

Market Intelligence & Industry Insights

Thomas Grogan
& Diana Alexander

01.09.24

Thomas Grogan

- Senior Director, Economics & Private Markets
- Joined ACEC in May, 2023
- 13 Years in the AEC Industry
- BA International Relations, MA Applied Economics, Johns Hopkins University
- Staff Director for Technology Committee



Diana Alexander

- Director, Private Market Resources, ACEC National
- Joined ACEC in April 2021.
- 11+ Years in AEC Industry.
- BSBA Marketing, UNC Charlotte.
- Certified Professional Services Marketer (CPSM)
- Certificate in Economic Measurement, NABE
- Lead the Business Development & Marketing Forum



Topics

Economic Update (National & State)

Commercial & Residential Real Estate

Massachusetts Specific Trends & Investments

Forecast by Market 2024-2027

How is the US Economy Doing?

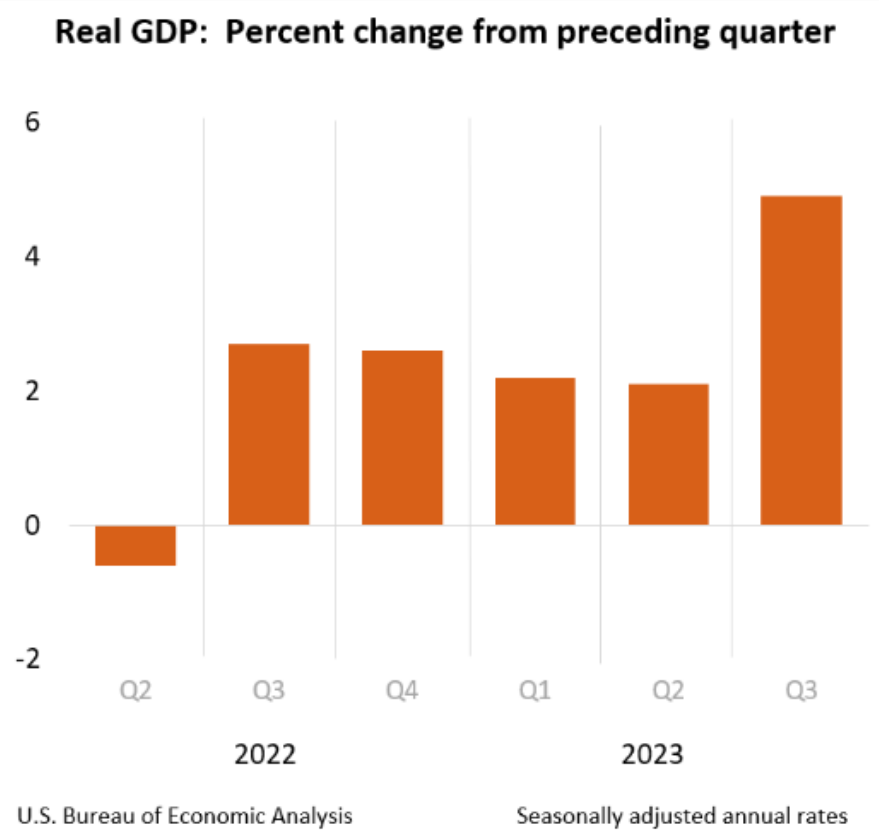
Gross Domestic Product (Third Estimate), Corporate Profits (Revised Estimate), and GDP by Industry, Third Quarter 2023

Q3 2023 (3rd)	+4.9%
Q2 2023	+2.1%

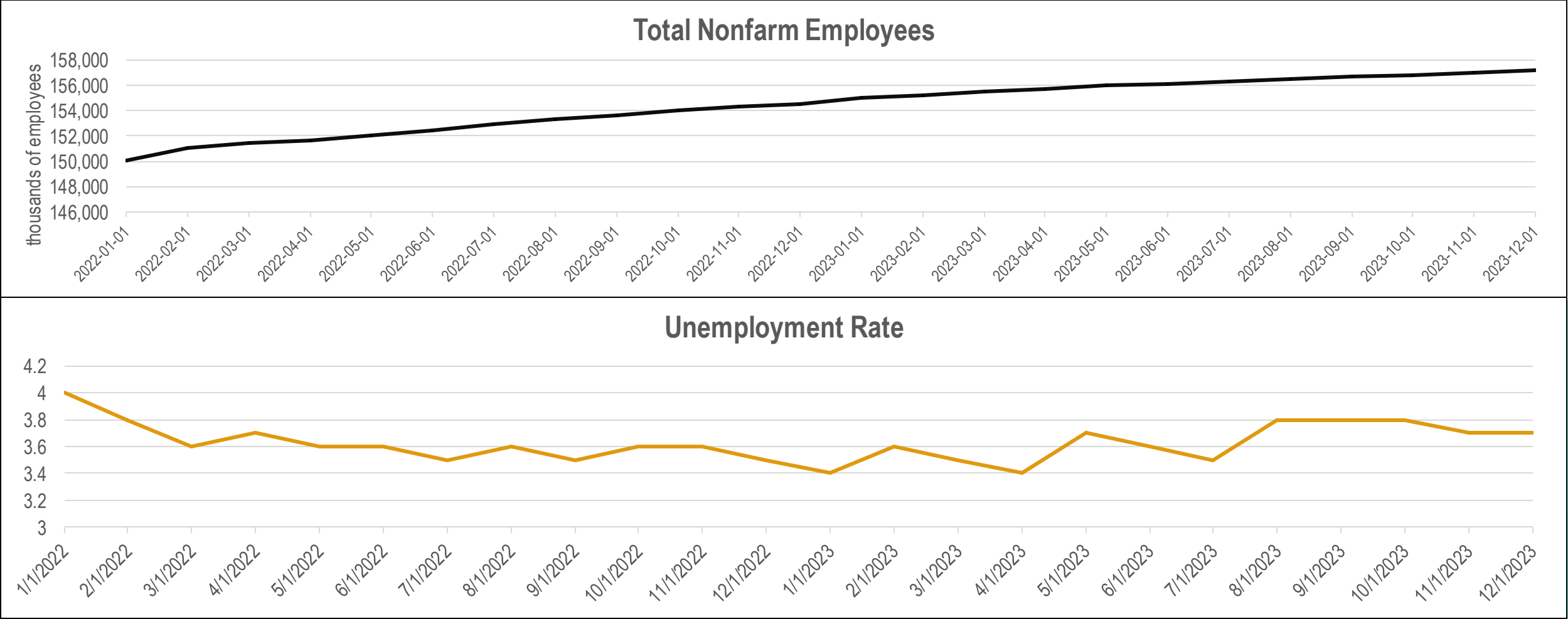
Real gross domestic product (GDP) increased at an annual rate of 4.9 percent in the third quarter of 2023, according to the “third” estimate. In the second quarter, real GDP increased 2.1 percent. The increase in the third quarter primarily reflected increases in consumer spending and inventory investment. Imports, which are a subtraction in the calculation of GDP, increased.

Profits increased 3.4 percent at a quarterly rate in the third quarter after increasing 0.2 percent in the second quarter.

In the third quarter, the value added of private goods-producing industries increased 10.2 percent, private services-producing industries increased 4.1 percent, and government increased 2.0 percent. Overall, 14 of 22 industry groups contributed to the third-quarter increase in real GDP.

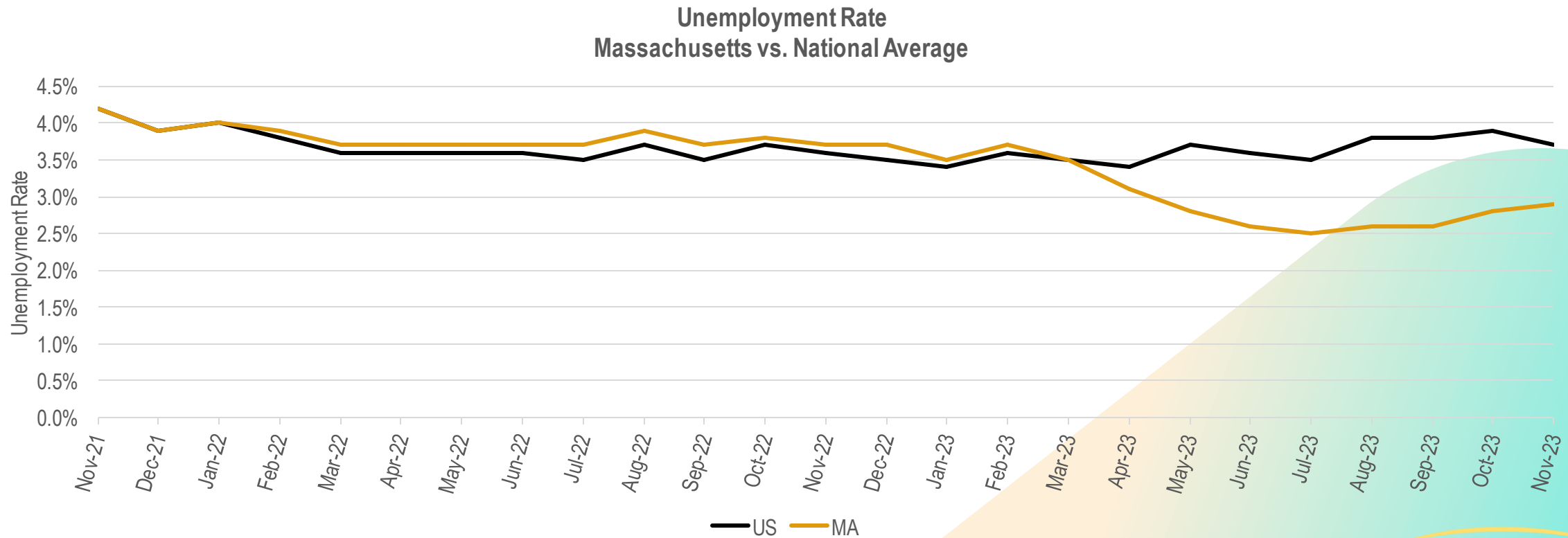


Employment increases surging again; unemployment rate remains very low.



