

# Market Outlook Construction Forum Summary

as of February 10, 2023

## Presenters

- Blair Tennant, Principal, Vermeulens
- Richard Vermeulen, Lead Economist, Senior Principal, Vermeulens

## Economic Overview, Vermeulens

- rise in escalation rate in construction costs relate to the target of 2% annual inflation for consumer prices and the monetary policy used to achieve this goal
- strong fiscal measures aided to counter the collapse in activity as a result of the pandemic
- raised interest rates in December to 4.25% has caused a decline in sectors such as residential construction
- residential dollar volume declined by 2.56% in Q4
- nonresidential spending is up by 17.7% from December 2021 to December 2022
- reduction in crude oil prices in Q4 to \$80.16 per barrel
- structural section and beam prices decreased by 10.3%
- increase in labor supply, bringing unemployment rates to 4.6% in Q4

## Contractor Input, Big State Electric Ltd

- EV charger fabrication will increase demand by 22%
- projects in the sectors of mission critical, healthcare, and industrial remain steady in Texas
- major issues in lead times and skilled labor
- advise to implement proactive procurement, target value design, and value engineering to mitigate market fluctuations

## Forecast and Recommendations, Vermeulens

- a decline in architectural billings, a leading indicator for future construction volume
- dissipating supply chain issues
- carry 0-10% bidding contingency
- design add/deduct alternates in 10% construction cost range
- monitor bid results for local and regional projects
- clearly communicate specification levels required



## Design and Construction Market Outlook Forum<sup>®</sup>

Blair Tennant, Principal

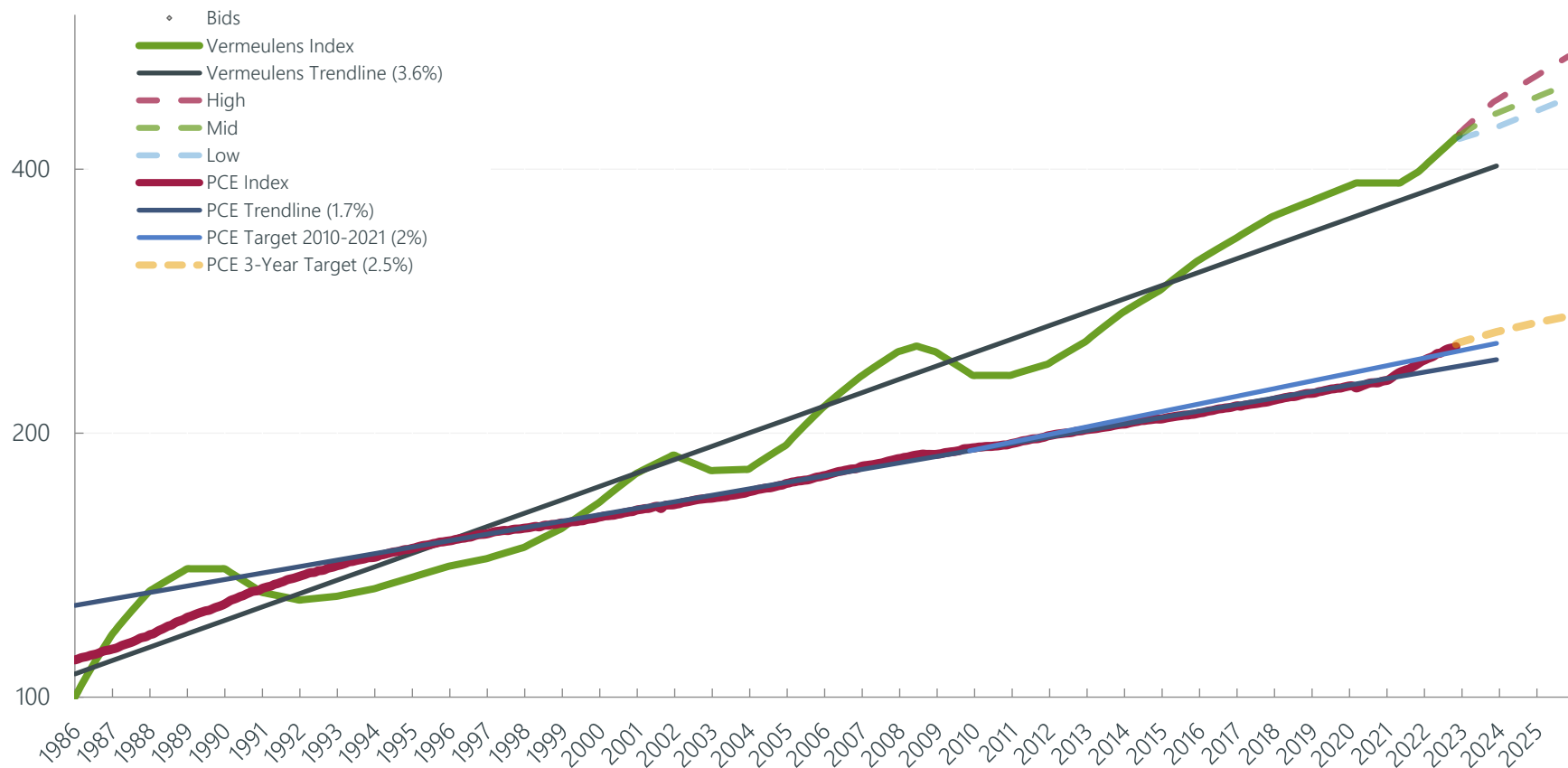
[vermeulens.com](http://vermeulens.com)

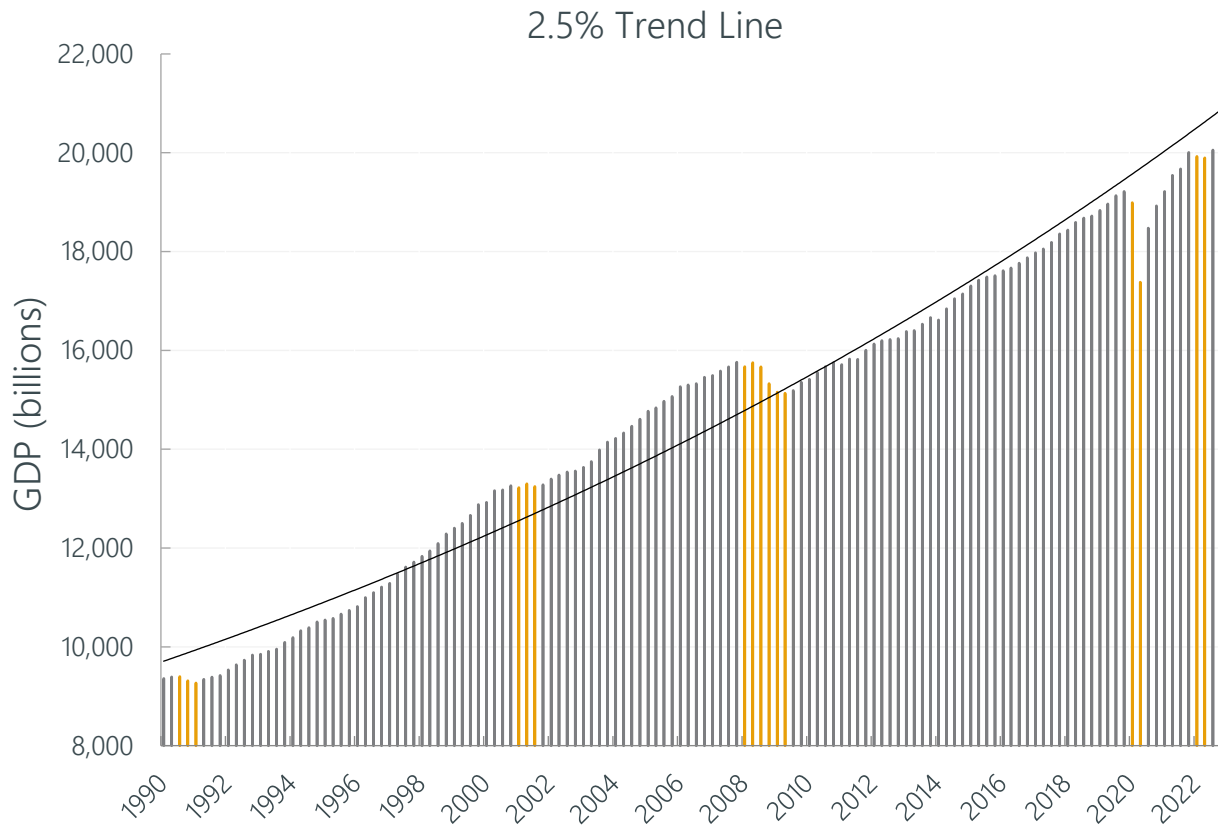
- ➔ interim questions and comments via chat
- ➔ slide deck, recording, summary notes; available on website
- ➔ 2023 forums will follow Quarter end
  - > May 11, 2023
  - > August 8, 2203
  - > November 9, 2023
  - > February 8, 2024

- ➔ Economic Overview
- ➔ Sub Contractor Input
- ➔ Recommendations and Forecast

- 525 estimates in 2022 – 10 per week
- reconciling 6 to 8 per week
- consensus based reconciliation generally to within 5%

