



## Market Outlook

September 15, 2021

[fmiconsulting.com](https://fmiconsulting.com)

# WHAT we do and WHO we serve

## Our Services

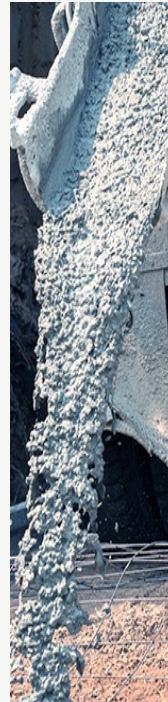
- Compensation & Rewards
- Leadership & Organizational Development
- Market Research & Due Diligence
- Operations
- Peer Groups
- Strategy
- Technology
- Training

## Clients we serve

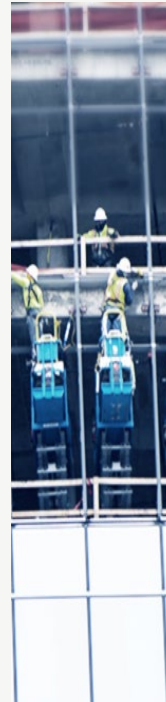
Building  
Products



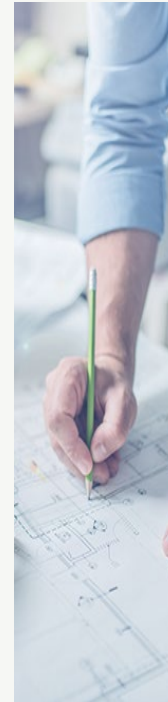
Construction  
Materials



Contractor &  
Construction  
Services



Engineering  
& Design



Private  
Equity



Technology  
Companies



Utility &  
Communication  
Infrastructure







Durable or Fragile

Did we experience a two-year recovery in two quarters?



Bulls and bears coexist in all economies

Where will the greatest opportunities present themselves over the next five years?

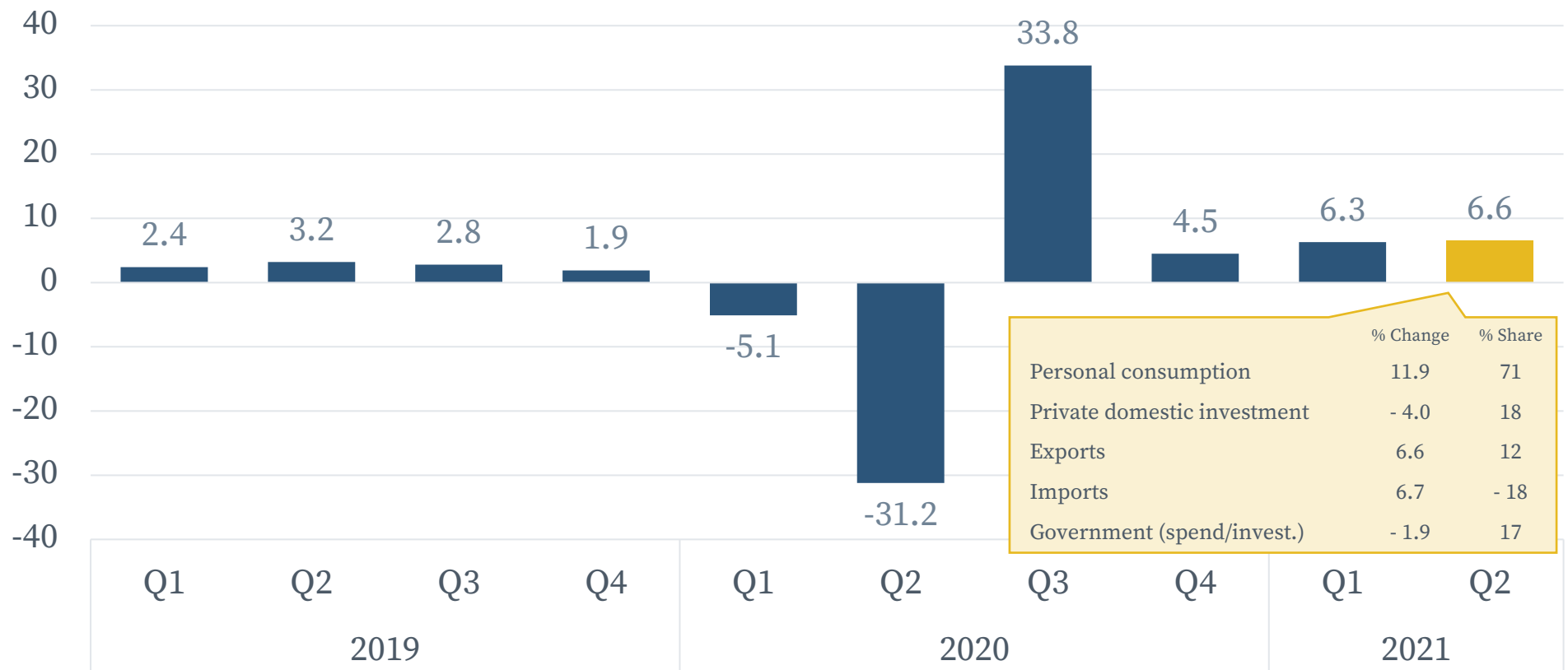


Bigger, Faster, Better

How will evolving project characteristics define competitive advantage?