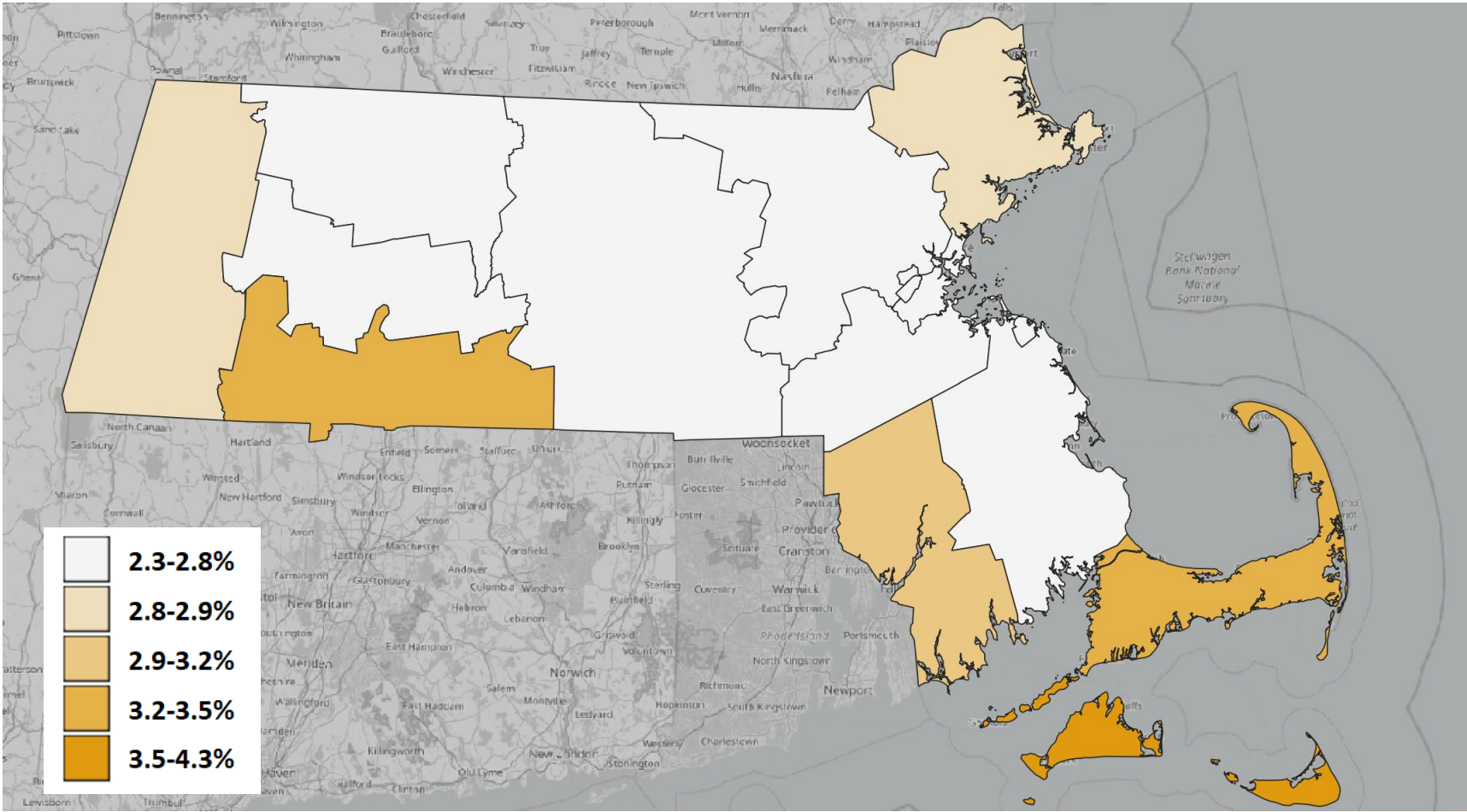
Employment (continued)

- Compared to US, Massachusetts has an even lower unemployment rate
- Though not evenly distributed across the state...



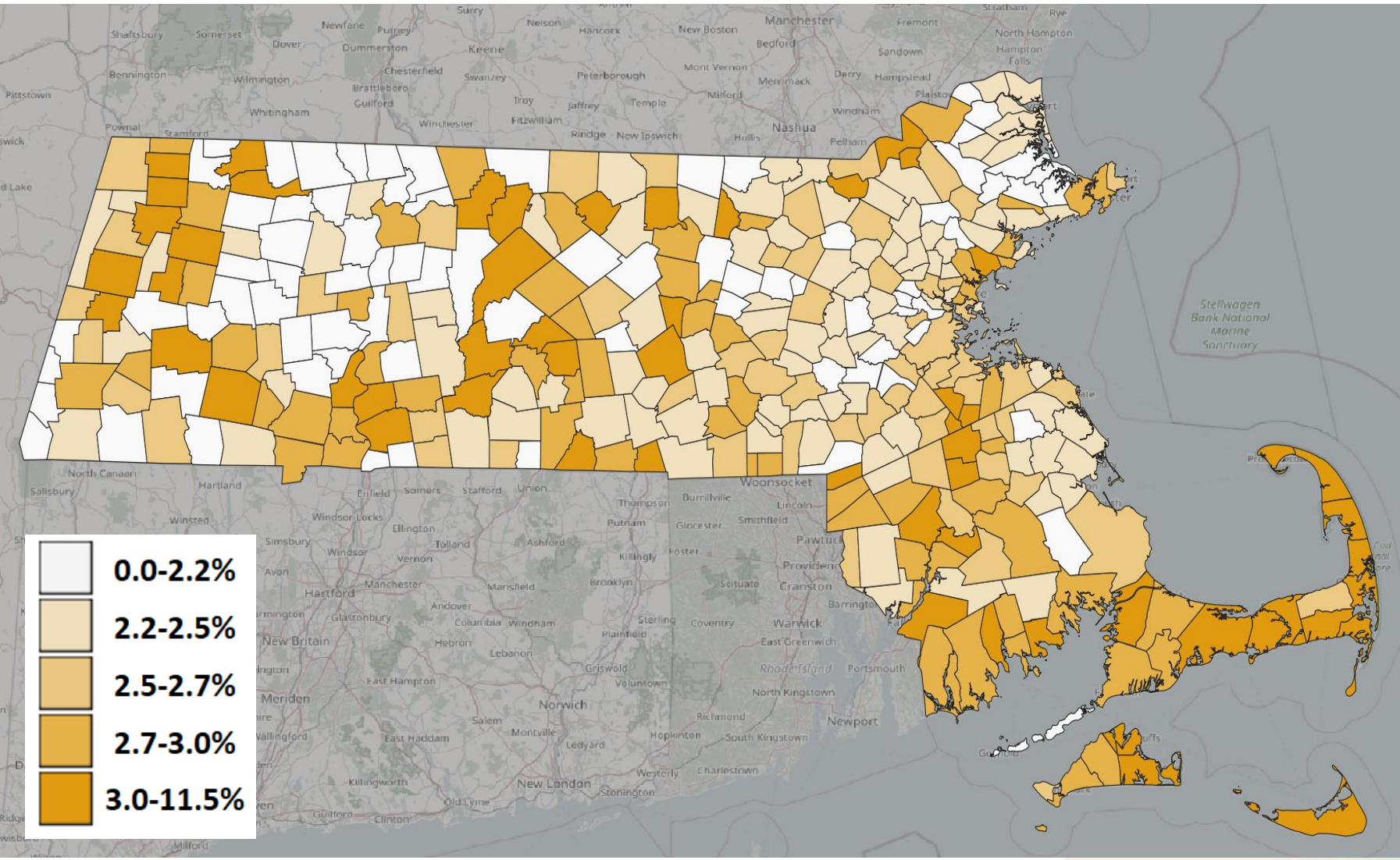
Employment (continued)

- Unemployment rate ranges from 2.3 – 4.3% across the state by county (November 2023).



Source: Massachusetts Department of Economic Research, January 2024

Employment (continued)



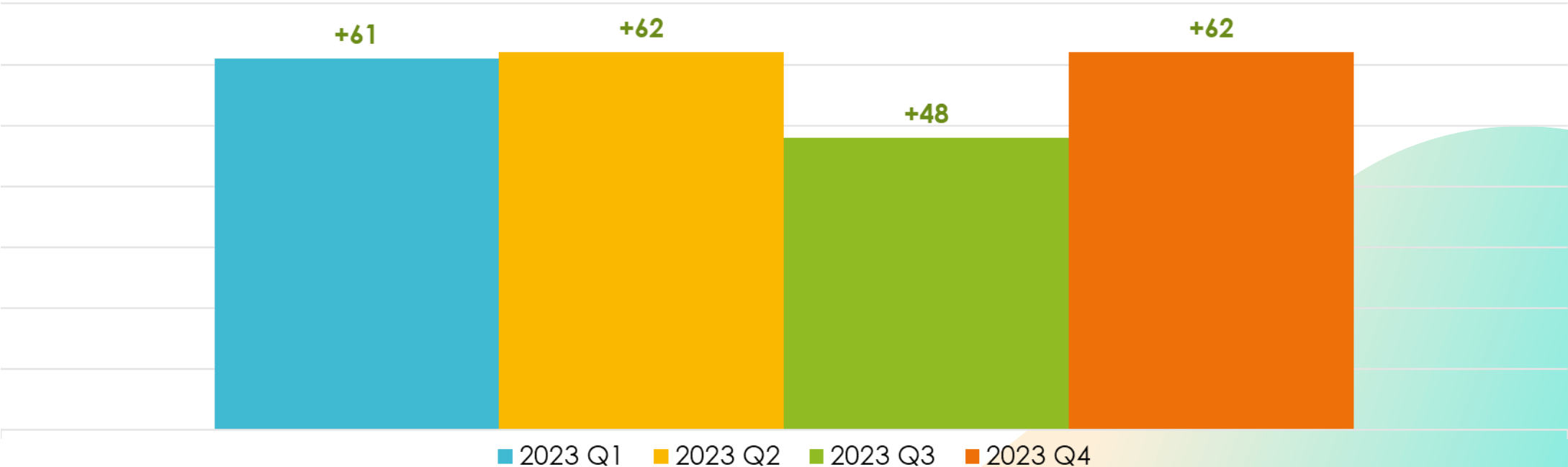
- Unemployment rate ranges from 0 – 11.5% across the state by City and Town (November 2023).

Source: Massachusetts Department of Economic Research, January 2024

Not surprisingly, inflation concerns have spiked back to levels from earlier this year.

Impact of Inflation
Net Rating - Trend

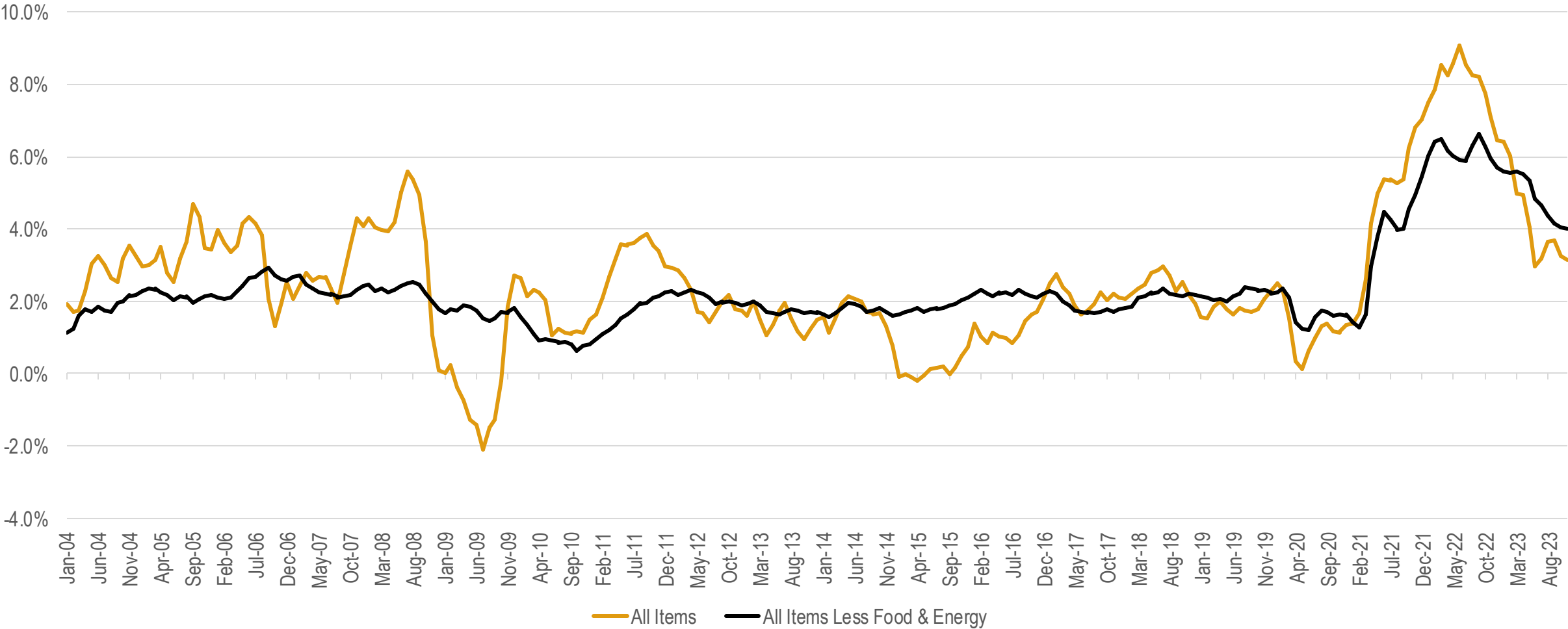
I am extremely concerned about the impact inflation will have on my firm in the coming year.



