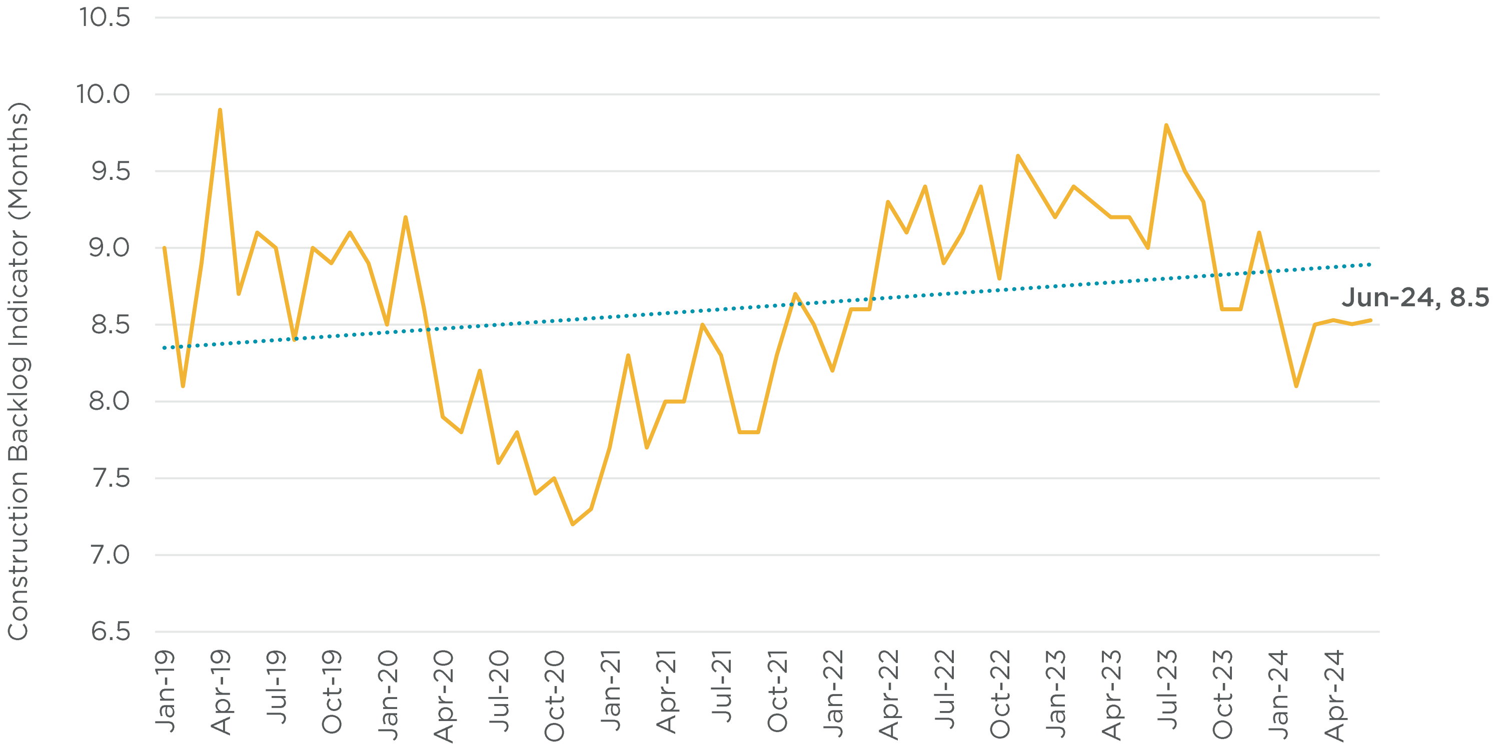
THE CONSTRUCTION BACKLOG HAS FLATTENED

A forward look at commercial and institutional construction work under contract

The Associated Builders and Contractors (ABC) construction backlog for commercial and institutional projects totaled 8.5 months as of June 2024. The indicator remains flat from its March 2024 reading, but 0.5 below June 2023 levels.

The backlog indicator has decreased from its peak in mid-2023 but has remained flat for the past three months. As of June, the backlog has decreased by 4.4% over the last 12 months, averaging 8.8 months. Also as of June, the South region has the longest backlog at 9.5 months, which is a significant reduction from the 11.4 months reported in January 2024.

The sector's confidence decreased in June, as shown by the ABC's Construction Confidence Index, which averaged 58.1, below March's average of 59.2. Confidence has been volatile due to the expected rate cuts in the first half of the year not materializing. However, confidence remains above 50, indicating continuing expectations of growth.



Source: Associated Builders and Contractors

Backlog is defined as "the amount of work, measured in dollars, that construction companies are contracted to do in the future."