# Real Gross Domestic Product (GDP)

## Percent Change From Preceding Period, Seasonally Adjusted Annual Rate



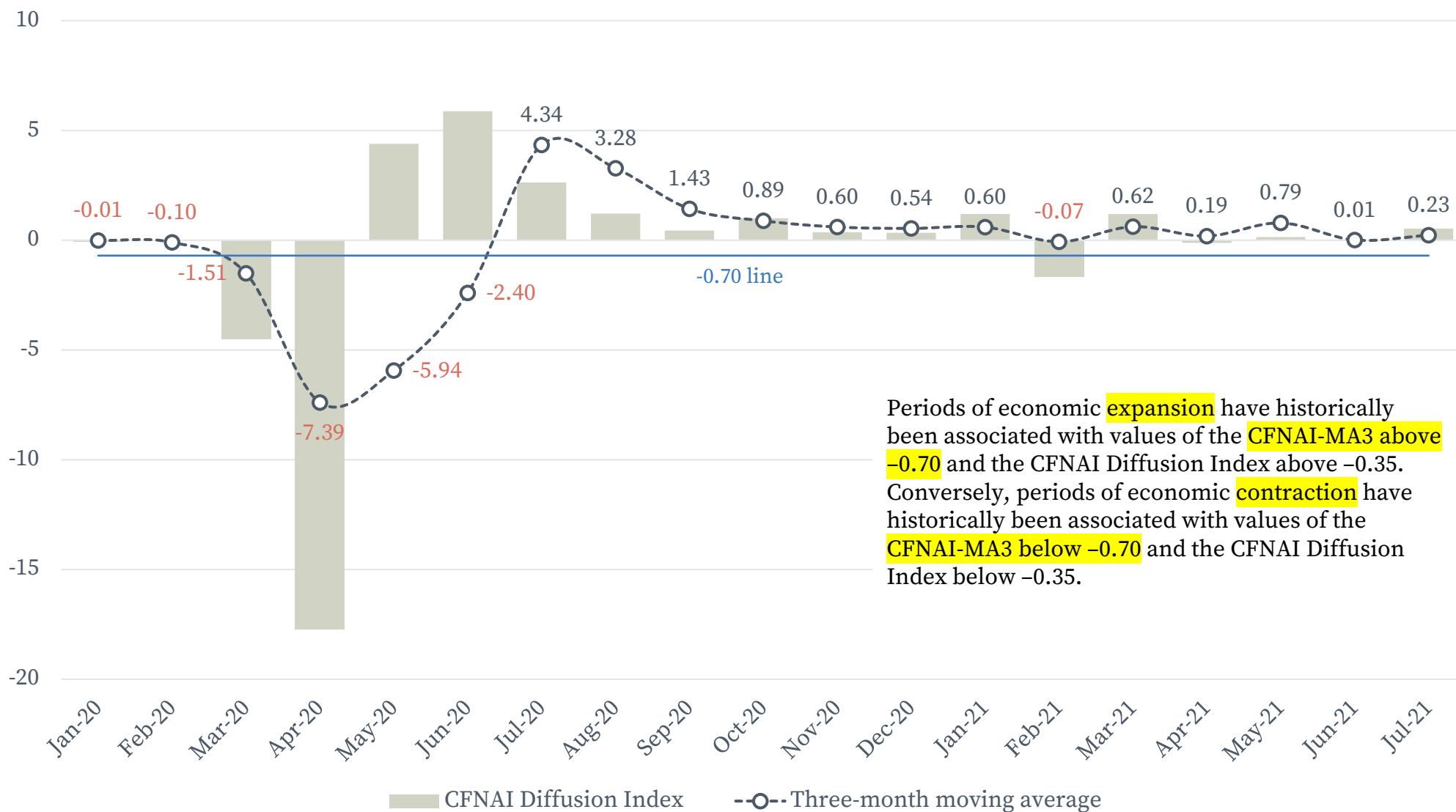
## RECESSION INDICATORS ARE A MIXED BAG

Indicators of the Likelihood of Recession

Indicator/ Metric	Recessions Considered	Correct Predictions	False Positives	Prediction Strength	Flag/ Warning Timing	Risk Assessment/ Trending
Yield Curve Inversion	6	6	0	100%	<1-3 year	MODERATE ↓
New Home Sales	7	7	1	86%	<1-3 year	MODERATE ↓
Money Supply	8	7	1	75%	<1-3 year	MODERATE ↓
Unemployment Rate	7	5	0	71%	<1 year	MODERATE ↔
Lumber Sales	3	3	1	67%	~1-2 year	MODERATE ↓
US Trade Balance (BOP % Change)	7	6	2	57%	~1-2 year	LOW ↑
Months Supply of Homes	8	4	0	50%	<1-1 year	MODERATE ↑
Copper Price (Doctor Copper)	8	7	3	50%	<1-4 year	MODERATE ↔
Stock Market Performance	4	3	1	50%	<1 year	MODERATE ↑
MBS Held by Banks	2	2	1	50%	<1-2 year	LOW ↑
Residential CPiP	7	4	1	43%	<1-2 year	MODERATE ↑
Rental Vacancy Rates	10	5	1	40%	<1-2 year	MODERATE ↓
Manufactured Goods, New Orders	3	2	1	33%	<1 year	LOW ↑
Consumer Confidence (OECD)	8	6	4	25%	~1-3 year	MODERATE ↓
Heavy Duty Truck Sales	8	6	5	13%	~1-2 year	MODERATE ↓