Q17. To what extent do you agree or disagree with the following statement: I am extremely concerned about the impact inflation will have on my firm in the coming year.
Not sure omitted from calculations.

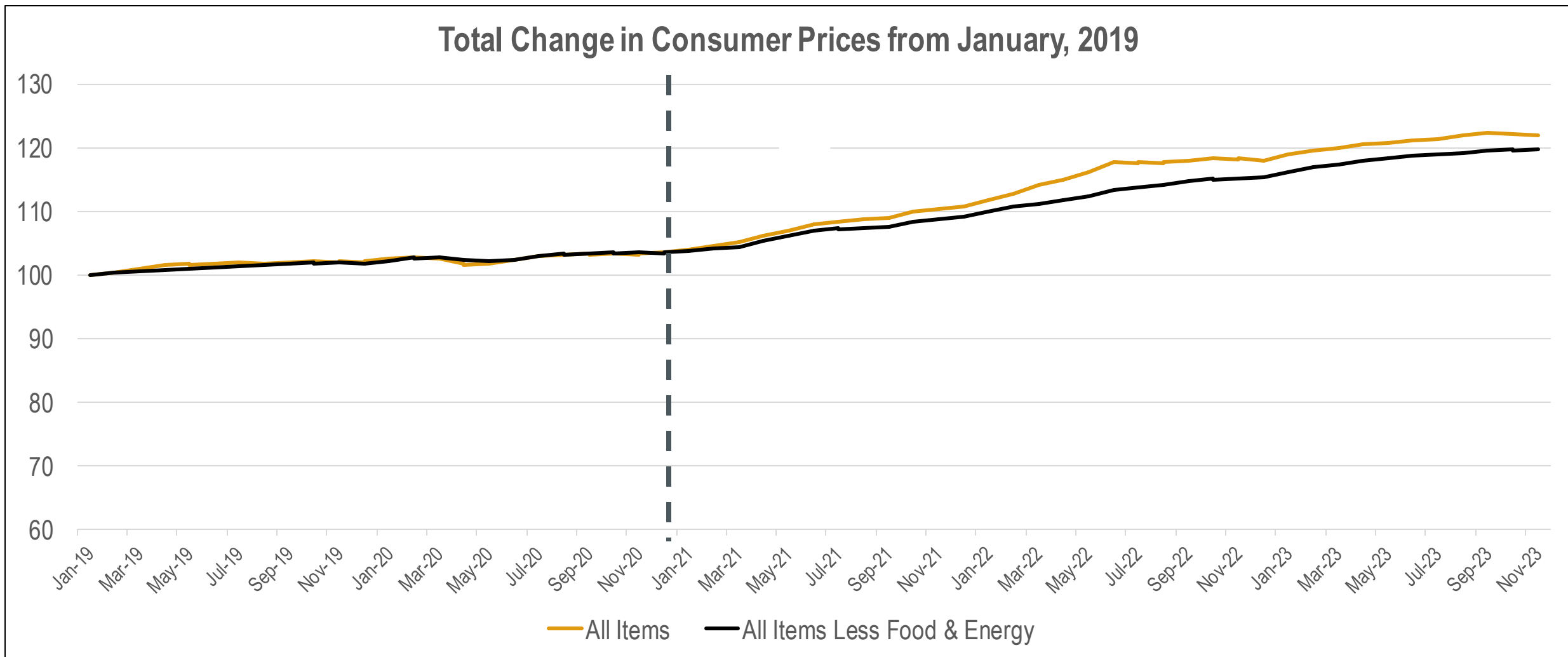
Inflation lower now than June 2022...

12-month percentage change, Consumer Price Index, selected categories

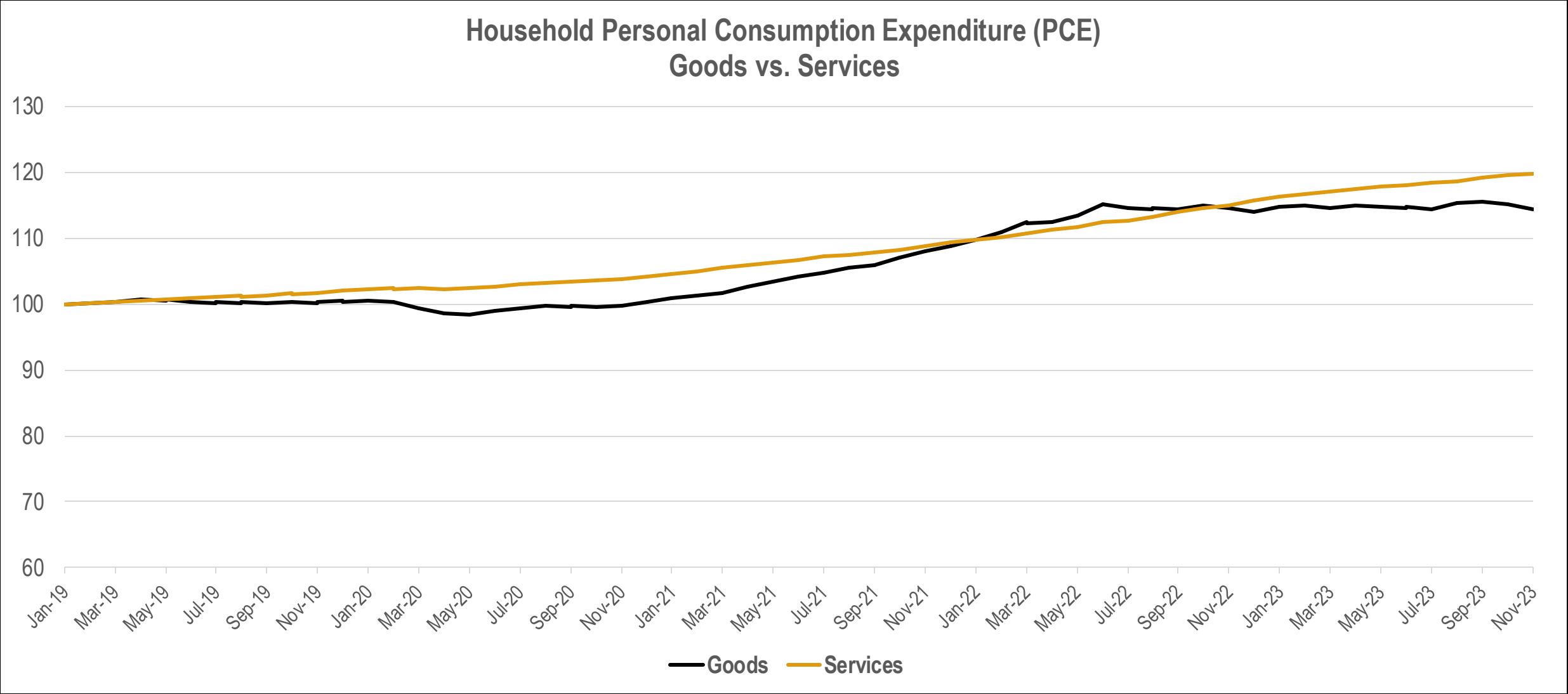


Source: U.S. Bureau of Labor Statistics, January 2024

What matters? Disinflation or Deflation?