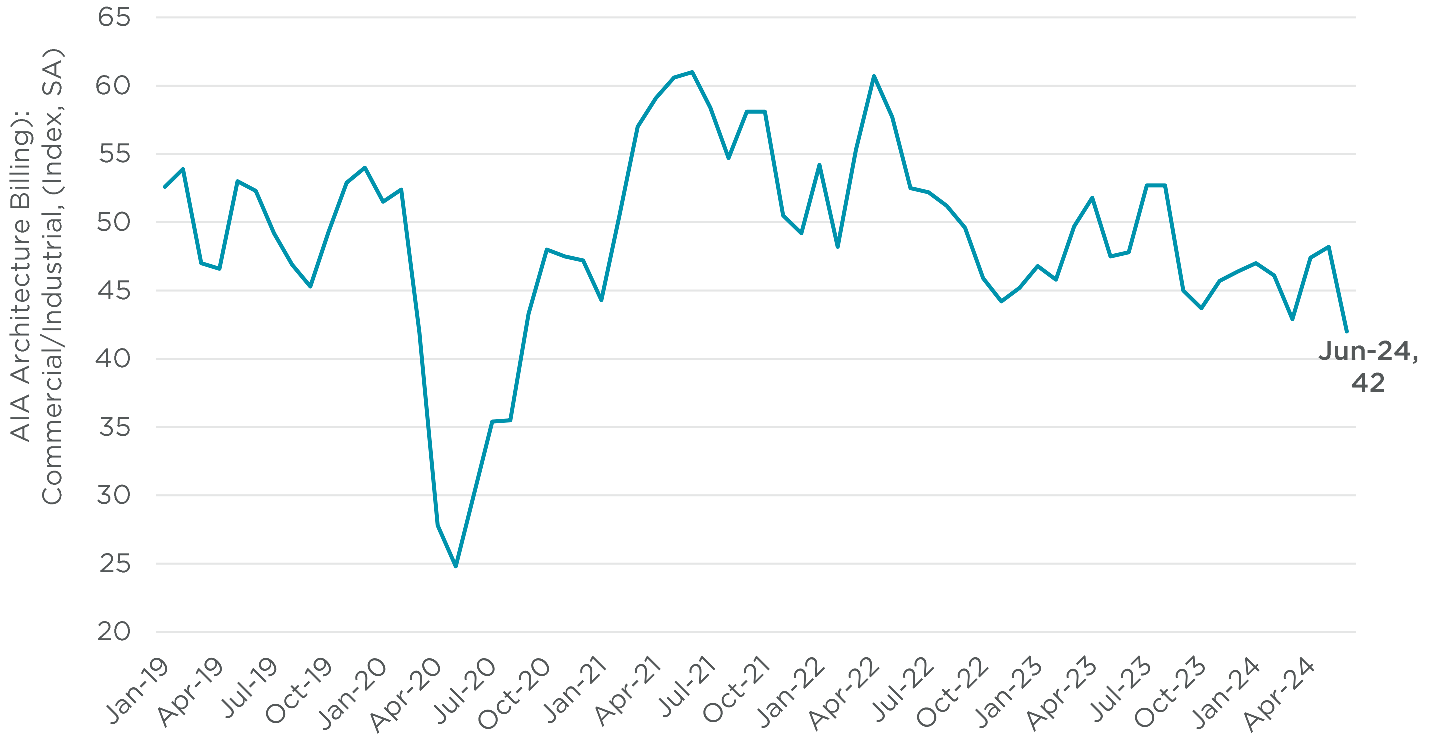
ARCHITECTURAL BILLINGS SOFTNESS CONTINUES

Commercial and Industrial billings have trended lower since 2022

Commercial and industrial architectural billings fell 13% in June on a MOM basis and were down 12% YOY. Billings have been below 50 for all of 2024, indicating a continued decline. Since billings are forward-looking, this points to softness in the construction sector over the next nine to 12 months.

Regionally, the Northeast posted the strongest overall billings at 52, and the West posted the lowest at 43.

Despite this year's weaker billings, general sentiment in the architectural sector remains positive, according to the American Institute of Architects (AIA). This positive sentiment lies in the expectation that interest rate cuts will spur additional construction activity in the short term.



Source: The American Institute of Architects (AIA)

CUSHMAN & WAKEFIELD

TYLER PAYTAS
Global Head of GOS Project Management
tyler.paytas@cushwake.com

CARRIE BOEGEMAN
Head of Platform Operations
GOS Project Management
carrie.boegeman@cushwake.com

SANDY ROMERO
Research Manger, Global Research
sandy.romero@cushwake.com

ABOUT CUSHMAN & WAKEFIELD

Cushman & Wakefield (NYSE: CWK) is a leading global commercial real estate services firm for property owners and occupiers with approximately 52,000 employees in nearly 400 offices and 60 countries. In 2023, the firm reported revenue of $9.5 billion across its core services of property, facilities and project management, leasing, capital markets, and valuation and other services. It also receives numerous industry and business accolades for its award-winning culture and commitment to Diversity, Equity and Inclusion (DEI), sustainability and more. For additional information, visit www.cushmanwakefield.com.

Better never settles