## A REASON TO BE OPTIMISTIC

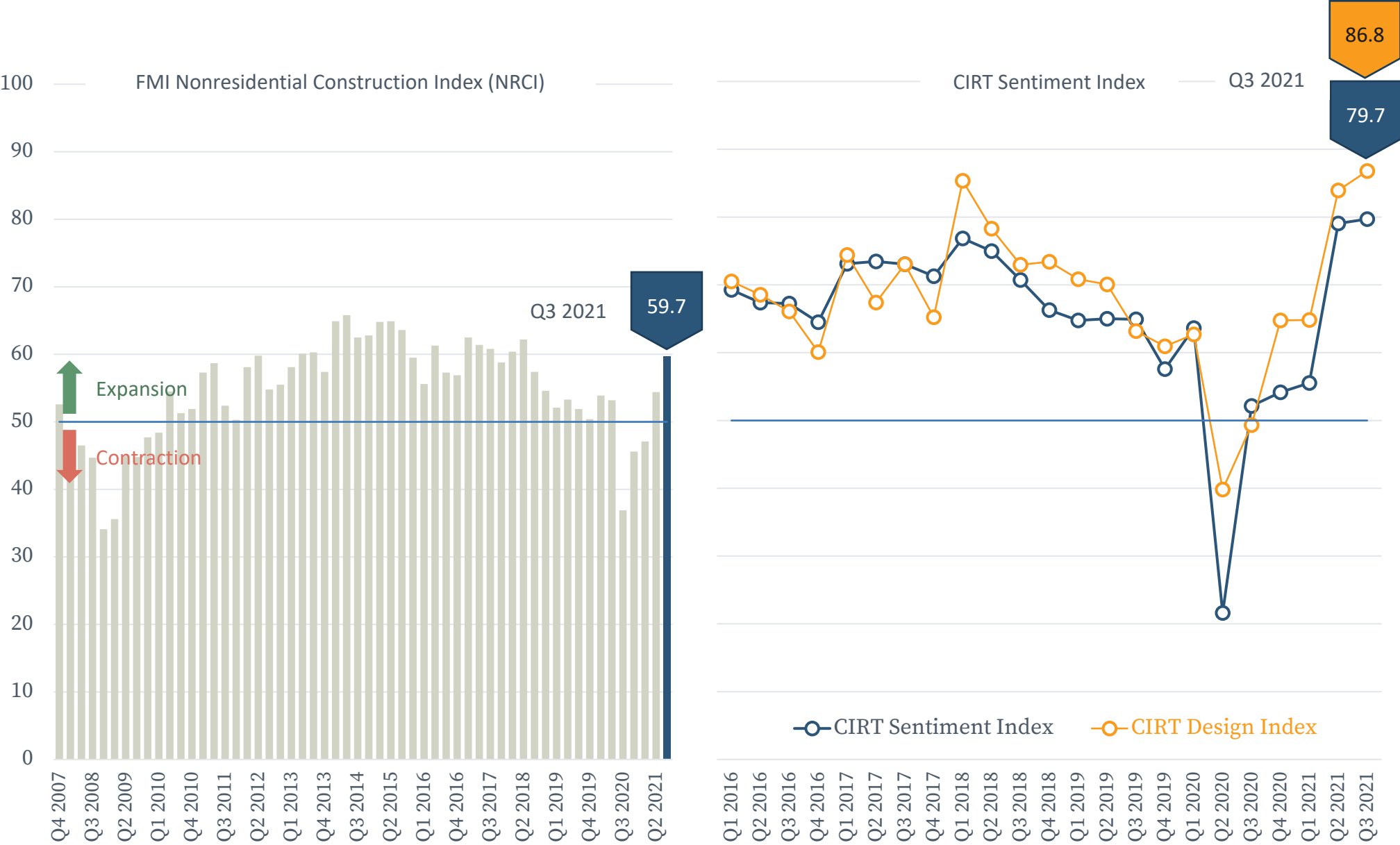
Chicago Fed National Activity Index  
Diffusion Index and three-month moving average



Periods of economic **expansion** have historically been associated with values of the **CFNAI-MA3 above -0.70** and the CFNAI Diffusion Index above -0.35. Conversely, periods of economic **contraction** have historically been associated with values of the **CFNAI-MA3 below -0.70** and the CFNAI Diffusion Index below -0.35.