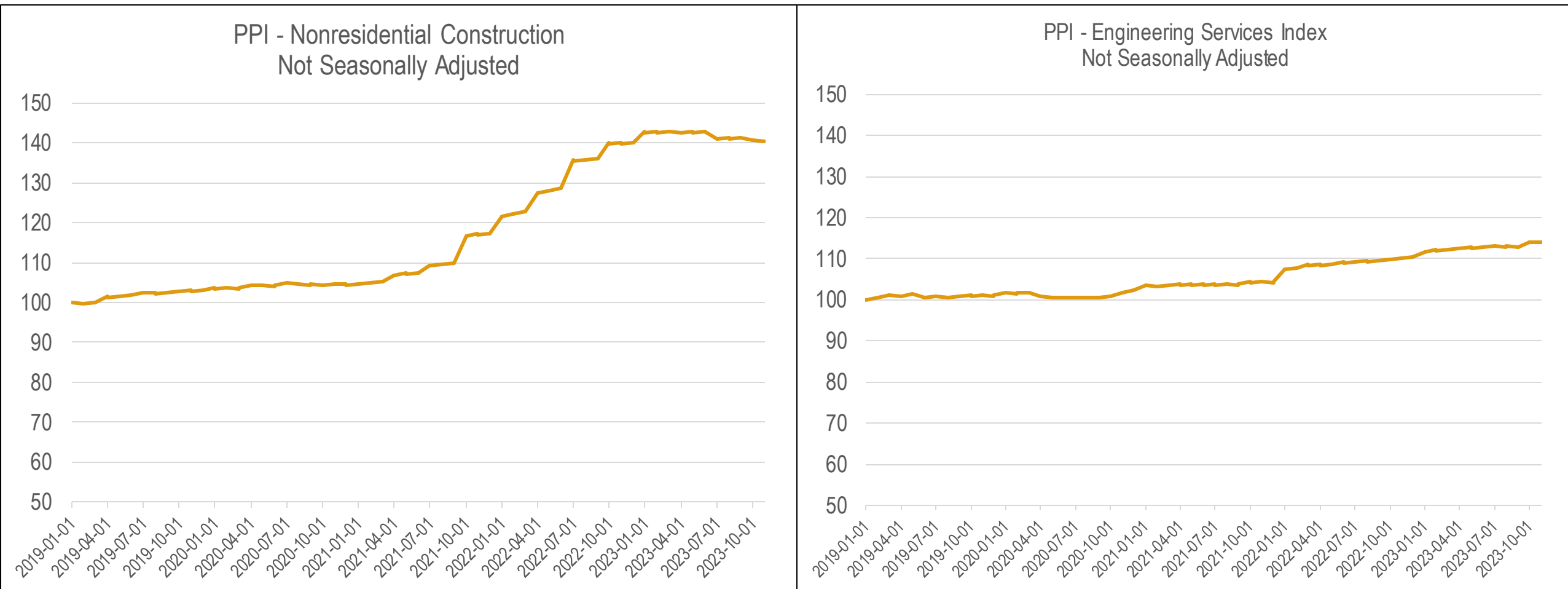


Not Everything is Disinflating



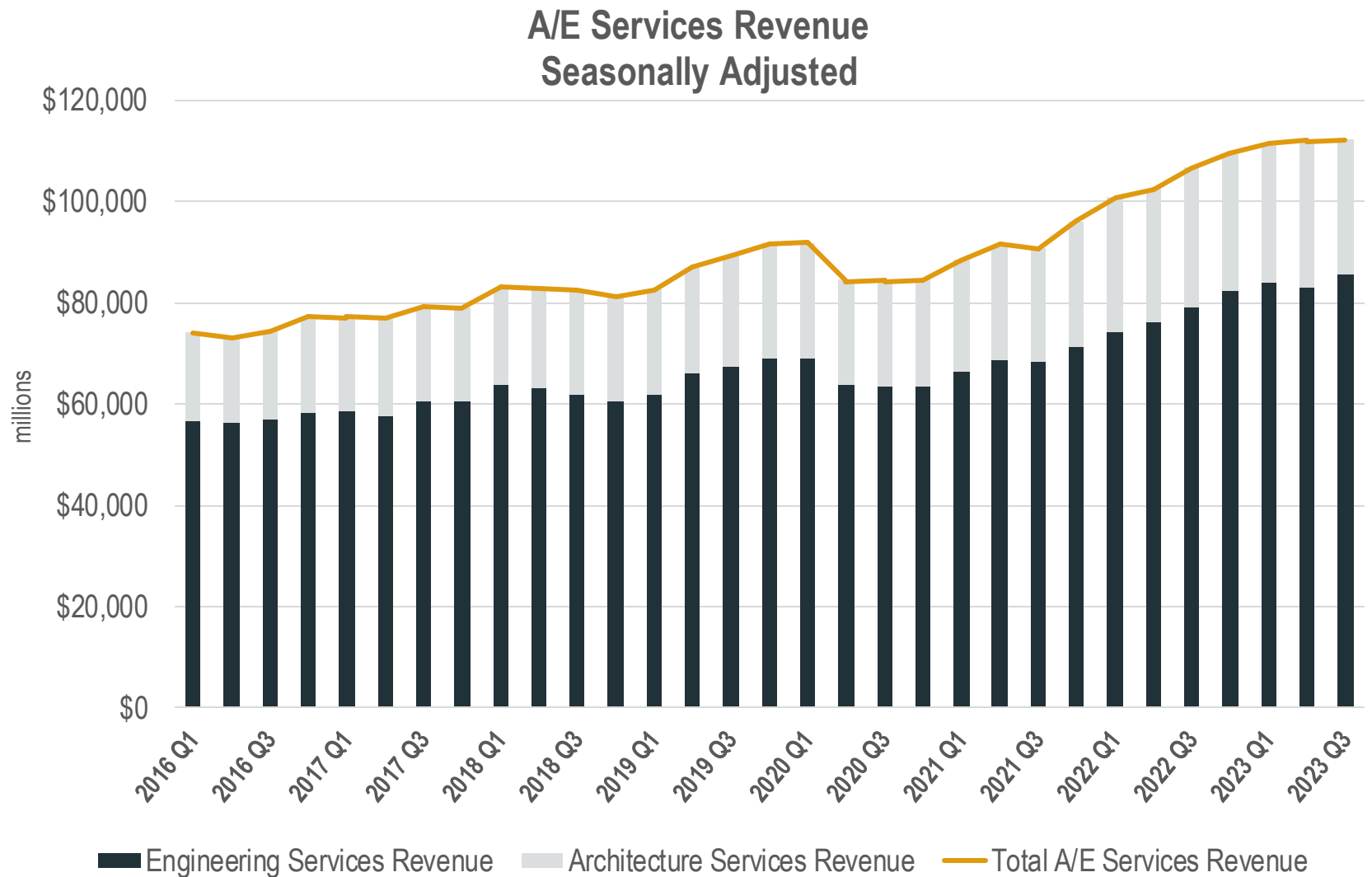
Source: U.S. Bureau of Economic Analysis, Price Indexes for Personal Consumption Expenditures by Major Type of Product and by Major Function, November 2023

Wholesale prices also remain a concern: infrastructure costs vary significantly by component



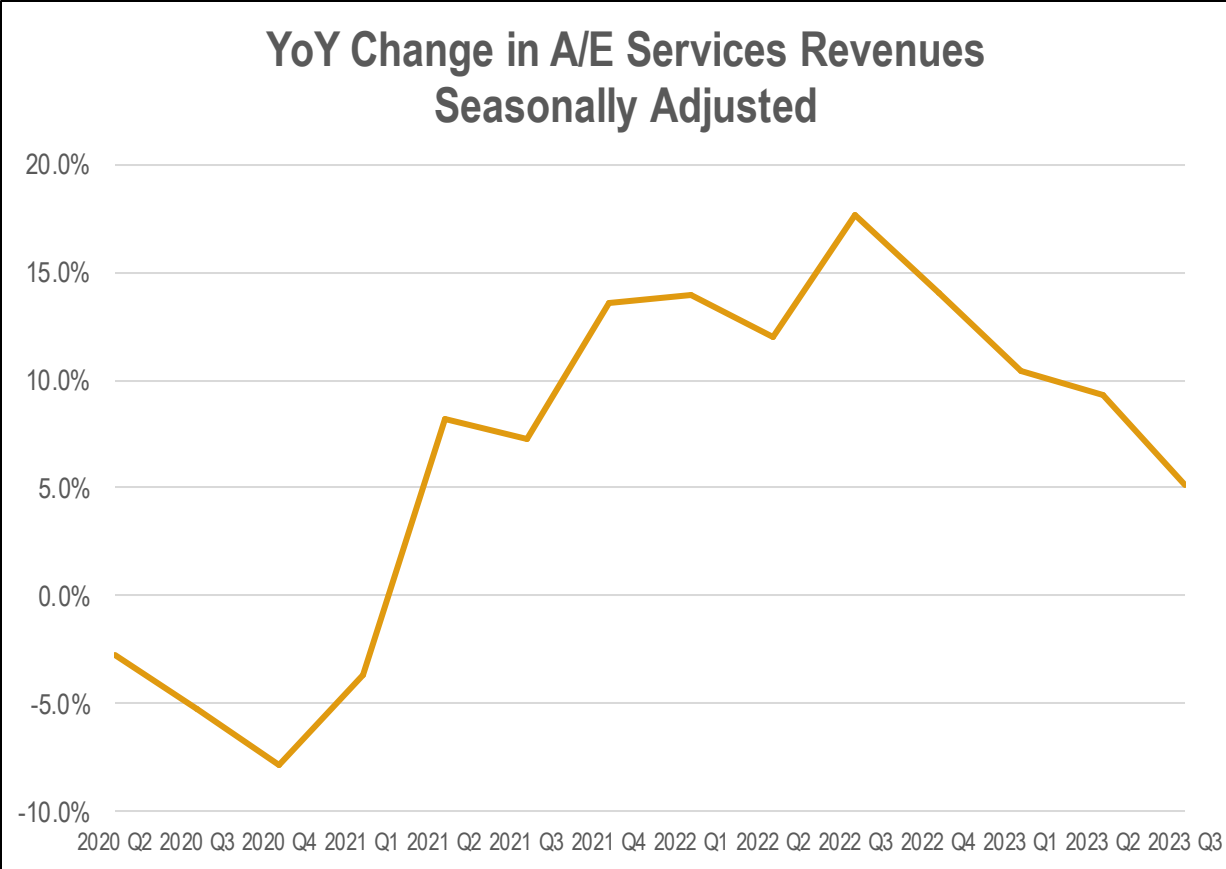
2023 Q2 A/E revenues continue to reach new highs

- A/E Total Services Revenue = \$112.3B for 2023 Q3
- Total revenues up 0.2% compared to Q2 2023
- Total revenues up 5.2% YoY