# Economic Overview

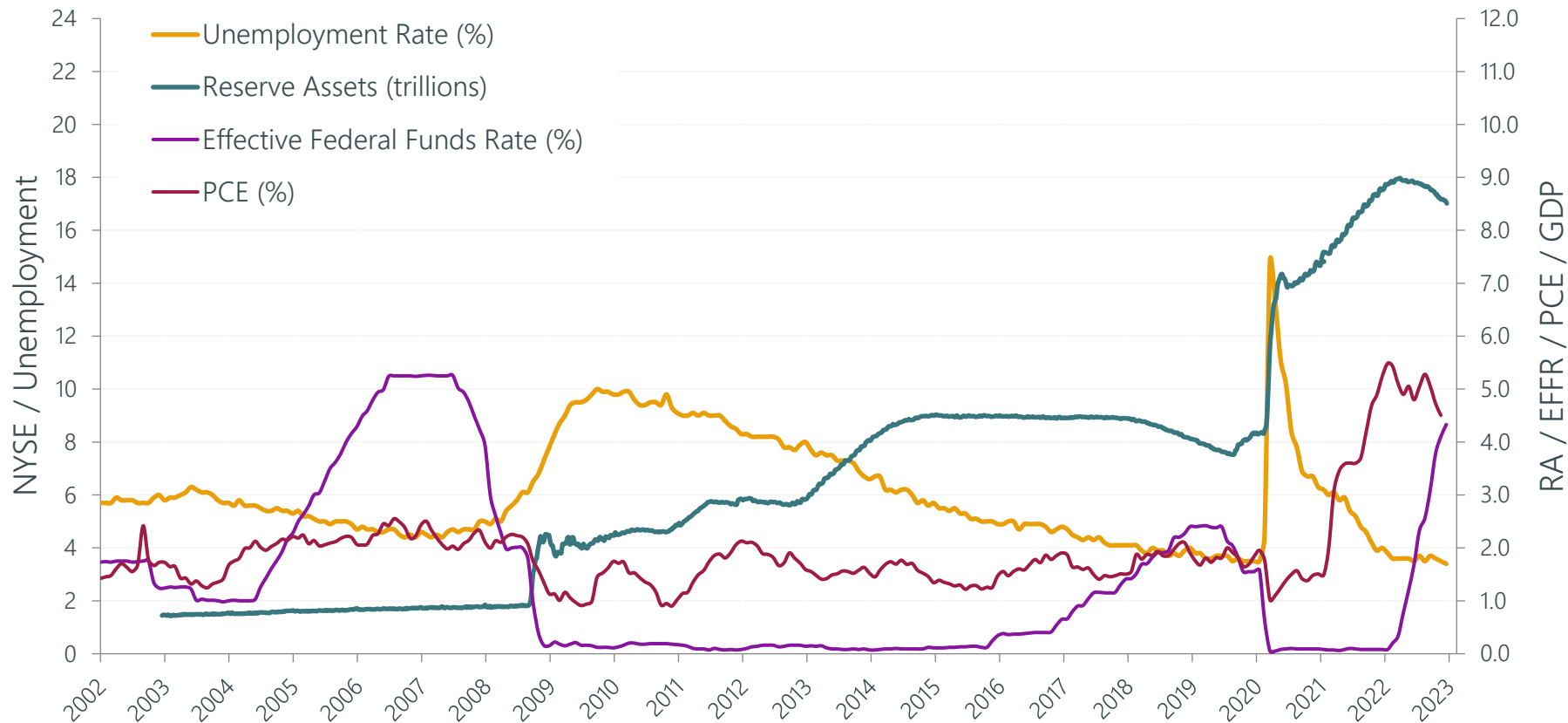


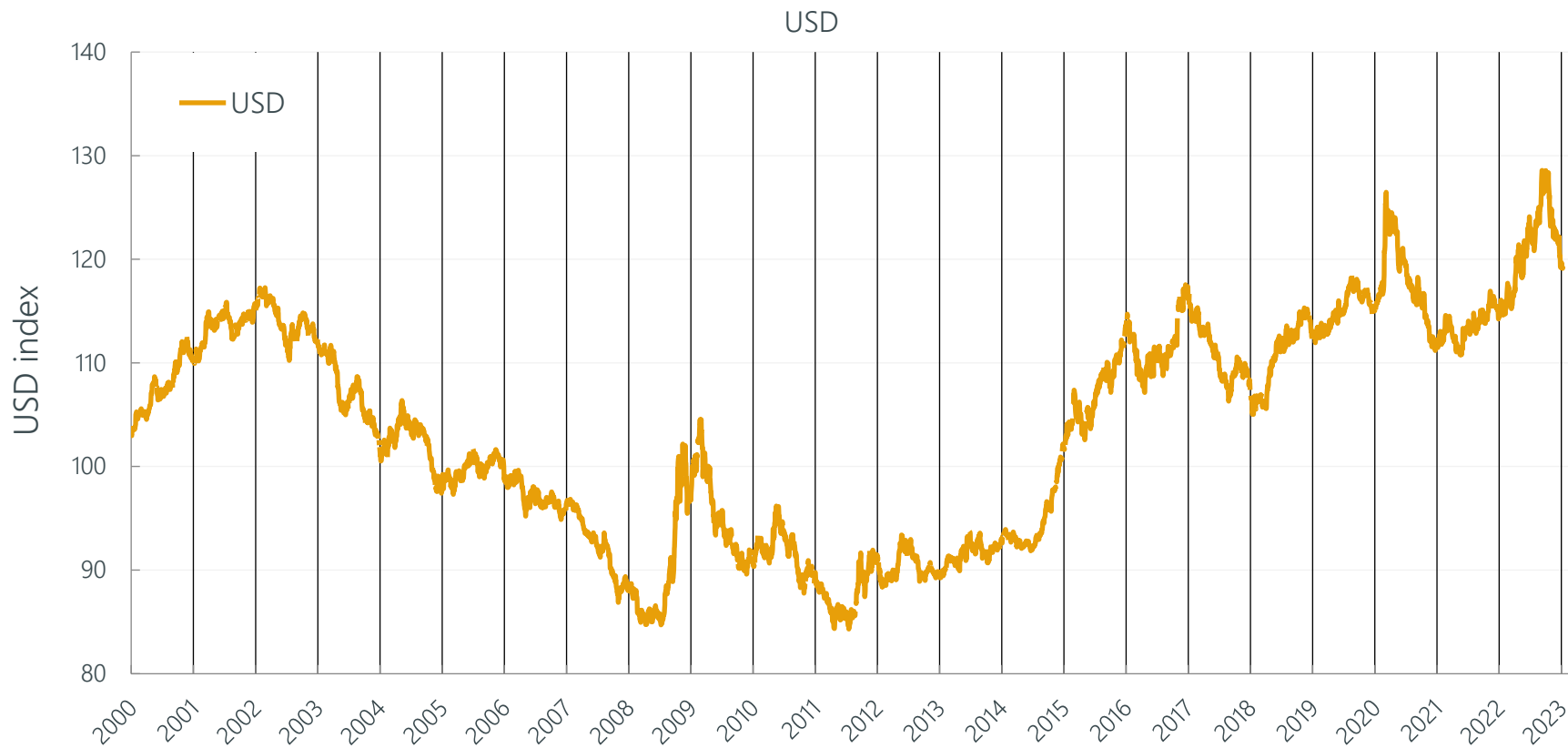


2009 to 2019  
+25.6%

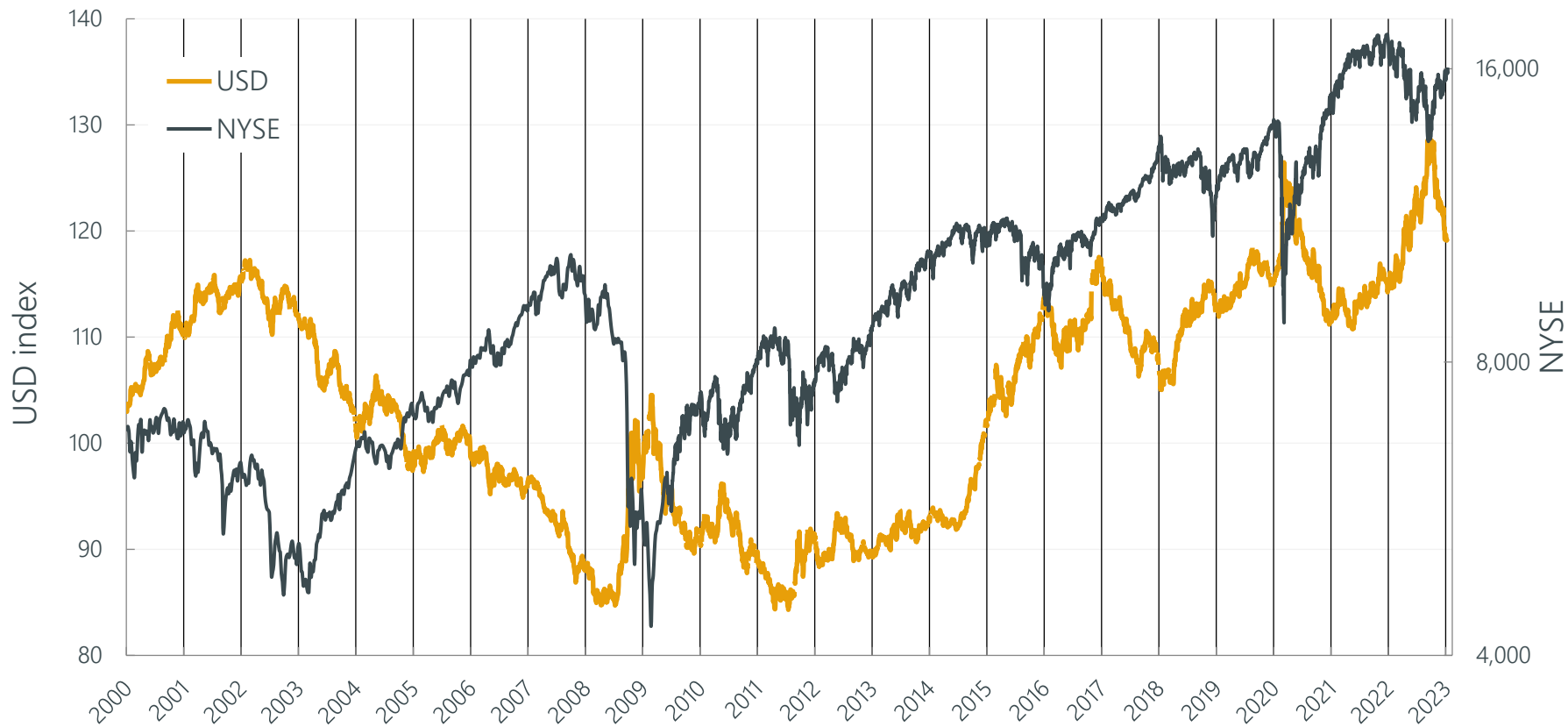
2019 to Current  
+5.1%

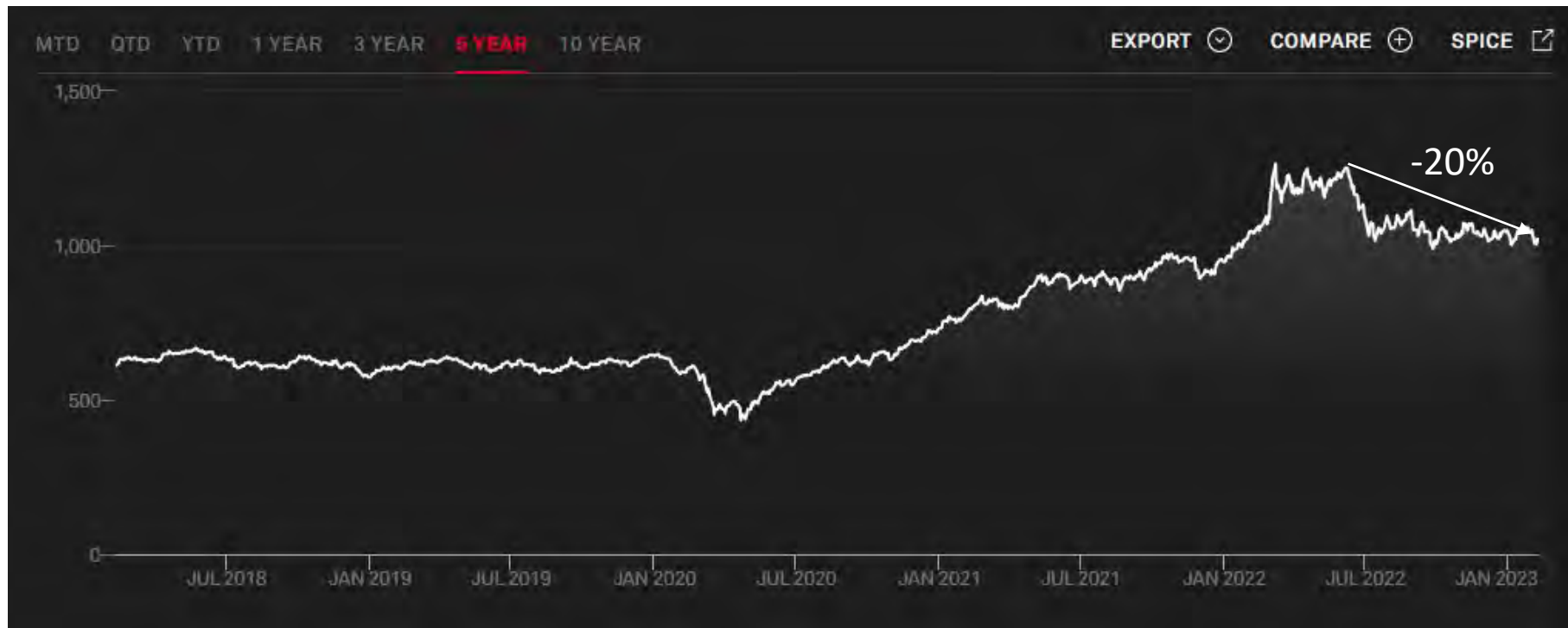




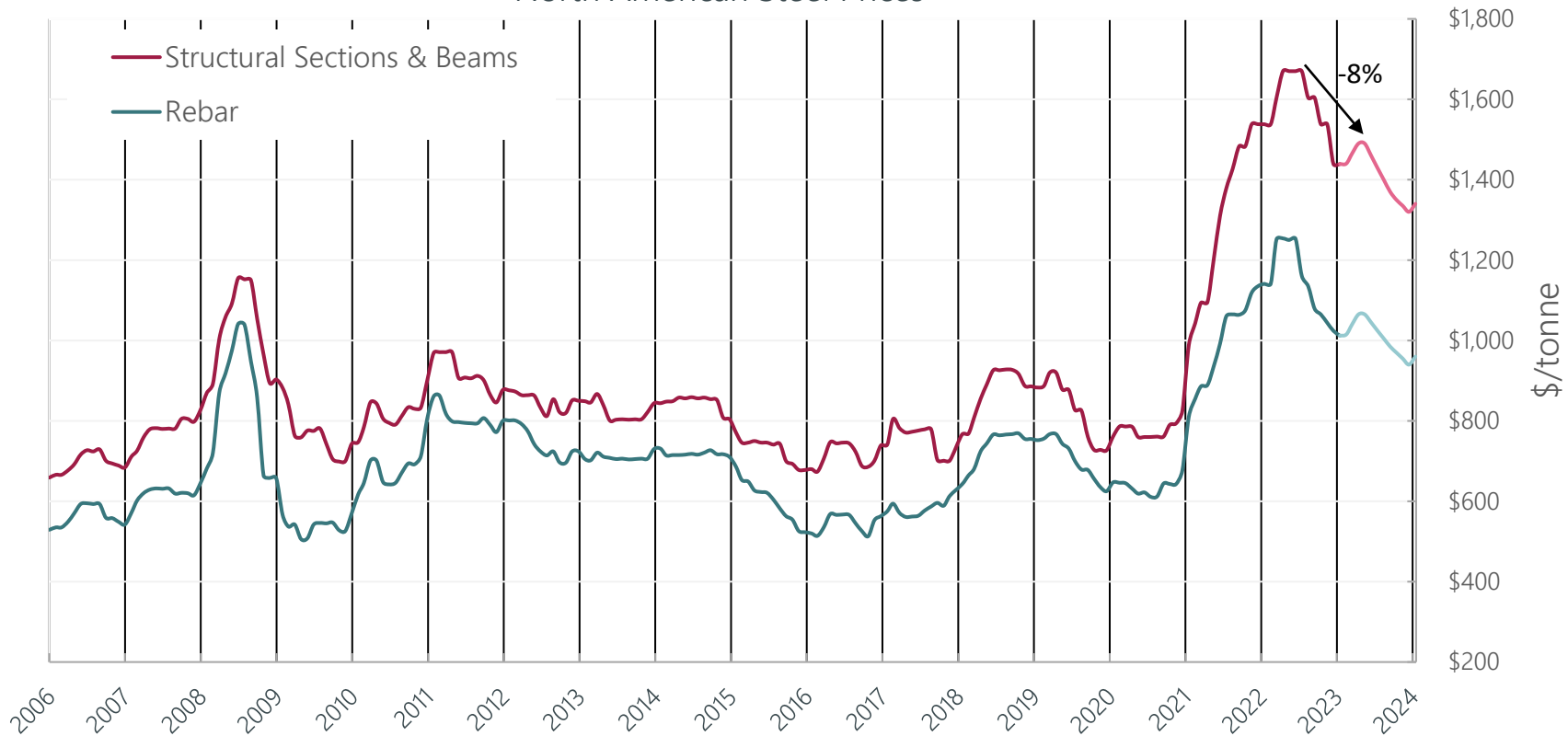








### North American Steel Prices



## Commodities



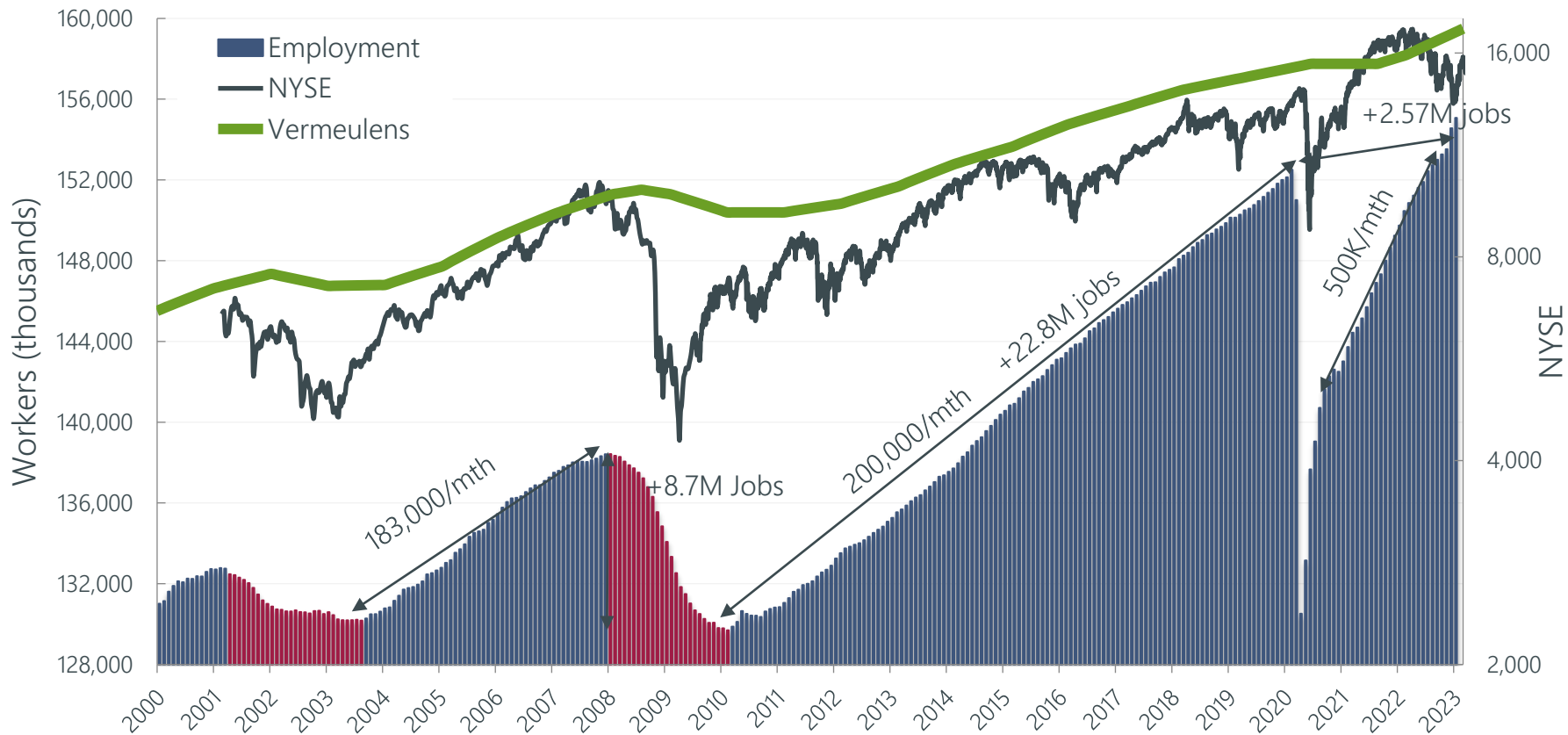


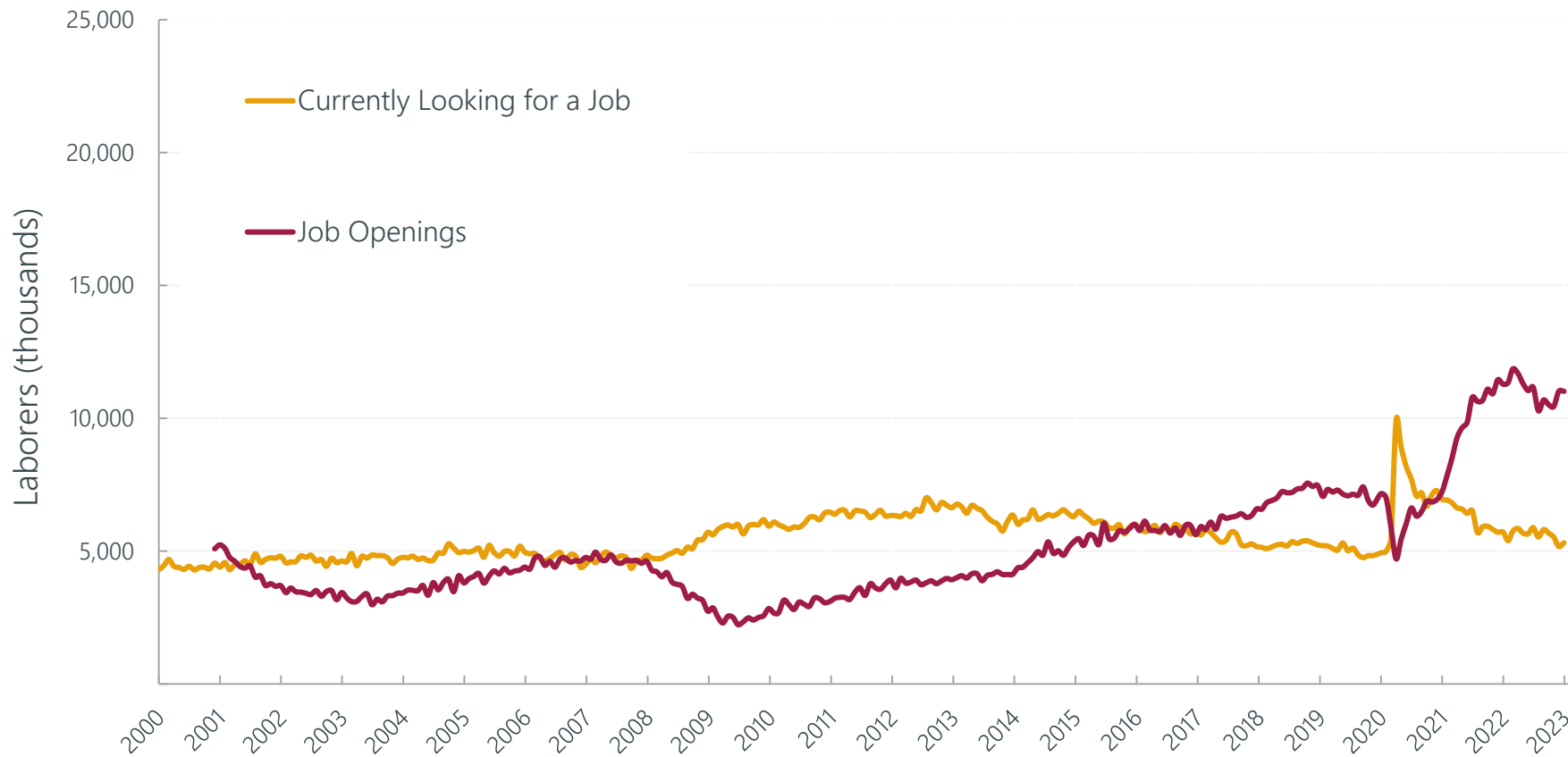


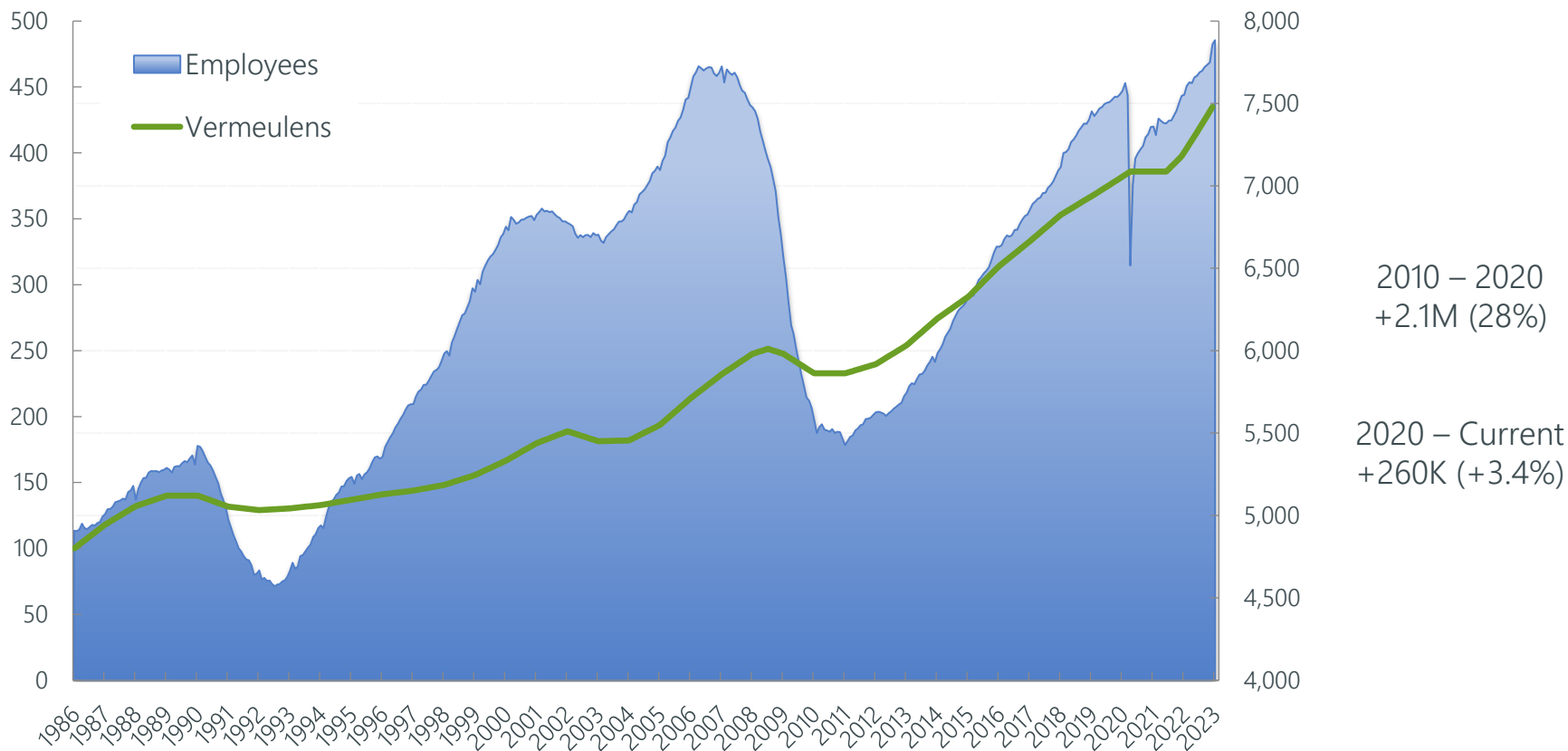