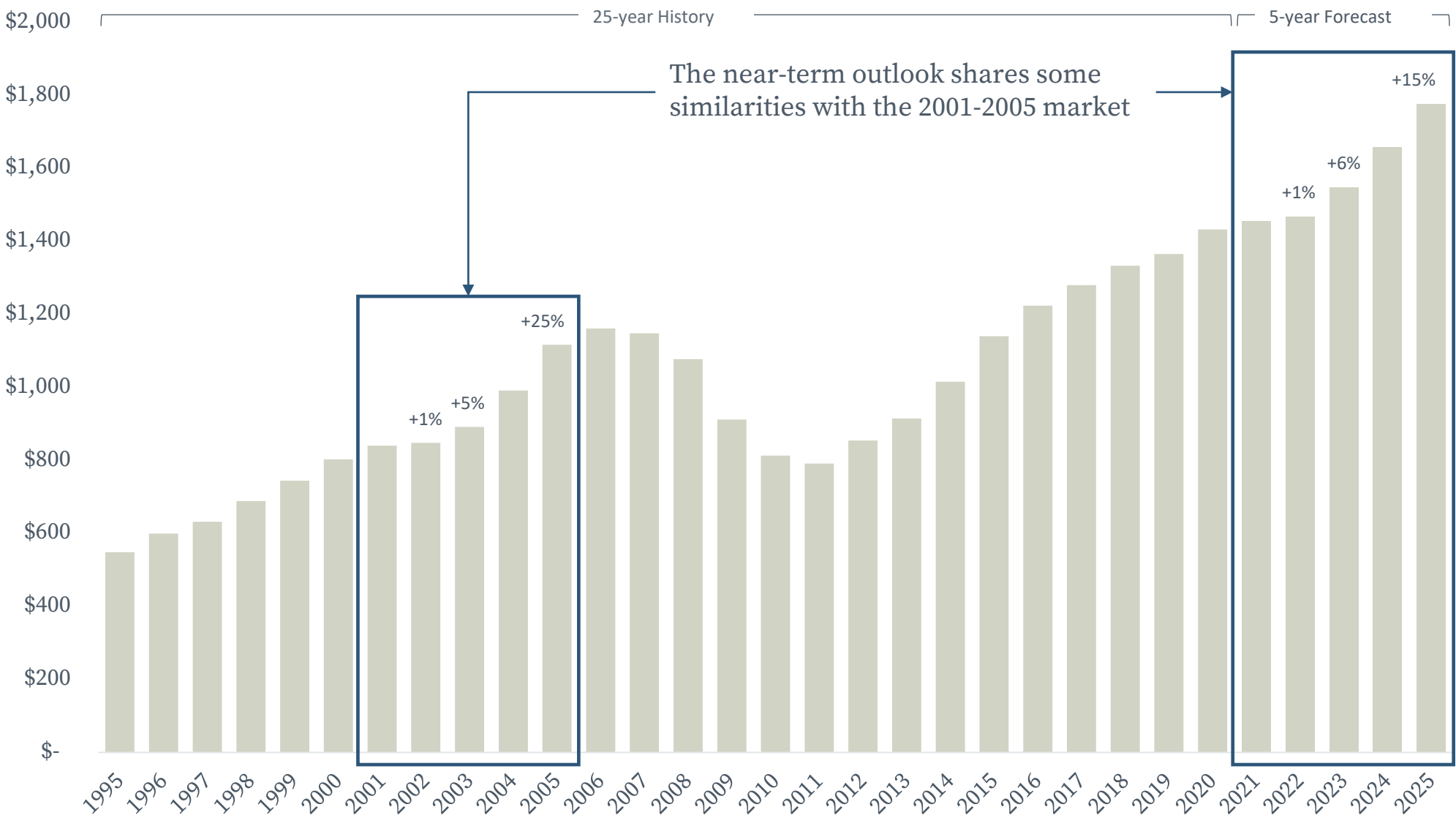
THE INDUSTRY IS BULLISH ON EXPANSION

AEC industry sentiment indices



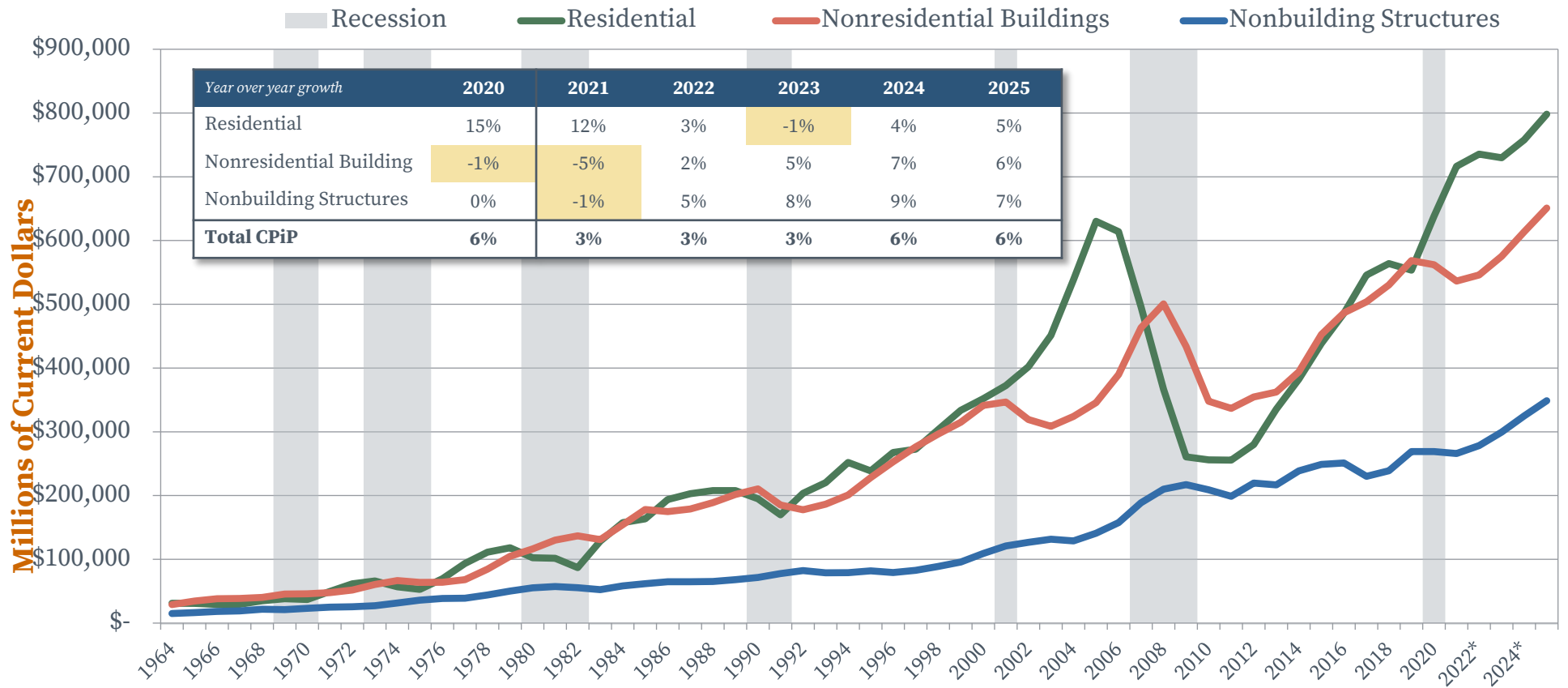
# DEMAND IS TEMPERED NEAR TERM BY SUPPLY CONSTRAINTS

Total Construction Spending Put in Place (US)  