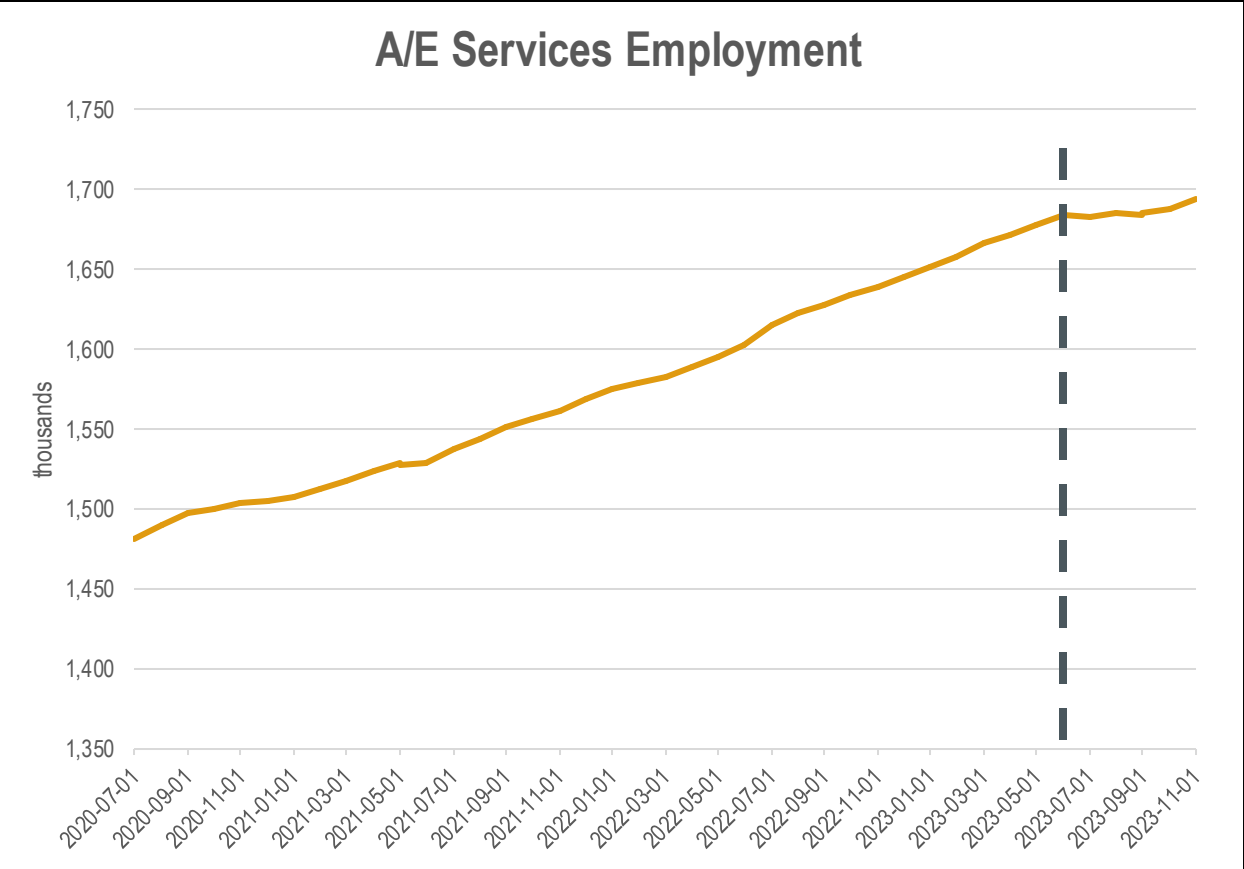
A/E Metrics Show Plateaus

YoY Change in A/E Services Revenues
Seasonally Adjusted



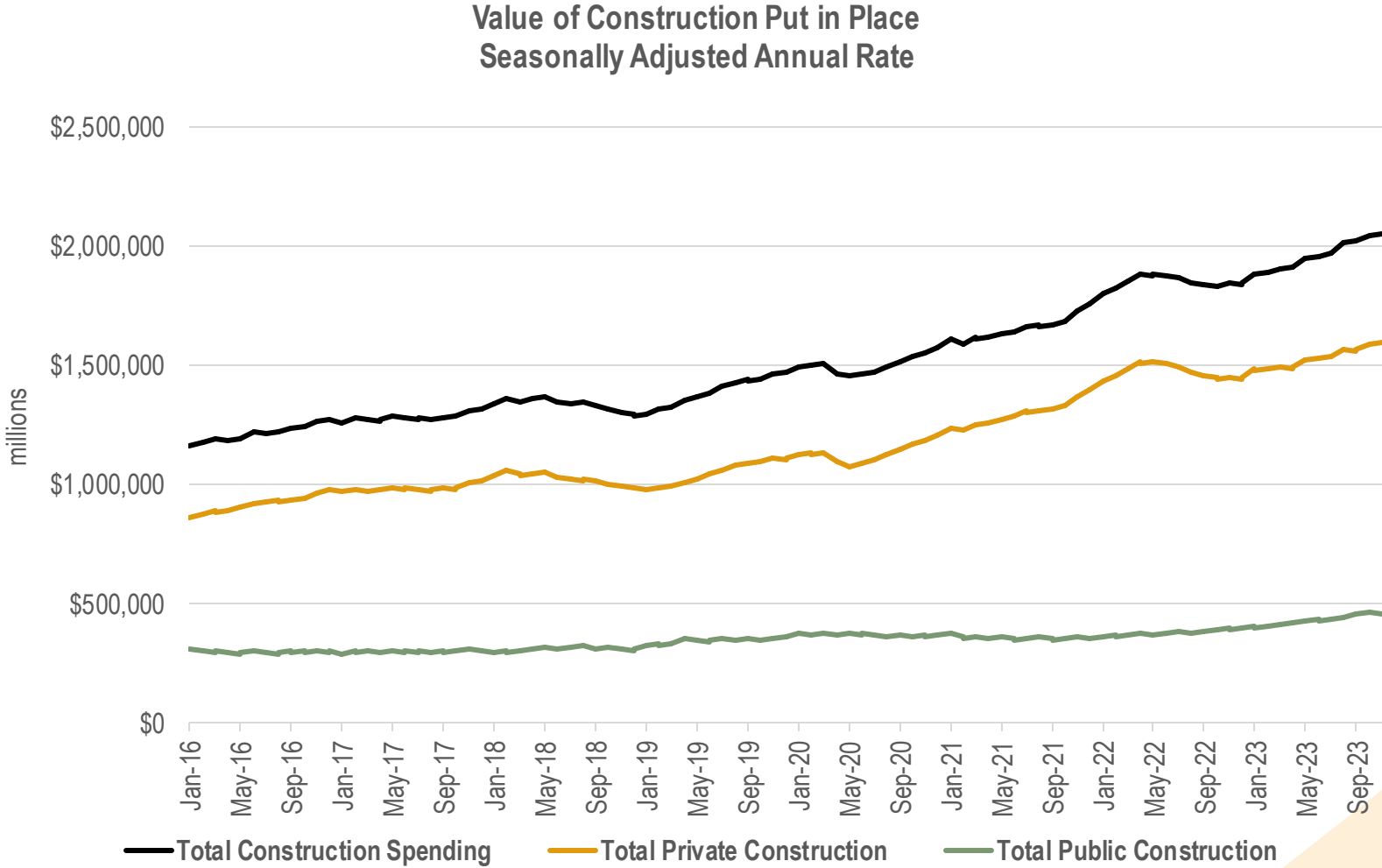
Source: U.S. Census Quarterly Services Survey, December 2023

A/E Services Employment



Source: U.S. Bureau of Labor Statistics, Employees on nonfarm payrolls by industry sector and selected industry detail, January, 2024

CPIP - Public vs. Private



- Total spending in November is \$2.05 T.
- Private ~\$1.6 T (+0.7% MoM).
- Public ~\$455 B (-0.7% MoM).
- Year to Date spending growth on Public Construction projects is significantly higher at 14% (compared to 3.7% for Private).

Source: US Census Value of Construction Put in Place Survey, January 2, 2024, release

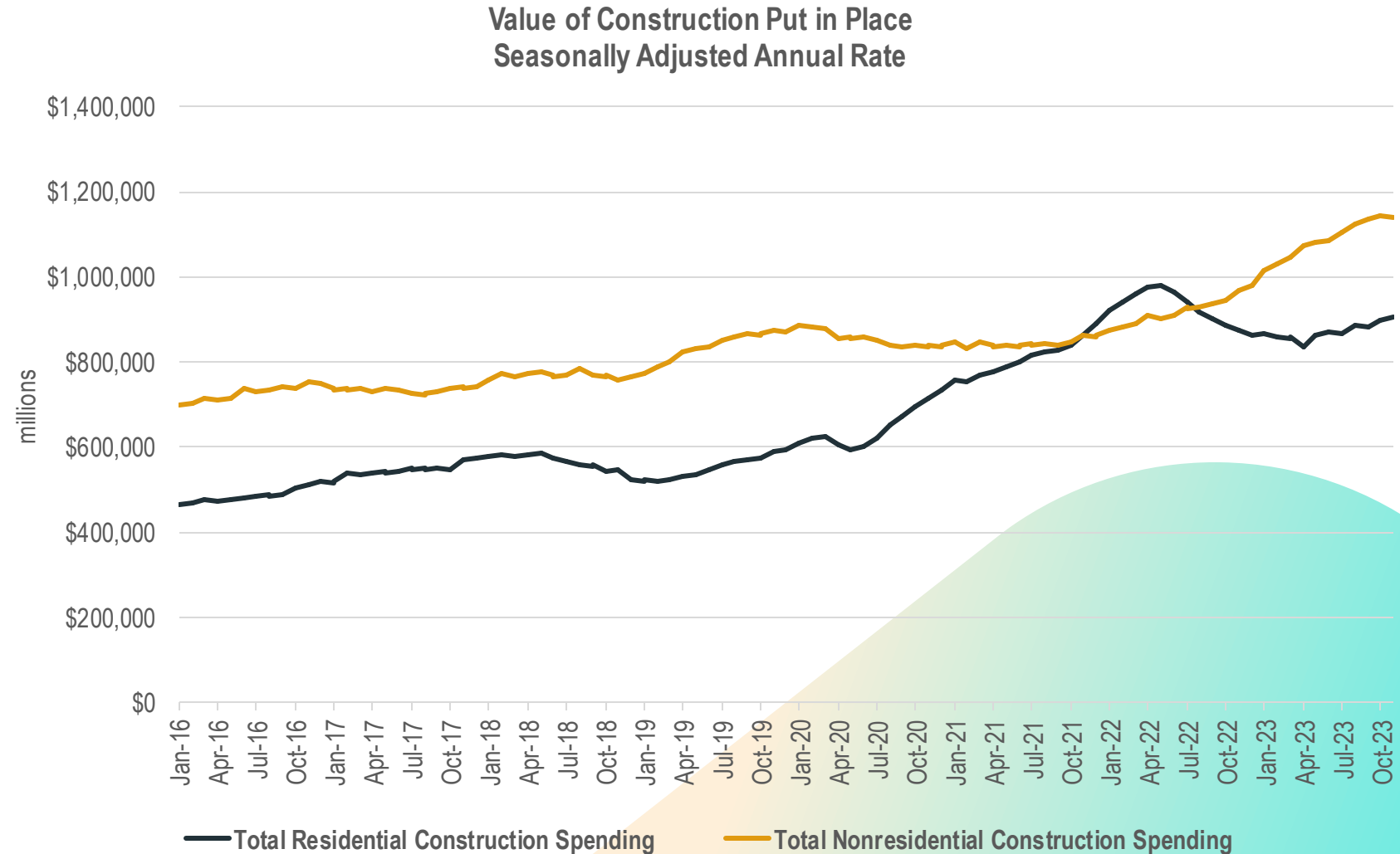
CPIP – Private Residential vs. Non-Residential

Classification	Nov-22	Nov-23 (p)	YOY % Change
Total Construction	\$1,842,206	\$2,050,058	11.3%
Residential (Private)	\$865,170	\$896,758	3.7%
Nonresidential (Private)	\$585,319	\$698,192	19.3%

Source: US Census Value of Construction Put in Place Survey, January 2, 2024, release

Residential vs. Nonresidential Trend Line

- Private Residential - November was the second month in 2023 with positive YoY growth at 3.7%
- Private Manufacturing growth at 59% YoY.
- Nonresidential project classifications grew at 18% YoY, though down 0.1% MoM (first time since May, 2022).



Top Construction (Public & Private) Year to Date Project Growth by Classification – November 2023

Project Classification	YTD Spending Jan - Nov 2022 (millions)	YTD Spending Jan - Nov 2023 (millions)	Percent Change	Absolute Change (millions)
Total Manufacturing	\$1,237,720	\$2,122,634	71.5%	\$884,914
Total Sewage and waste disposal	\$355,490	\$448,995	26.3%	\$93,505
Total Conservation and development	\$103,506	\$127,439	23.1%	\$23,933
Total Lodging	\$214,137	\$257,949	20.5%	\$43,812
Total Water supply	\$255,910	\$296,281	15.8%	\$40,371

Source: US Census Value of Construction Put in Place Survey, January 2, 2024, release

Bottom Construction (Public & Private) Year to Date Project Growth by Classification – November 2023

Project Classification	YTD Spending Jan - Nov 2022 (millions)	YTD Spending Jan - Nov 2023 (millions)	Percent Change	Absolute Change (millions)
Total Residential	\$10,262,549	\$9,586,787	-6.6%	(\$675,762)
Total Communication	\$267,013	\$273,408	2.4%	\$6,395
Total Amusement and recreation	\$329,393	\$351,955	6.8%	\$22,562
Total Office	\$1,003,301	\$1,081,013	7.7%	\$77,712
Total Transportation	\$644,965	\$698,812	8.3%	\$53,847

Source: US Census Value of Construction Put in Place Survey, January 2, 2024, release

Commercial & Residential Real Estate

Market Scope

- Property types:
 - Office, industrial, retail, single-family, multi-family residential (including student and senior housing), hospitality, and health care.
- Clients:
 - Developers and owner-users, such as large retailers.

Top Commercial Developers & Home Builders

The top 10 commercial developers of 2022 and top 10 home builders of 2023 in the United States are listed below based on firm growth, market share and the number of closings.