## MATERIALS PRICE INFLATION THROUGH 2025

	2020	2021	2022	2023	2024	2025
ASPHALT PAVING	-3.1	+3.6	+16.9	-0.8	-5.3	0.4
CEMENT	+1.1	+4.0	+9.7	+5.3	0.4	2.4
REINFORCING BARS	-10.2	+54.3	+15.8	-22.2	-10.7	0.7
CONST. MACHINERY	+1.8	+4.5	+10.5	+5.5	0.0	0.3
FABRICATED PIPE	-0.3	+17.7	+15.4	-9.5	-8.1	-1.1
GYPSUM PRODUCTS	+0.3	+15.9	+17.9	7.5	-6.4	3.9
LUMBER, SOFTWOOD	+30.1	+41.9	-5.4	-31.0	1.5	3.1
PLYWOOD	+13.0	+46.2	-1.9	-26.7	1.3	1.0
AGGREGATES	+4.5	+4.0	+10.1	4.6	1.5	1.8
SHEET-METAL WORK	-0.3	+11.7	+20.1	-3.0	-8.5	-5.7
STRUCTURAL STEEL	-2.3	+26.7	+27.5	-7.7	-9.0	-6.4

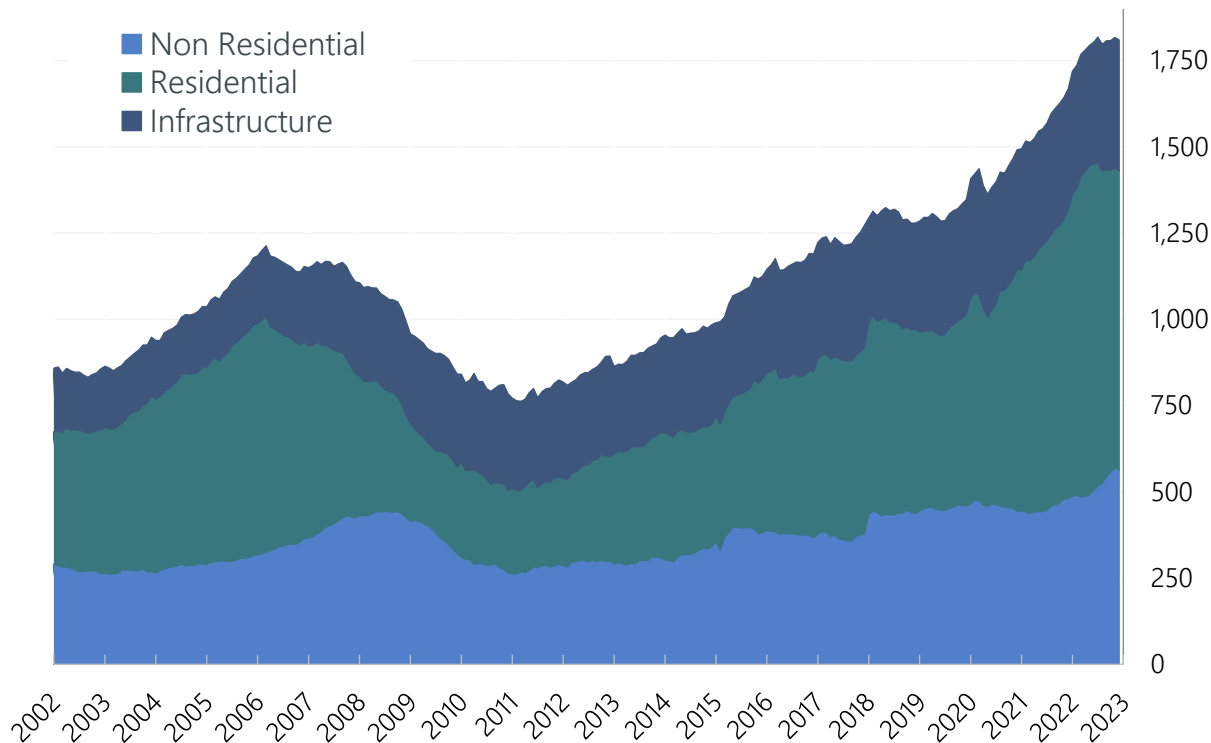
SOURCE: IHS GLOBAL INSIGHT INC. NOTE: ESCALATION RATES ARE ANNUAL AVERAGES.







# Put In Place Construction (annualized billions)



## 2020 to Current

Total	+26%
Infra	+3%
Res	+44%
Non Res	+18%

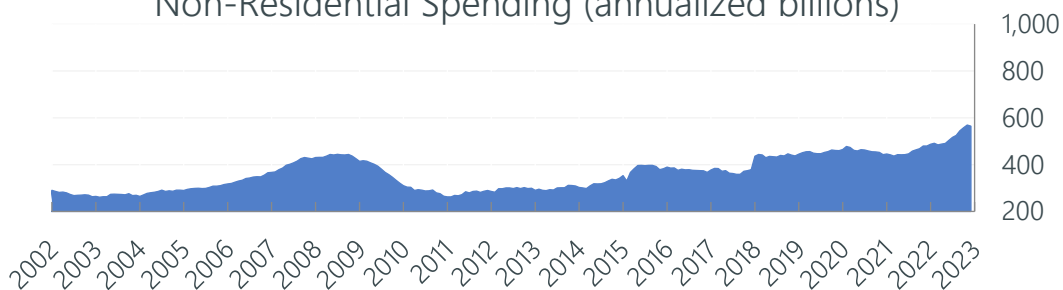
Infrastructure Spending (annualized billions)



Residential Spending (annualized billions)



Non-Residential Spending (annualized billions)



## 2020 to Current

Total	+26%
Infra	+3%
Res	+44%
Non Res	+18%

# Contractor Input



*"Begin with the End in Mind"*

# Current Market Updates

February 10, 2023



# ▶ 2022 Q4 Report

- ▶ 2023 looks to be a record year in contract volume
- ▶ Some slowing in residential
- ▶ Leadtimes still a major issue
- ▶ Skilled labor (including leadership) is a major issue
- ▶ EV charger fabrication will increase demand by 22%
- ▶ Other commodities are holding steady.
- ▶ Projects in Texas remain steady (Mission Critical, Healthcare, Industrial)