Billions of current dollars





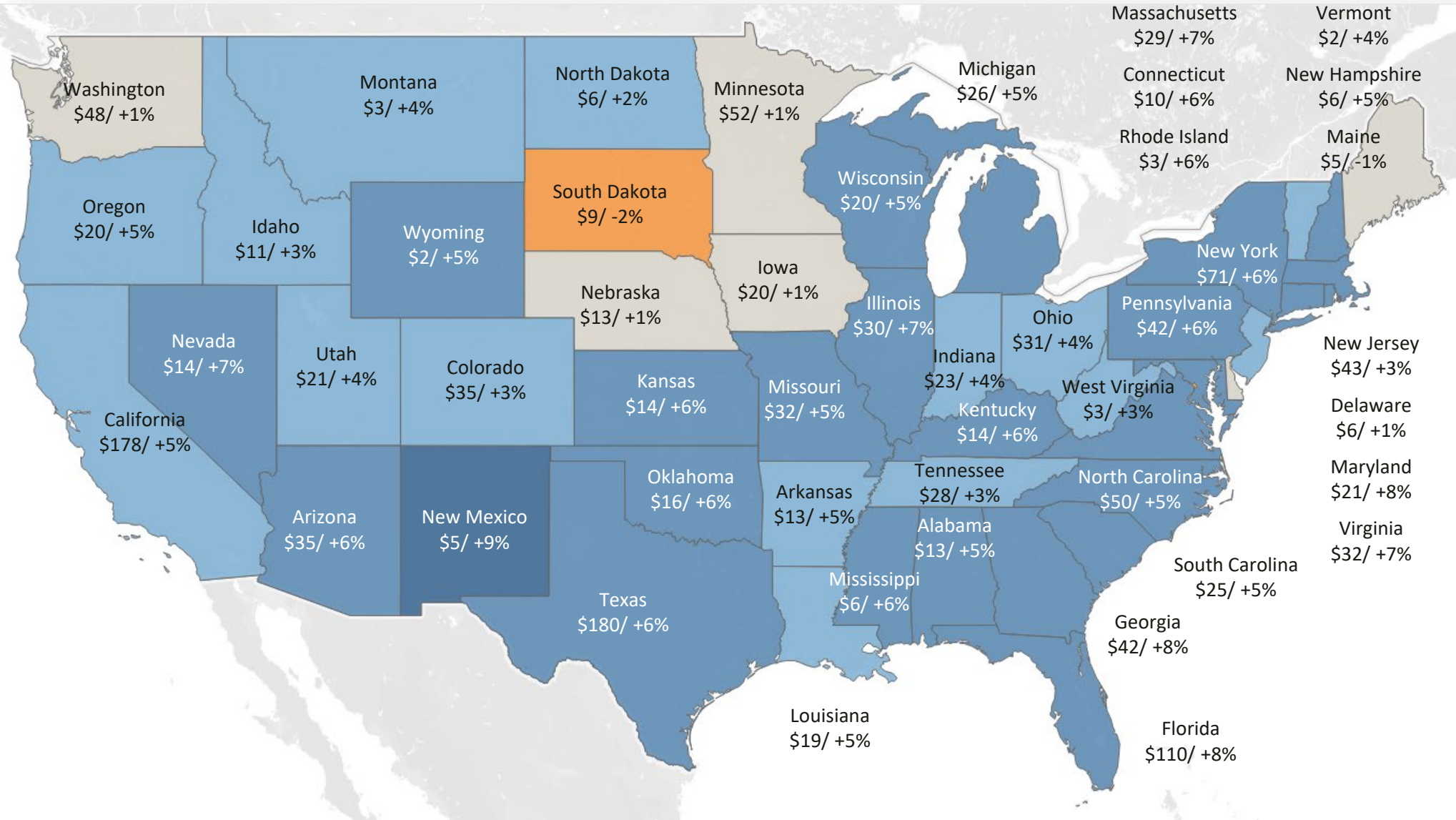
## U.S. Construction Forecast – Q4 2021






4th Quarter 2021 Forecast, Based on 2nd Quarter 2021 Actuals and 3rd Quarter 2021 Assumptions