Rank	Commercial Developers	Home Builders
1	Trammell Crow Co.	D.R. Horton
2	Lincoln Property Co.	Lennar Corp.
3	Tishman Speyer	PulteGroup
4	Hines	NVR
5	Stream Realty Partners	Meritage Homes Corp.
6	The Related Cos.	KB Home
7	Sansone Group	Taylor Morrison
8	Flaherty & Collins Properties	Clayton Prop. Grp.
9	Transwestern Invest. Grp.	Century Communities
10	First Industrial Realty Trust	Toll Brothers

(Source: Commercial Property Executive 2022 & Zonda Homes 2023 Report)

— Development Prospects —

HOT

1. Data Centers
2. Fulfillment Centers
3. Workforce Housing
4. Life-Sciences
5. Single-Family Rentals

NOT

- Regional Malls
- Power Centers
- Central-City Offices
- Outlet Centers
- Suburban Office

(Source: PwC and ULI)

Development Prospects

Sectors expected to heat up or cool down.

Trend #1: Housing Surge Slows to 2008 Lows

- Redfin reported that home sales in the U.S. are on pace for the fewest homes sold since 2008, roughly 4.1 million.
- NAHB also reported that housing starts had fallen to its lowest since May 2020.
- ACEC Research Institute's 2023 Economic Assessment of the Engineering Design Services Industry Report, predicts more weakness in the housing market and further declines ahead.
- Potential for economic downturn and rising interest rates causing markets to cool.



More Impacts on Housing

- Housing – Multi-family developments coming to a halt due to high financing restrictions such as rates and loan proceeds.
- Construction pricing has not come down from highs, due primarily to labor costs all up and down the vertical market (workers, manufacturers of products, etc).



Trend #2: Office Sector Impacts Banking Industry

- Office vacancy rates in Q2 2023 were 16.4%, 30 basis points higher than the quarter before and higher than the peak of the Global Financial Crisis in Q1 2010, according to Colliers Research Report, *Top 50 U.S. Office Markets*.
- Rising interest rates have also caused smaller banks to offload office debt which accounts for 1.5% of total US banking systems assets, according to CBRE.
- Banks are expected experience \$60 billion in losses during this downturn and \$26 billion of that is expected to come from the office sector.



Bifurcation in the Office Market

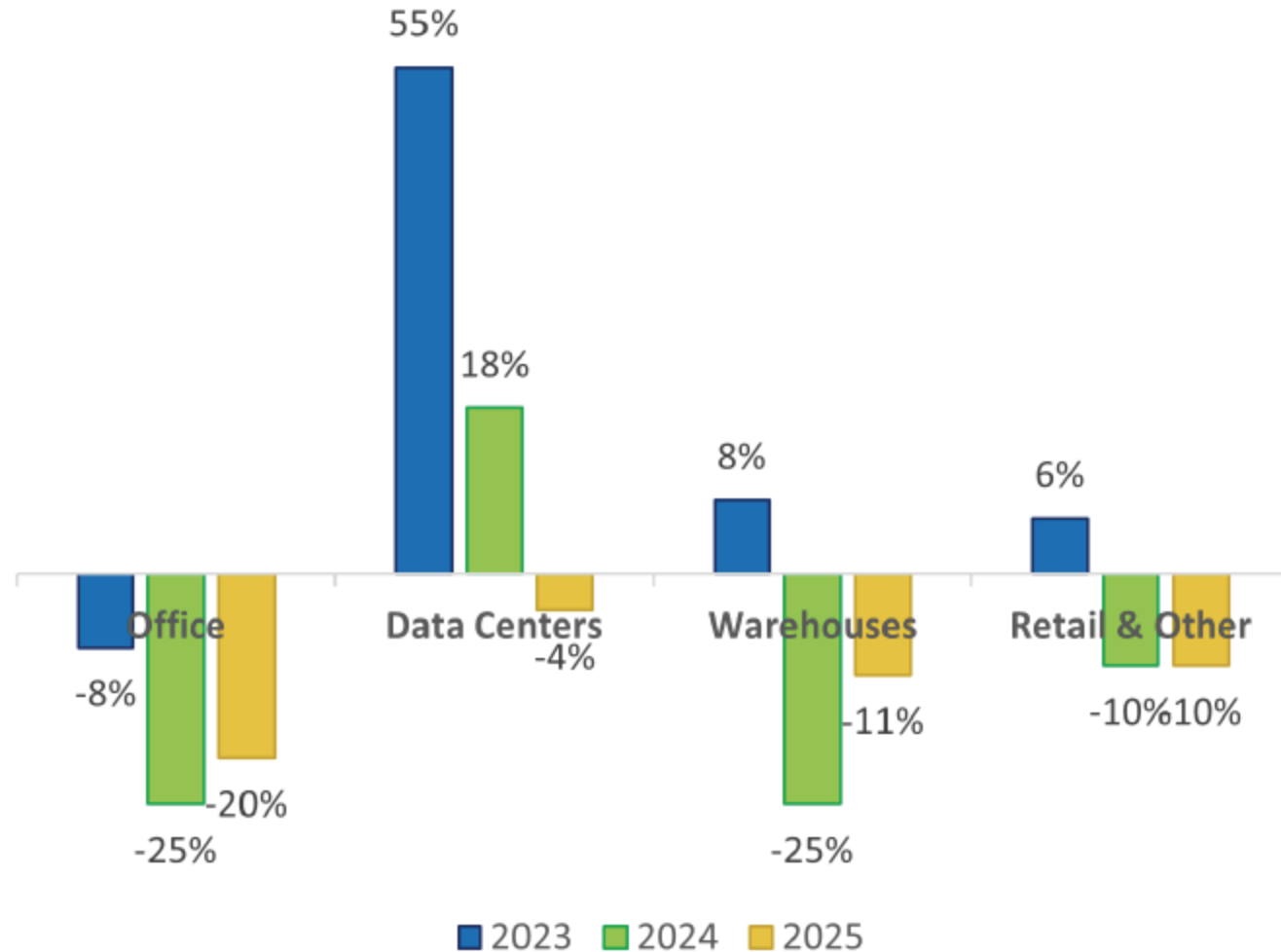
- 90% of tenants looking for 10% of the space.
- Class A space (high-end improvements & first-class finishes) is outperforming Class B (older buildings in less desirable locations) as companies in the U.S. accept hybrid working models and seek to lease space that is near transportation, offers sustainability features and first-class amenities.



Trend #3: Non-Residential Sectors Carry the Market

- Commercial construction for Data Centers expected to increase 55% in 2023 and 18% in 2024.
- Warehouse construction expected to increase 8% in 2023.
 - Declines of -25% and -11% expected in 2024 and 2025 as this sector normalizes to pre-COVID levels.

Commercial Construction Forecast (2023-2025)



(Source: U.S. Census Bureau)

CRE Markets

- Data Centers and Manufacturing support CRE

Trend #4: IRA Issues Energy Efficient Incentives for Homes

- **New Energy Efficient Home Credit** - \$1,000 to \$5,000 per energy efficient multi-family unit or new home to incentivize builders to lower energy costs.
- **House Energy Performance Based, Whole House Rebates** - \$4.3 billion in rebates for energy savings retrofits in a home or multi-family building.
- **Assistance for Latest and Zero Building Energy Code Adoption** - \$1 billion grants for states and local government to adopt building energy code for commercial buildings.
- <https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook/>



Trend #5: Quick Move in Homes Trending Over Resales

- Total quick move-in homes (QMI's) are 80.5% above 2019 levels. (QMI's are built by home builders as part of a new community, without a buyer in mind and are usually occupied within 90 days.)
- Housing supply is low in the resale market, so buyers are turning to QMI's as an alternative.
- >>Markets experiencing the largest year-over-year community growth (five units or more for sale) and what communities fell.

Market	Growth Rate
Austin, TX	+15.9%
Minneapolis, MN	+14.4%
Riverside/San Bernadino, CA	+10.0%
Tampa, FL	-17.4%
Seattle, WA	-16.9%
Las Vegas, NV	-15.0%

(Source: Zonda Homes)

Government Affairs: WOTUS Impacts Builders & Developers

- Conforming final rule of the Waters of the US defining scope of federal jurisdiction under the clean waters act.
- Impacts housing construction and land development.
 - Wetland permitting delays.
 - Stricter nexus test, finding that federal agencies may regulate only those “wetlands with a continuous surface connection to bodies that are ‘waters of the United States’ in their own right,” so that they are “indistinguishable” from those waters.
- States that do not have their own wetland permitting process will rely on the federal rule.
- Online course available from ACEC National called “It’s Clear as WOTUS” by Kevin Ramberg, COO.

Business Development Insight

- Office to residential conversions.
- Softening in the office market, vacancy rates on the rise.
- 7.3 million homes short for low-income renters.
- Biden Administration released a 544-page guidebook on how the federal government can help in the process including grants, tax credits and loans. This includes up to \$10 billion through the Community Development Block Grant Fund.

RANK	MARKET	TOTAL OFFICE VACANCY
1	Houston	23.4%
2	San Francisco	21.1%
3	Denver	20.4%
4	Seattle	20.1%
5	Austin	19.9%
6	Atlanta	19.4%
7	Chicago	18.9%
8	Phoenix	18.8%
9	Nashville	17.5%
9	Twin Cities	17.5%
9	Dallas	17.5%
10	New Jersey	17.3%

RANK	MARKET	AFFORDABLE HOUSING DEFICIT
1	New York City	805,452
2	Los Angeles	605,547
3	Miami	224,625
4	Chicago	211,737
5	Houston	195,301
6	Dallas	185,864
7	Washington, D.C.	151,864
8	San Francisco	146,660
9	Atlanta	142,741
10	Philadelphia	142,102

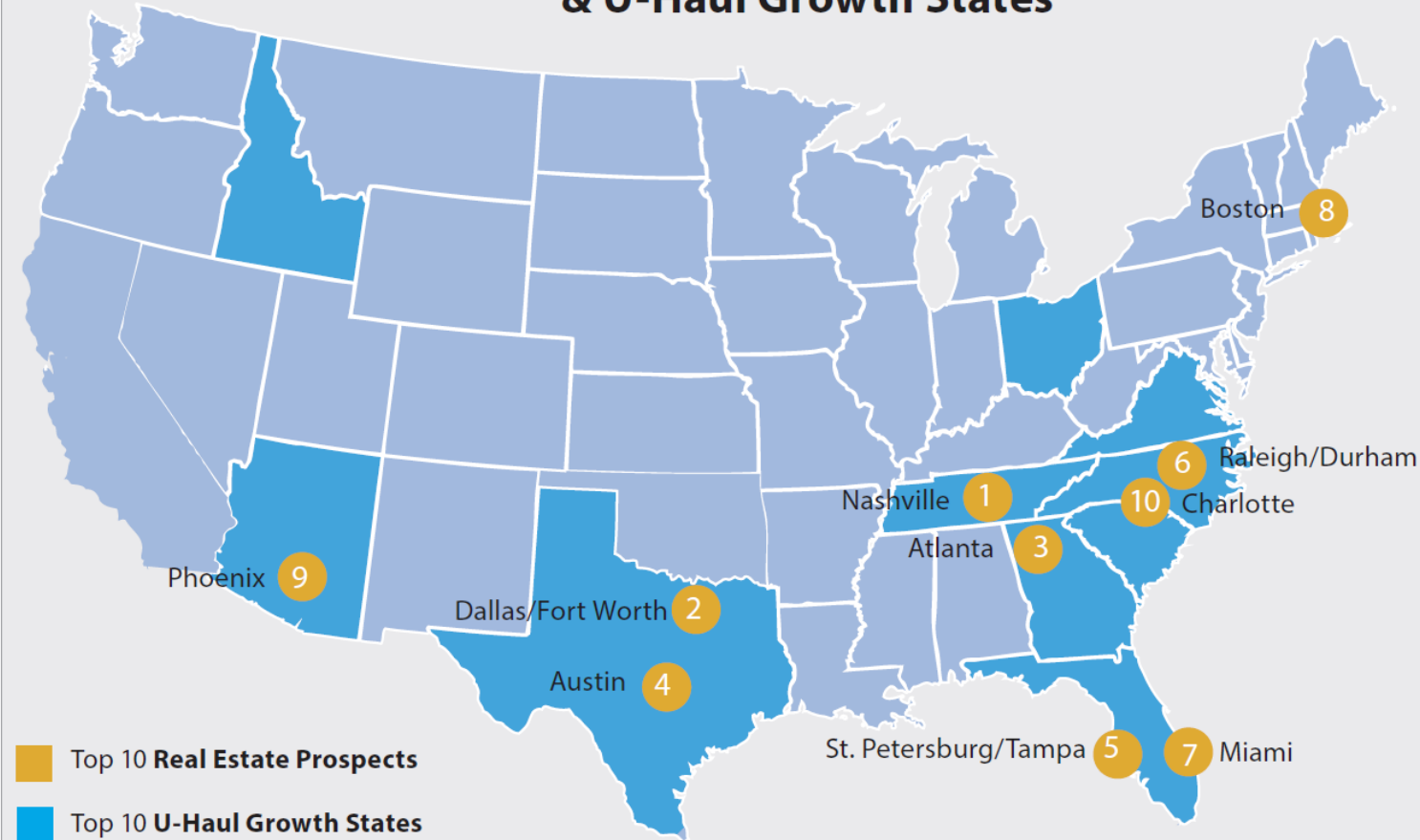
Cities with both high office vacancies and affordable housing shortages.