Switchgear

350 - 425days

Generators

230 - 400days

*"Begin with the End in Mind"*



# ▶ How to Mitigate

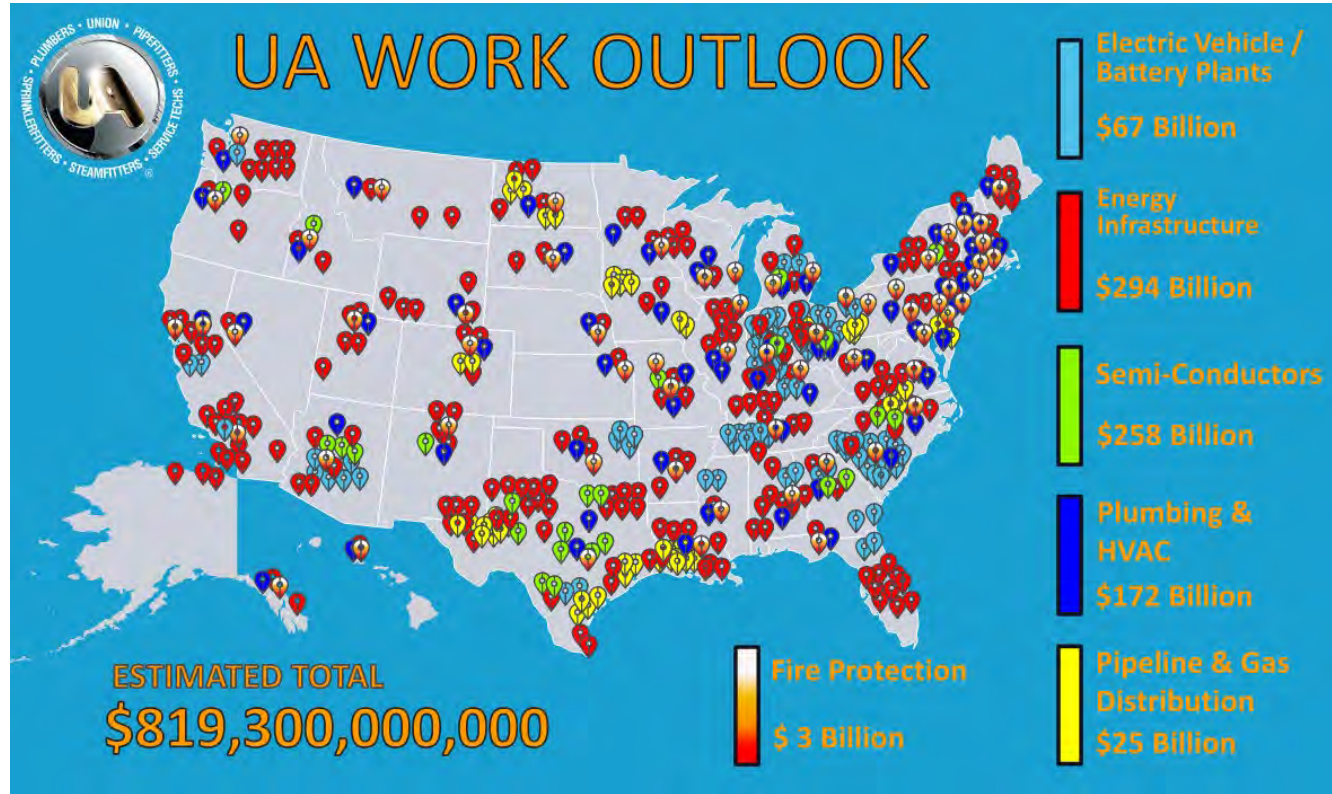
- ▶ Design Assist
- ▶ Market leverage / buying power
- ▶ Proactive procurement
- ▶ Target Value Design
- ▶ VE is a big one!!! Escalation can catch it quickly!!!!
- ▶ Consultant backlog vs resources moving towards contractor design build contracts
- ▶ Early Commitment to Vendors
- ▶ **BE FLEXIBLE WITH SPECS & DETAILS**

*"Begin with the End in Mind"*





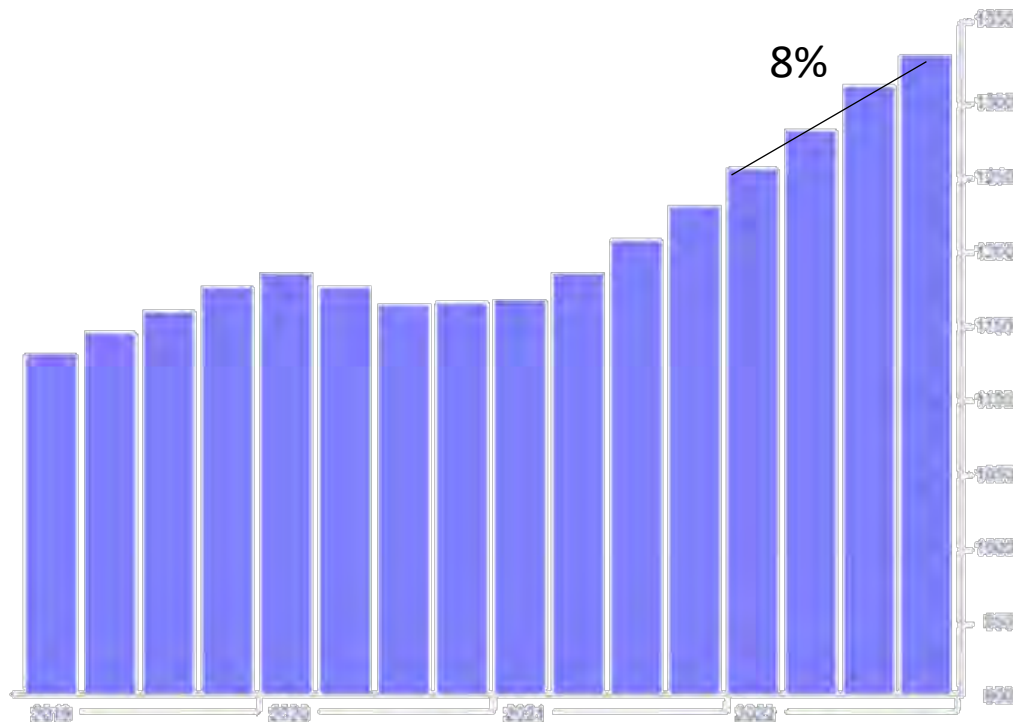
- ➔ 2023 looking to be a record year; bidding 2024 now
- ➔ 60 day payment terms and retention are causing cash flow issues
- ➔ skilled workers can go wherever they want
  - > currently paying \$3-\$5/hr over scale
  - > plus monthly bonuses
  - > plus per diems
- ➔ pipe and fittings stable, copper bouncing
- ➔ AHU's 32-52 weeks
- ➔ billions of dollars invested in chip manufacturing



Non Residential & Infrastructure Market Is 900B

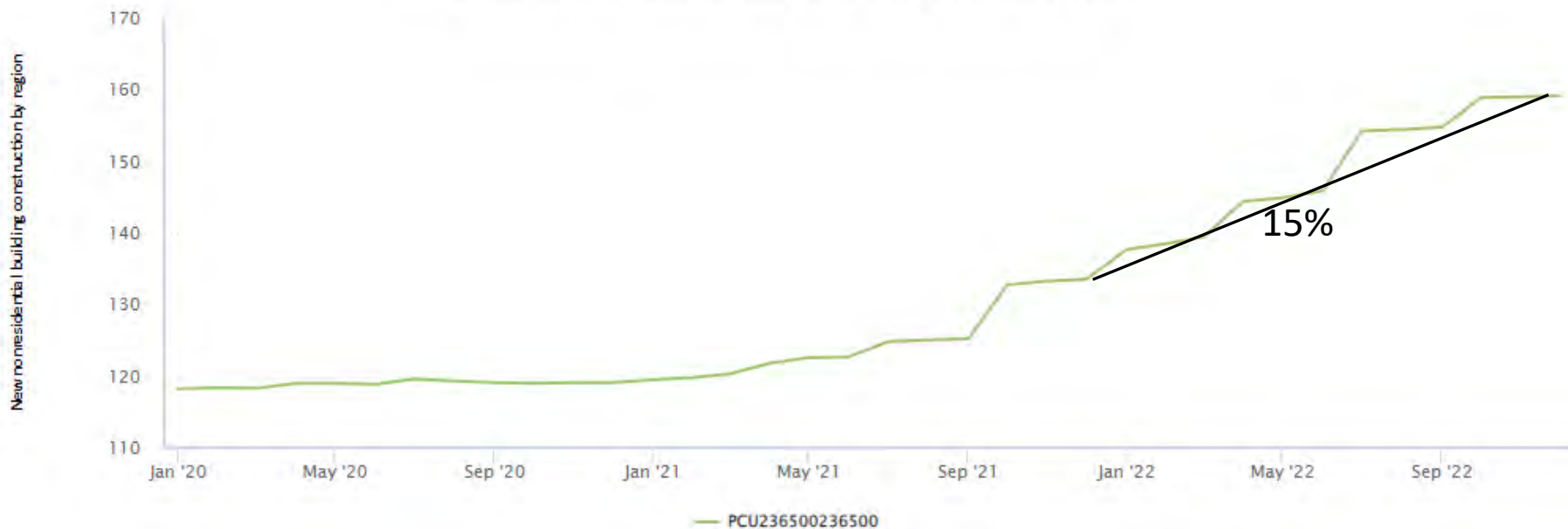
# Forecast & Recommendations

# Turner



Quarter	Index	% Change
4 <sup>th</sup> Quarter 2022	1332	1.60
3 <sup>rd</sup> Quarter 2022	1311	2.18
2 <sup>nd</sup> Quarter 2022	1283	2.23
1 <sup>st</sup> Quarter 2022	1255	2.03
4 <sup>th</sup> Quarter 2021	1230	1.91
3 <sup>rd</sup> Quarter 2021	1207	1.68
2 <sup>nd</sup> Quarter 2021	1187	1.28
1 <sup>st</sup> Quarter 2021	1172	0.09