# MOST STATES WILL EXPERIENCE GROWTH

Total Construction Spending Put in Place (2021) and Forecast Growth (2021-2025 CAGR) by State  
Billions of current dollars

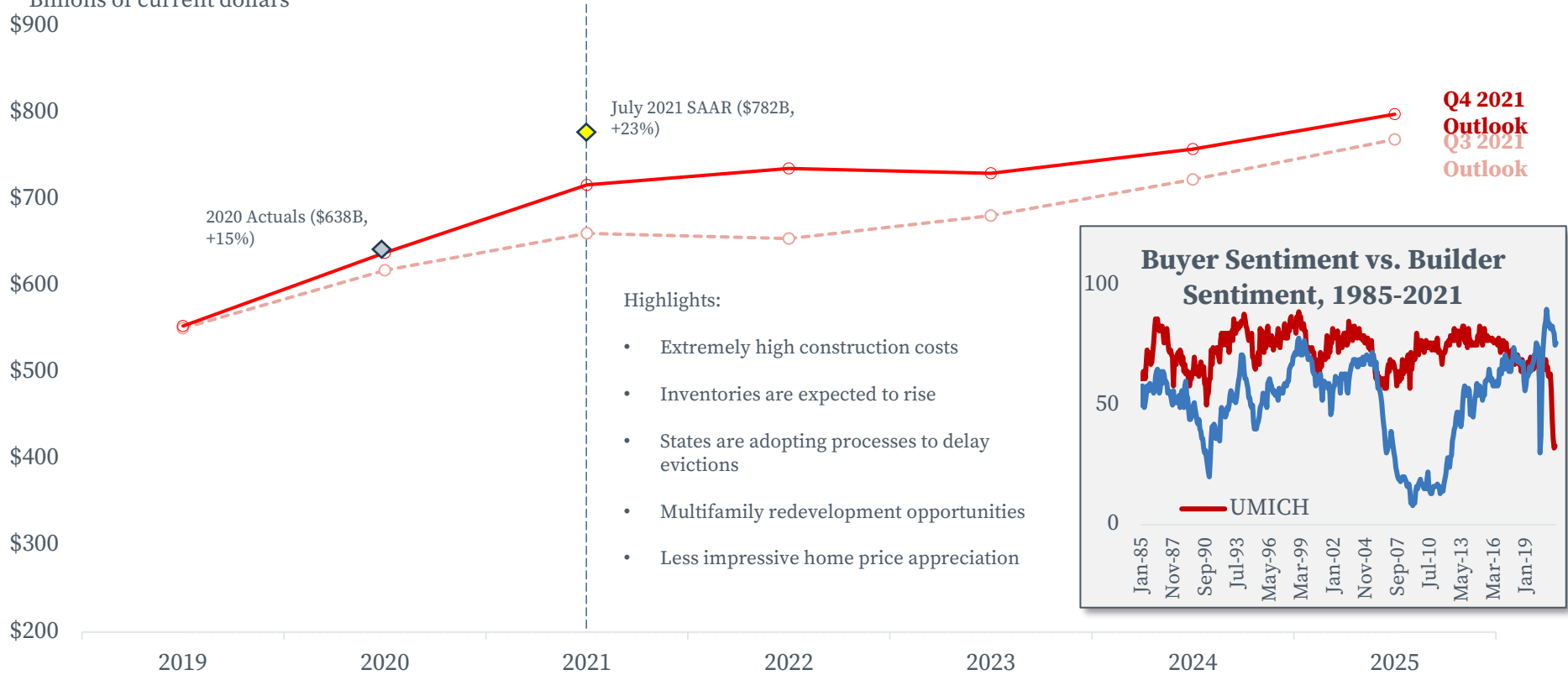


## U.S. 2021 Segment Performance 2021/2020 Comparison

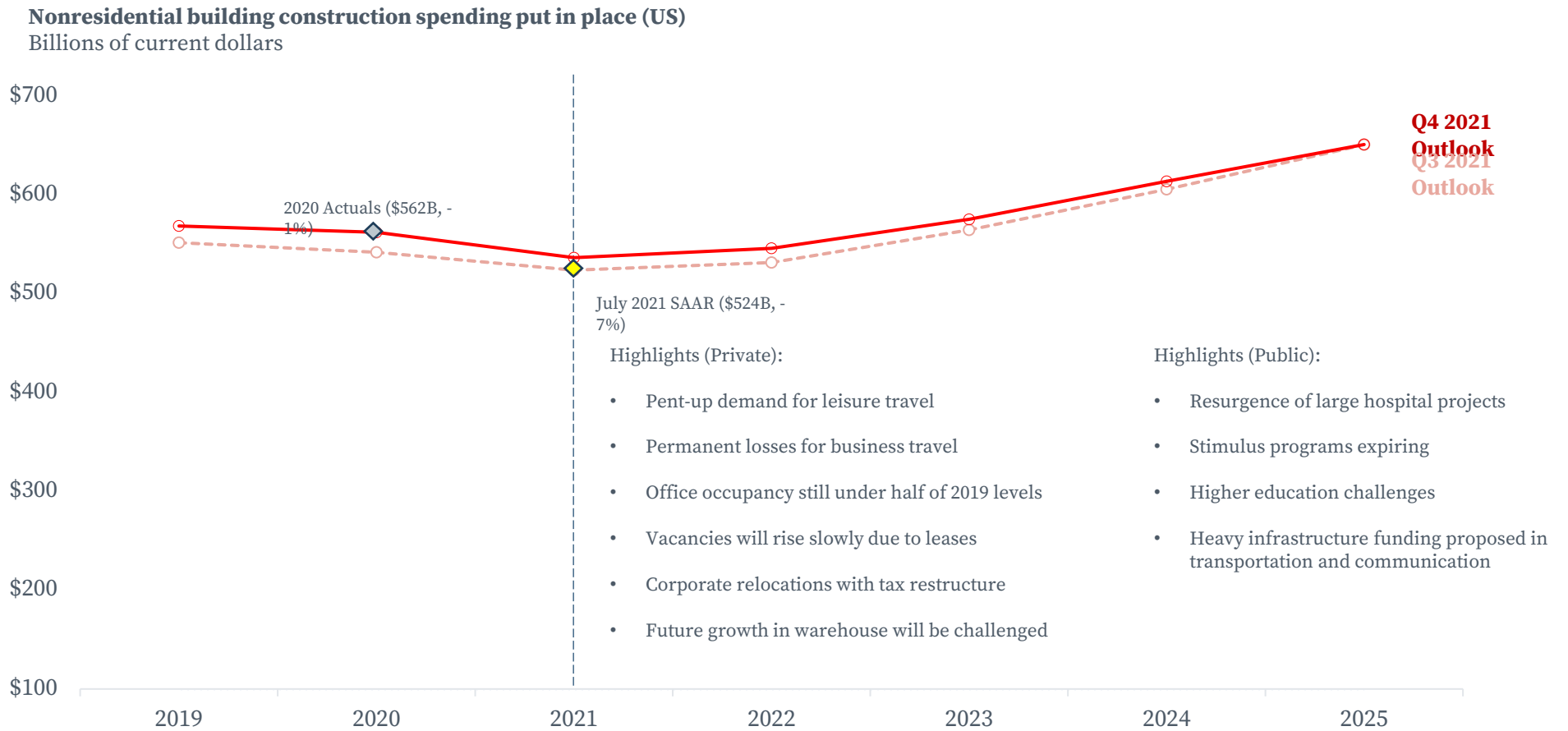
 <p><b>UP</b> 5% or more</p>	 <p><b>STABLE</b> 0% to 4%</p>	 <p><b>DOWN</b> Under 0%</p>
<ul style="list-style-type: none"> <li>• Single Family</li> <li>• Multifamily</li> <li>• Improvements</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial</li> <li>• Health