Sources: United Way, Commercial Edge

Conversion Opportunities

Two problems = one opportunity.

Markets to Watch for Overall Real Estate Opportunities & U-Haul Growth States



Top 10 Real Estate Prospects

Top 10 U-Haul Growth States

Source: PwC and ULI

Real Estate Opportunities

- Prospects
- U-Haul Growth States Index

Massachusetts

Market Specific Trends

ACEC Research Institute - Massachusetts

- Strong economic recovery from pandemic.
- Employment at all-time highs and low unemployment.
- GDP increased 22% from 2022.
- #10 in GDP contribution>>.

Engineering and Design Services Industry Total Economic Contribution							
States in 2022							
Rank	State	Total Value-Added (GDP, in bils \$)	% of Total Value-Added by the Industry	Cumulative %	Total Jobs Supported (x1000)	% of U.S	Total Paid Wages (in mils \$)
1	California	\$90.7	14.5%	14.5%	620	12.3%	\$53
2	Texas	\$85.2	13.6%	28.0%	584	11.6%	\$46
3	Florida	\$35.6	5.7%	33.7%	339	6.8%	\$21
4	Michigan	\$34.8	5.6%	39.3%	253	5.0%	\$21
5	New York	\$28.9	4.6%	43.9%	249	5.0%	\$18
6	Colorado	\$25.6	4.1%	48.0%	177	3.5%	\$15
7	Virginia	\$24.2	3.9%	51.8%	182	3.6%	\$15
8	Pennsylvania	\$21.7	3.5%	55.3%	194	3.9%	\$13
9	Illinois	\$20.0	3.2%	58.5%	160	3.2%	\$11
10	Massachusetts	\$19.9	3.2%	61.6%	136	2.7%	\$12
11	Georgia	\$19.5	3.1%	64.7%	167	3.3%	\$11
12	New Jersey	\$17.9	2.9%	67.6%	134	2.7%	\$10
13	North Carolina	\$15.8	2.5%	70.1%	151	3.0%	\$9
14	Ohio	\$15.0	2.4%	72.5%	141	2.8%	\$9
15	Maryland	\$14.8	2.4%	74.8%	122	2.4%	\$9
16	Washington	\$14.2	2.3%	77.1%	103	2.1%	\$8
17	Arizona	\$11.6	1.8%	79.0%	104	2.1%	\$7
18	Alabama	\$10.5	1.7%	80.6%	87	1.7%	\$7
19	Tennessee	\$9.7	1.5%	82.2%	76	1.5%	\$5
20	Missouri	\$9.2	1.5%	83.6%	76	1.5%	\$5

☆ New Private Housing Units Authorized by Building Permits for Massachusetts (MABPPRIV)

DOWNLOAD

Observation:

Oct 2023: **841**

(+ more)

Updated: Nov 27, 2023

Units:

Units,
Not Seasonally Adjusted

Frequency:

Monthly

1Y | 5Y | 10Y | Max

1988-01-01

to

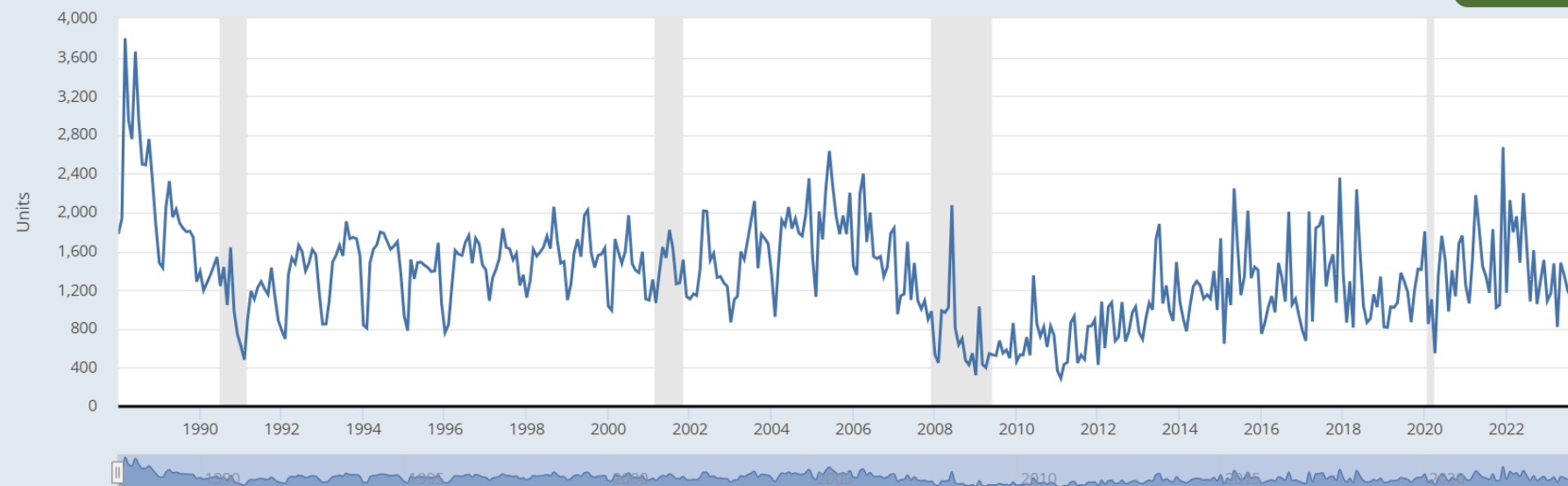
2023-10-01

EDIT GRAPH

FRED

— New Private Housing Units Authorized by Building Permits for Massachusetts

VIEW MAP



Source: U.S. Census Bureau

fred.stlouisfed.org

- **Approximately 841 October 2023., similar #'s to February 2019.**
- **No. of homes sold, down –27% YoY.**
- **New single-family listings down .3% YoY.**
- **2022, bottom 5 states for growth, per U-Haul Index, ranking just above Michigan, Illinois and California.**

1/9/2024

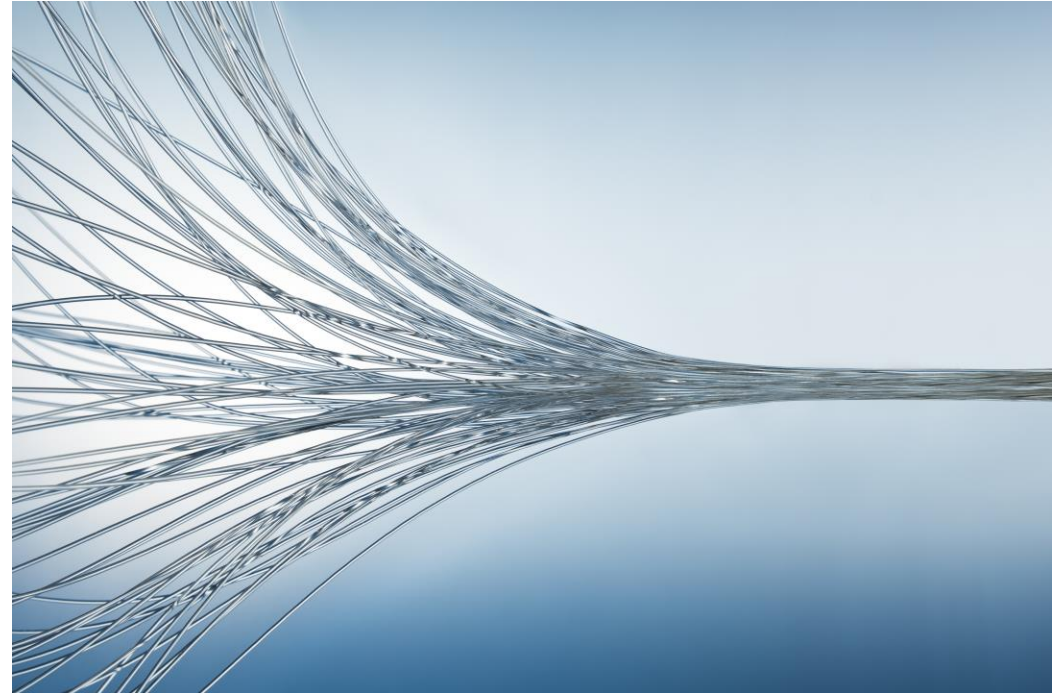
Investing in America

- To date \$6.1 billion in the BIL has been announced for Massachusetts.
 - \$5.1 billion transportation (including ports and airports)
 - \$402 million clean water and water infrastructure
 - \$305 million high-speed internet
- <https://www.whitehouse.gov/wp-content/uploads/2023/10/Massachusetts-Fact-Sheet.pdf>



Internet

- Massachusetts has received \$147.4 million through the Broadband Equity, Access, and Deployment (BEAD) Program.



Water

- \$402 million available to date to provide clean and safe water across the state through the Environmental Protection Agency in Massachusetts.
 - \$99.5 million is dedicated to lead pipe and service line replacement, with another \$87 million for safe drinking water investments that can also support lead pipe replacement.

EV Charging

- Massachusetts should receive roughly \$63 million in formula funding over five years to support the expansion of electric vehicle charging in the state.
- Massachusetts has been allocated \$36.4 million to date to build out a network of EV chargers across the state.