PPI industry data for New nonresidential building construction by region, not seasonally adjusted





# BUILDERS' CONSTRUCTION COST INDEXES

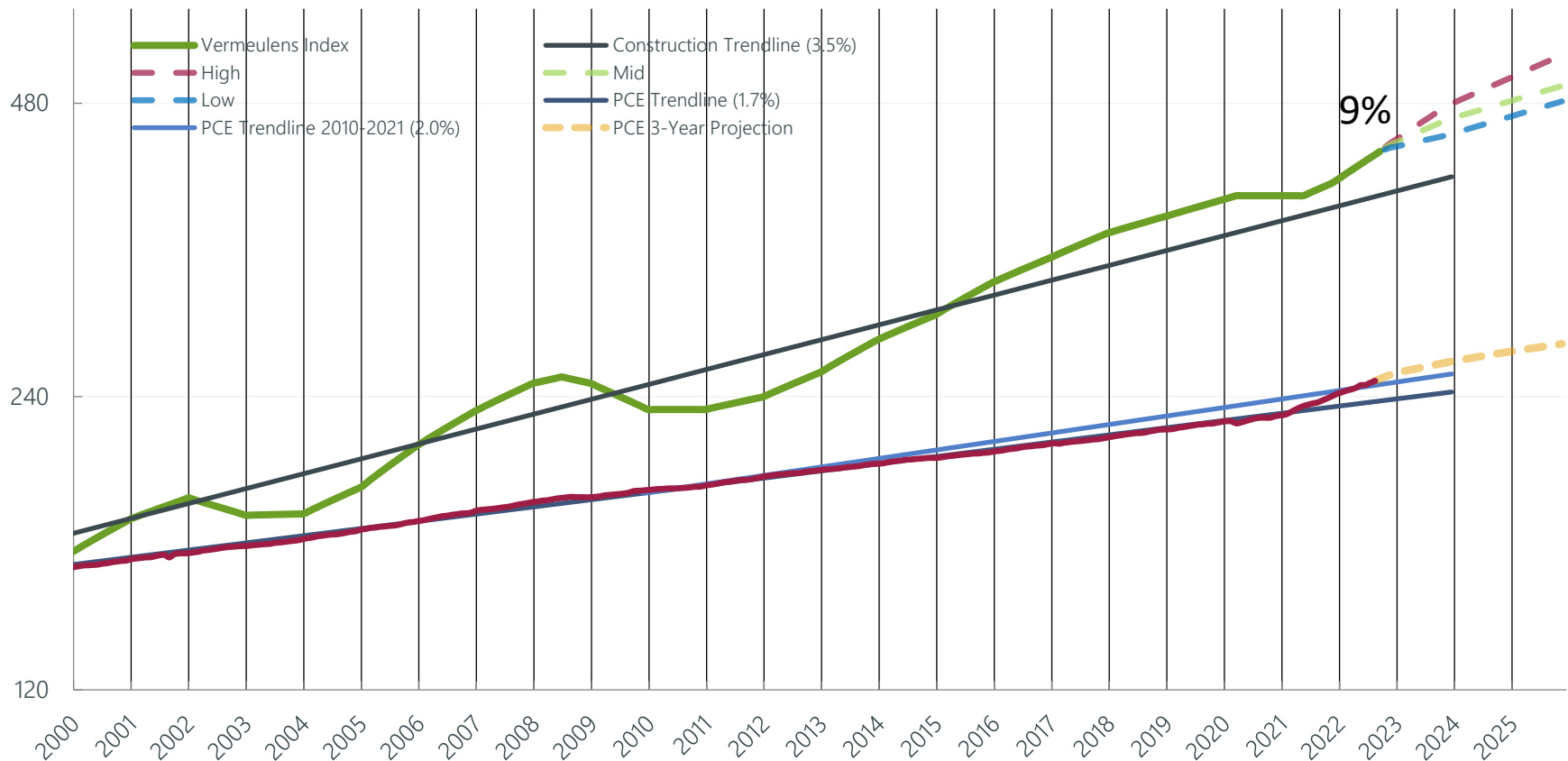
NAME, AREA AND TYPE	OCT 2021	JANUARY 2022	APRIL 2022	JULY 2022	OCT. 2022	% CHANGE QTR.	YEAR
<b>GENERAL-PURPOSE COST INDEXES:</b>							
ENR 20-CITY: CONSTRUCTION COST <sup>1</sup>	1160.43	1168.87	1200.84	1225.87	1226.54	+0.1	+5.7
ENR 20-CITY: BUILDING COST <sup>1</sup>	1072.38	1089.28	1136.40	1176.80	1179.89	+0.3	+10.0
BUREC: GENERAL BUILDINGS <sup>2</sup>	478.00	500.00	511.00	521.00	528.00	+1.3	+10.5
FM GLOBAL: INDUSTRIAL <sup>3</sup>	NA	NA	NA	NA	NA	NA	NA
SIERRA WEST: GENERAL BUILDING	1146.74	1154.18	1173.14	NA	NA	NA	NA
LELAND SAYLOR: MATERIAL/LABOR	1236.39	1324.85	1331.33	1327.42	NA	NA	NA
ECC, EDWARTOSKI COST CONSULTING <sup>4</sup>	NA	NA	NA	NA	NA	NA	NA
<b>SELLING PRICES INDEXES—BUILDING:</b>							
SIERRA WEST: SELLING PRICE	1930.87	1977.39	2111.69	NA	NA	NA	NA
TURNER: GENERAL BUILDING <sup>1</sup>	1222.03	1246.84	1274.64	1302.43	NA	NA	NA
LELAND SAYLOR: SUBCONTRACT	1271.31	1381.46	1379.85	1384.07	NA	NA	NA
RIDER LEVETT BUCKNALL <sup>5</sup>	225.38	228.93	234.42	239.68	244.19	+1.9	+8.3
<b>SPECIAL-PURPOSE BUILDING COST INDEXES:</b>							
U.S. COMMERCE: ONE-FAMILY HOUSE <sup>6</sup>	163.60	169.30	179.30	185.40	191.90	+3.5	+17.3
U.S. COMMERCE: NEW WAREHOUSES <sup>6</sup>	195.69	207.81	218.84	230.57	235.85	+2.3	+20.5
U.S. COMMERCE: NEW SCHOOL BUILDINGS <sup>6</sup>	190.75	195.78	204.16	215.17	223.96	+4.1	+17.4
U.S. COMMERCE: NEW OFFICE BUILDINGS <sup>6</sup>	165.72	173.95	181.91	192.64	199.80	+3.7	+20.6
POWER ADVOCATE: POWER PLANT <sup>7</sup>	NA	NA	NA	NA	NA	NA	NA

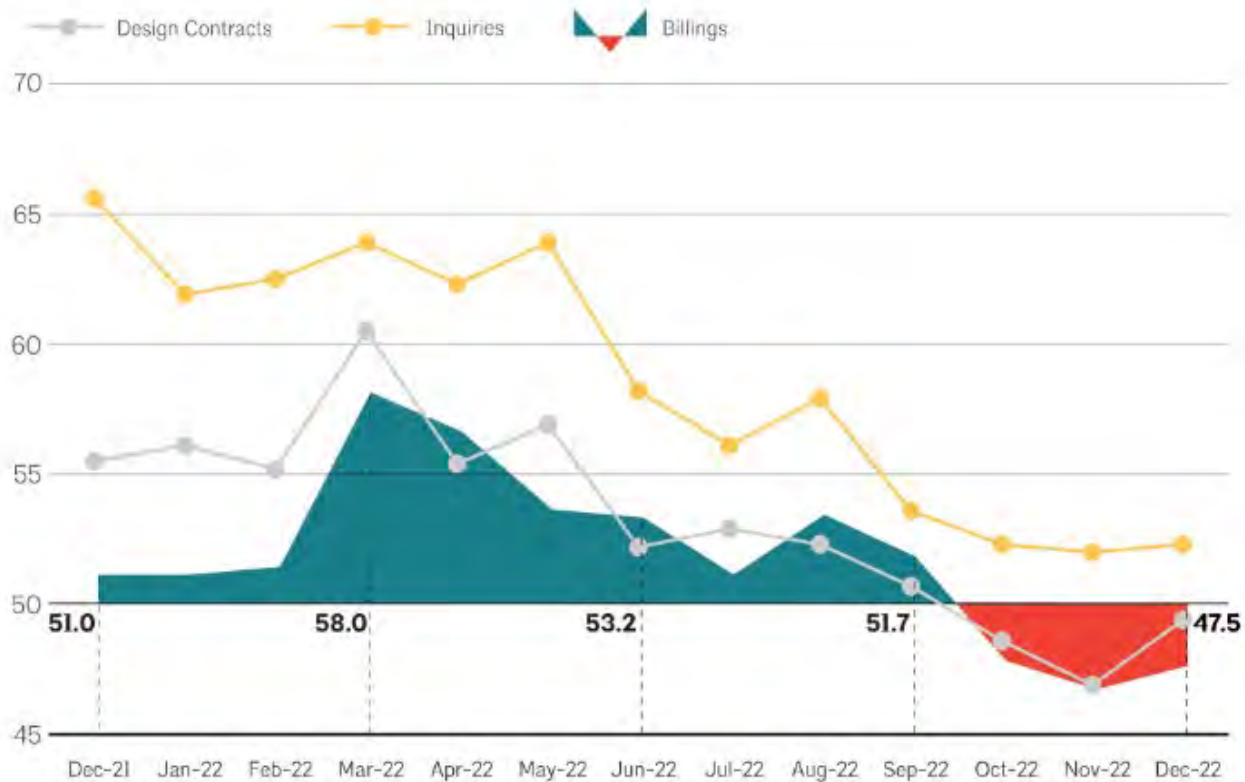
<sup>1</sup>BASE: 1967=100; <sup>2</sup>BASE: 1977=100; <sup>3</sup>BASE: 1980=100; <sup>4</sup>FORMERLY SMITH GROUP; 1992=100; <sup>5</sup>BASE: APRIL 2001=100; <sup>6</sup>BASE: 1992=100; <sup>7</sup>POWER PLANT FOR A 550-MW COMBINED-CYCLE FACILITY.