Care</li> <li>• Manufacturing</li> <li>• Sewage and Waste Disposal</li> <li>• Water Supply</li> </ul>	<ul style="list-style-type: none"> <li>• Lodging</li> <li>• Office</li> <li>• Educational</li> <li>• Religious</li> <li>• Public Safety</li> <li>• Amusement and Recreation</li> <li>• Transportation</li> <li>• Communication</li> <li>• Power</li> <li>• Highway and Street</li> <li>• Conservation and Development</li> </ul>

## Residential CIP – Q4 2021

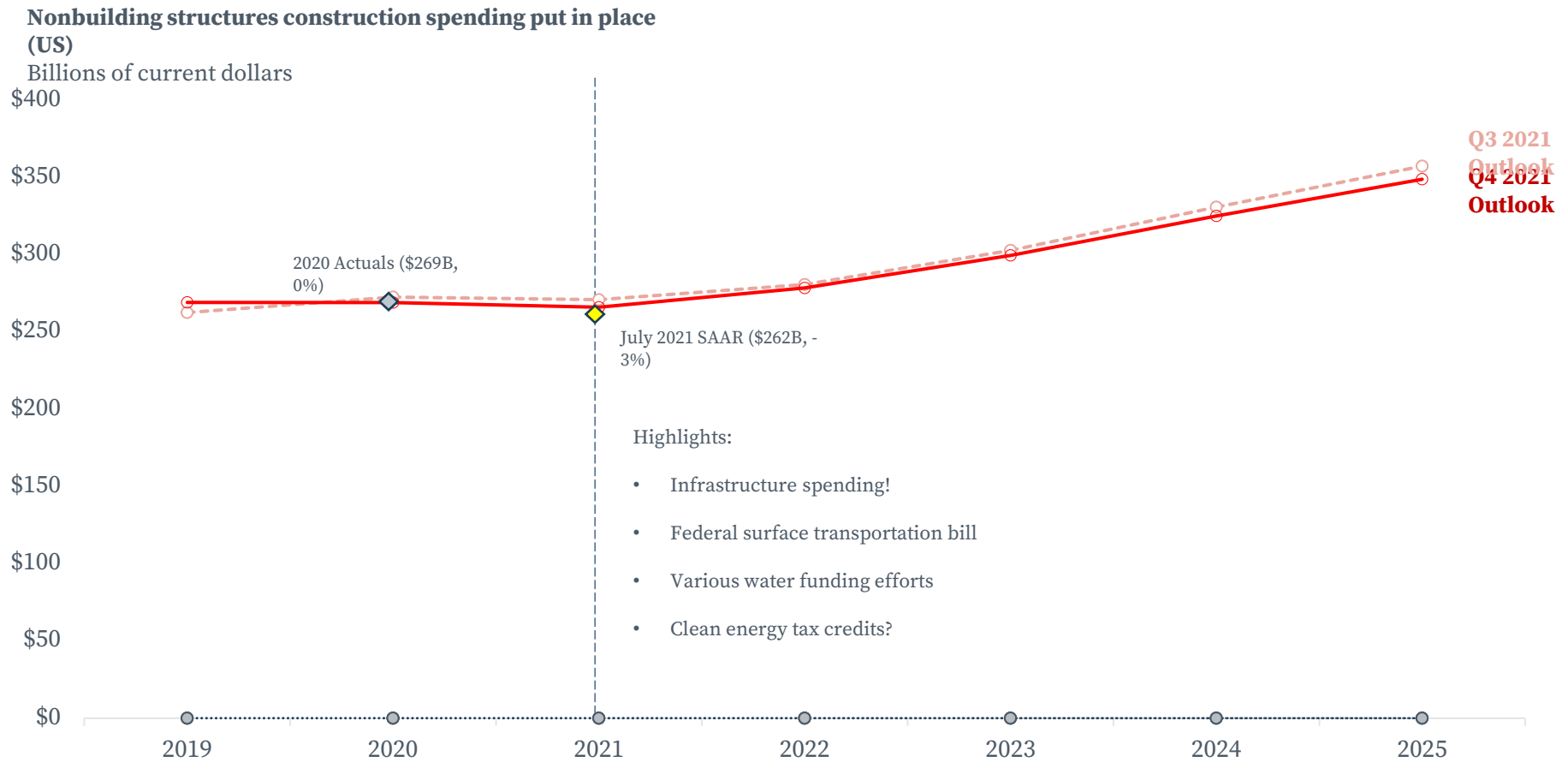
**Residential construction spending put in place (US)**  
Billions of current dollars