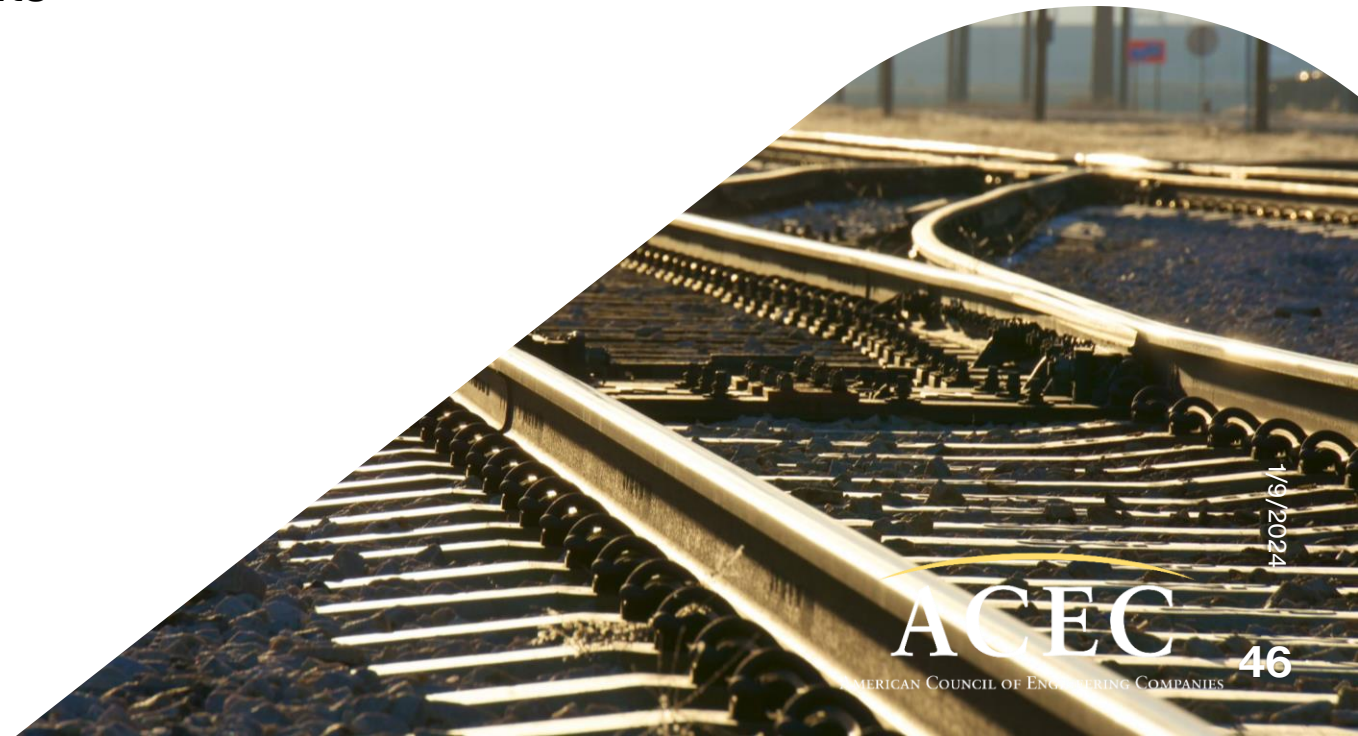
Clean Energy & Power

- Approximately \$170.5 million has been allocated to Massachusetts for clean energy, energy efficiency, and power.
 - \$80.1 million for weatherization;
 - \$7.7 million through the State Energy Program;
 - \$8.4 million through the Energy Efficiency and Conservation Block Grant Program; and
 - \$109.3 million to prevent outages and make the power grid more resilient.



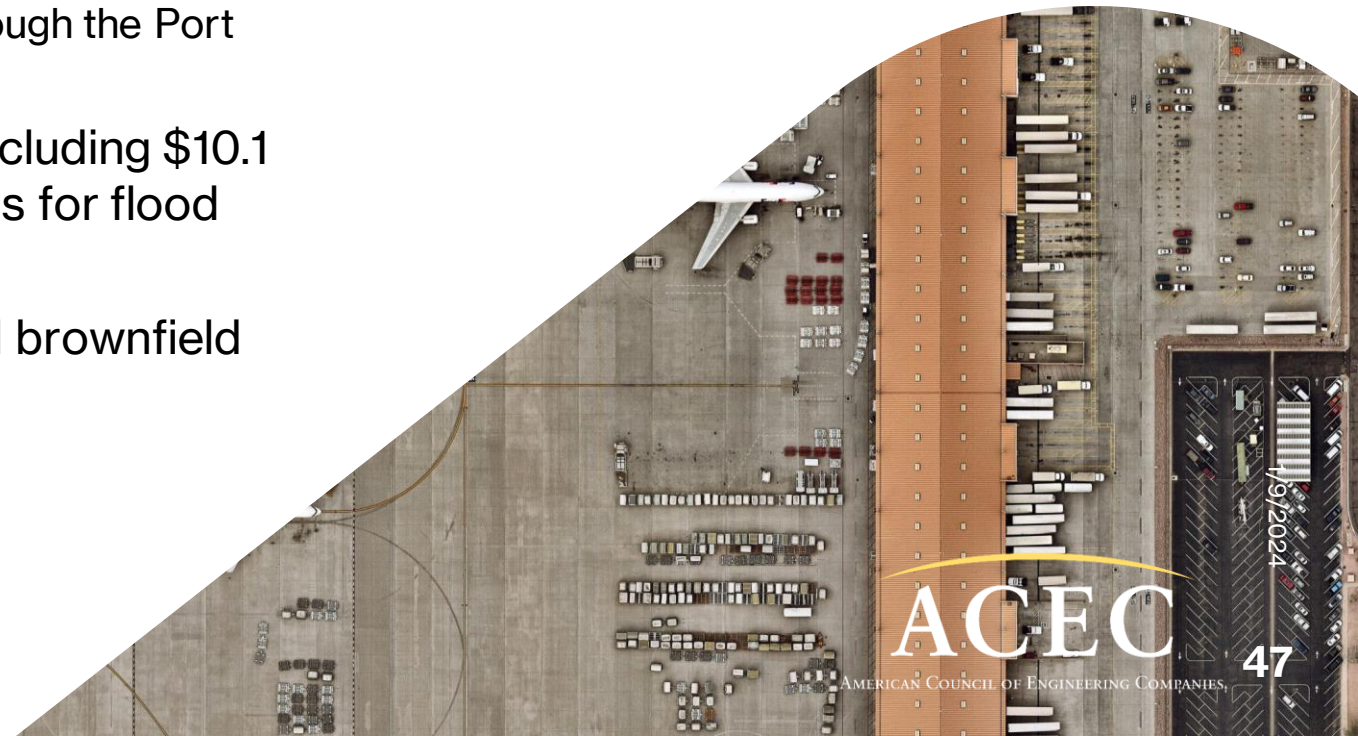
Rail

- DOT awarded \$108 million to MassDOT for rail infrastructure and safety improvements through the Consolidated Rail Infrastructure and Safety Improvements program including CSX and MassDOT involvement.



Other Opportunities

- Massachusetts received \$181.6 million for airports.
- Received \$90.7 million for ports and waterways.
 - Awarded \$58.2 million for 2 port projects through the Port Infrastructure Development Program.
- \$119.2 million for infrastructure resilience including \$10.1 million through the Army Corps of Engineers for flood mitigation.
- \$87.5 million for cleaning up Superfund and brownfield sites.



Forecast by Market

2023-2027

U.S. 2023 Segment Performance

2023/2022 Comparison

 UP 5% or more	 STABLE 0% to 4%	 DOWN Under 0%
Multifamily Lodging Office Commercial Health Care Educational Public Safety Amusement and Recreation Transportation Manufacturing Power Highway and Street Sewage and Waste Disposal Water Supply Conservation and Development	Religious Communication	Single-family Residential Improvements

Segment Performance

2022/2023 Comparison

Commercial & Residential Real Estate

Construction Put in Place <i>Forecast by market segment</i>	2023e	2024f	2025f	2026f	2027f	Change 2023- 2027f
Commercial	\$129 B	\$118 B	\$105 B	\$105 B	\$110 B	-14.7 %
Office	\$99 B	\$94 B	\$87 B	\$86 B	\$89 B	-10.1%
Lodging	\$23 B	\$24 B	\$21 B	\$20 B	\$21 B	-8.7%
Amusement & Recreation	\$32 B	\$34 B	\$32 B	\$32 B	\$31 B	-3.1%
Residential (Single-Family)	\$392 B	\$354 B	\$350 B	\$365 B	\$386 B	-1.5%
Residential (Multi-Family)	\$140 B	\$131 B	\$114 B	\$112 B	\$118 B	-15.7%

Key Drivers:

- Core CPI
- Mortgage Rates
- Rising Energy Costs
- High Office Vacancy Rates

Sources: U.S. Census Bureau, FMI

Intermodal & Logistics

Construction Put in Place <i>Forecast by market segment</i>	2023e	2024f	2025f	2026f	2027f	Change 2023-2027f
Manufacturing	\$181 B	\$209 B	\$201 B	\$181 B	\$171 B	-5.5%
Transportation (buildings)	\$63 B	\$71 B	\$79 B	\$84 B	\$86 B	36.5

Sources: U.S. Census Bureau, FMI

Key Drivers:

- Capital investments for Amtrak and Airports
- Electrification investments
- CHIPS and Science Act
- United Auto Workers strike

Energy & Utilities

Construction Put in Place <i>Forecast by market segment</i>	2023e	2024f	2025f	2026f	2027f	Change 2023a-2027f
Power	\$116 B	\$123 B	\$132 B	\$140 B	\$144 B	24.1%
Communication	\$25 B	\$26 B	\$27 B	\$28 B	\$30 B	20%
Sewage & Waste Disposal	\$39 B	\$42 B	\$44 B	\$45 B	\$47 B	20.5%
Water Supply	\$27 B	\$29 B	\$30 B	\$31 B	\$32 B	18.5%

Sources: U.S. Census Bureau, FMI

Key Drivers:

- BIL funding
- Innovation and technology investment
- Energy prices
- Renewables
- Population increases
- Severe weather events
- PFAS chemicals

Health Care

Construction Put in Place <i>Forecast by market segment</i>	2023e	2024f	2025f	2026f	2027f	Change 2023- 2027f
Health Care	\$60 B	\$63 B	\$66 B	\$65 B	\$64	6.7%

Sources: U.S. Census Bureau, FMI

Key Drivers:

- Population Change
- Strong Demand for Health Care

Education

Construction Put in Place <i>Forecast by market segment</i>	2023e	2024f	2025f	2026f	2027f	Change 2023- 2027f
Educational	\$110 B	\$117 B	\$123 B	\$126 B	\$129 B	17.3%

Sources: U.S. Census Bureau, FMI

Key Drivers:

- Population Changes
- IRA
- Renew America's School Program
 - Energy improvements
 - Building envelope
 - HVAC
 - Solar panels & batteries
 - EV infrastructure

Market Briefings

New Webinar Series!

- Beginning 2/21/24, The Growing Energy Market
- 1:30 to 2:30 pm EST
- Expert panels provide industry intel for engineers
- Other markets include What's next for office?, Health Care & Science + Technology, and Data Centers & Telecommunications



Thank You



Private Market Resources



202.347.7474



tgrogan@acec.org
Dalexander@acec.org



www.acec.org

The ACEC logo features the letters "ACEC" in a large, white, serif font. Above the letters is a thin, curved yellow line that arches over the "C"s.

AMERICAN COUNCIL OF ENGINEERING COMPANIES