## ENR'S 2023 COST FORECAST

	2022	2023	% CHANGE	
			'21-'22	'22-'23
BUILDING COST INDEX: 1913=100	7971.96	8275.00	+9.4	+3.8
SKILLED-LABOR INDEX: 1913=100	11320.21	11500.00	+2.4	+1.6
WAGES, \$/HR.	62.47	63.50	+2.4	+1.6
CONST. COST INDEX: 1913=100	13175.00	13330.00	+5.6	+1.2
COMMON-LABOR INDEX: 1913=100	24634.46	24975.00	+1.1	+1.4
WAGES, \$/HR.	47.36	48.00	+1.1	+1.4
MATERIALS COST INDEX: 1913=100	5889.91	5968.00	+18.6	+1.3
PORTLAND CEMENT, \$/TON	174.09	180.00	+14.4	+3.4
LUMBER, 2X4, \$/MBF	1094.73	1075.00	+15.0	-1.8
STRUCTURAL STEEL, \$/CWT	92.00	94.00	+20.2	+2.2

**SOURCE:** ENR/BNP MEDIA. ENR'S COST INDEXES FORECAST TO DECEMBER 2023;  
PERCENT CHANGES ARE DECEMBER VS. DECEMBER.

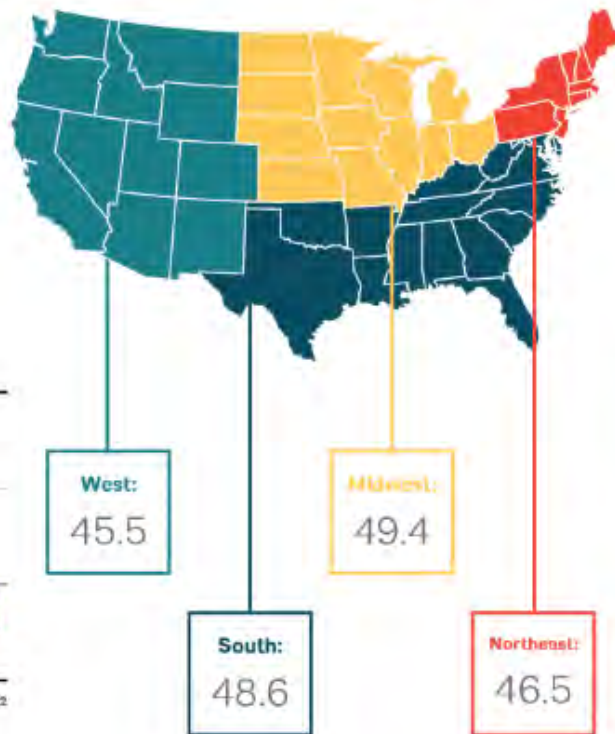
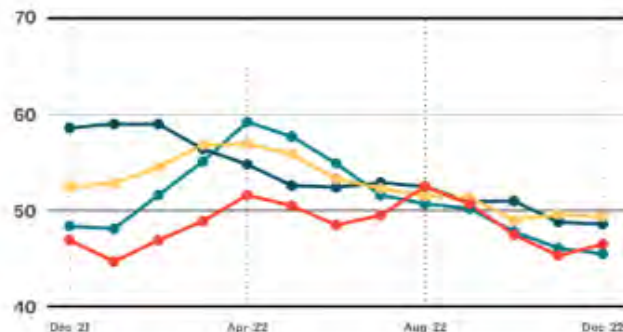


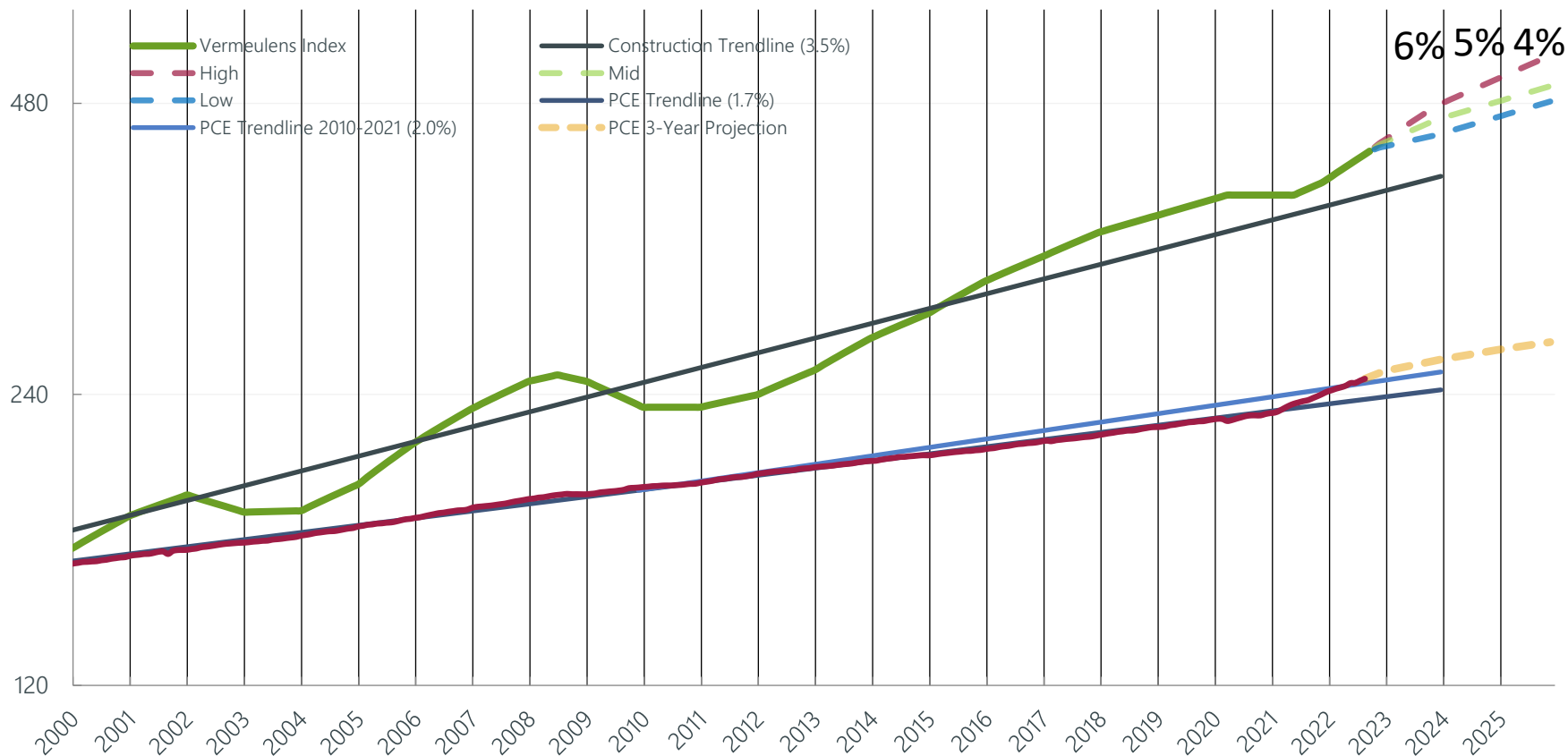


## Regional

Business conditions remain weak in all regions of the country

Graphs represent data from December 2021–December 2022 across the four regions. 50 represents the diffusion center. A score of 50 equals no change from the previous month. Above 50 shows increase; Below 50 shows decrease. 3-month moving average.





- ➔ 2022 volatility remained high as we are building nationally at all-time highs
- ➔ some supply chain challenges are dissipating
- ➔ carry 4% - 8% annual escalation to procurement in 2023, 2024, and beyond - how much is baked in?
- ➔ some markets or trades; carry 0% - 10% bidding contingency
- ➔ design add/deduct alternates in the 10% of construction cost range – must be at program
  - > 10% program
  - > 8% SD
  - > 6% DD
  - > 4% Bid
- ➔ continue design and get shovel ready
- ➔ leverage strategic early procurement packages to reduce construction escalation impact



Thank you!

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