## Nonresidential Building CPiP – Q4 2021



## Nonbuilding Structures CPiP – Q4 2021

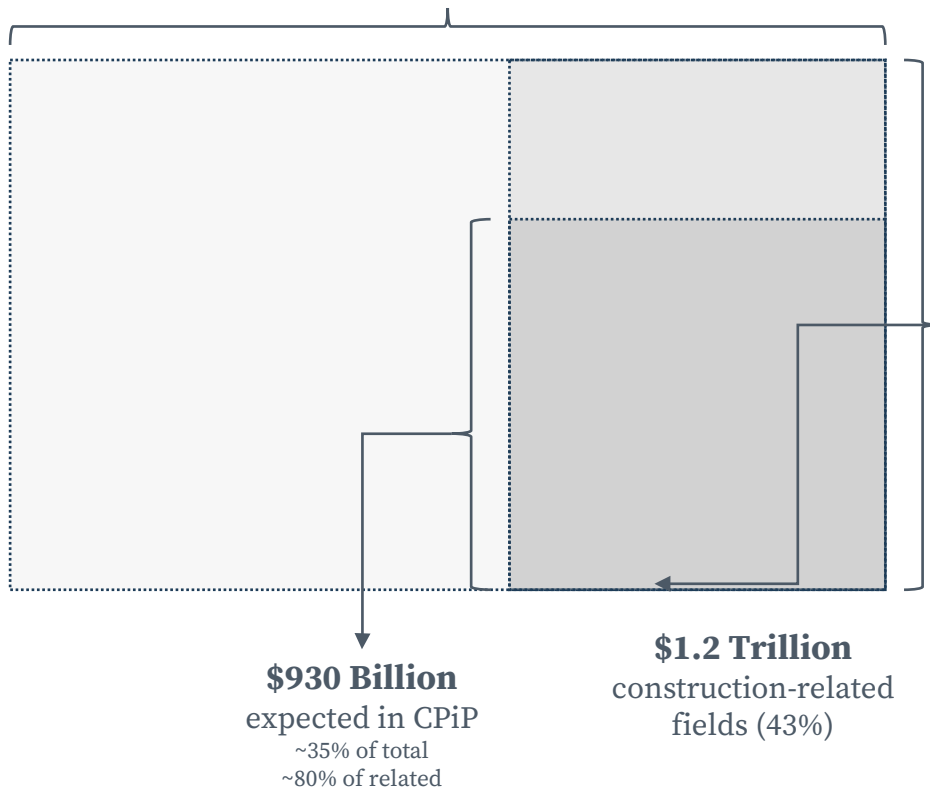




## Biden's American Jobs Plan (AJP)

**\$2.7 Trillion over ~10 years**

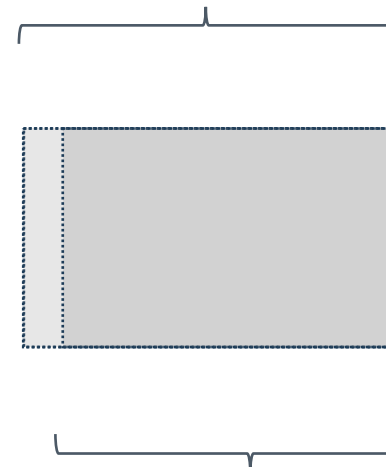
Total Spending



## Bipartisan Infrastructure Bill

**\$580 Billion over ~10 years**

Spending 100% in construction-related fields



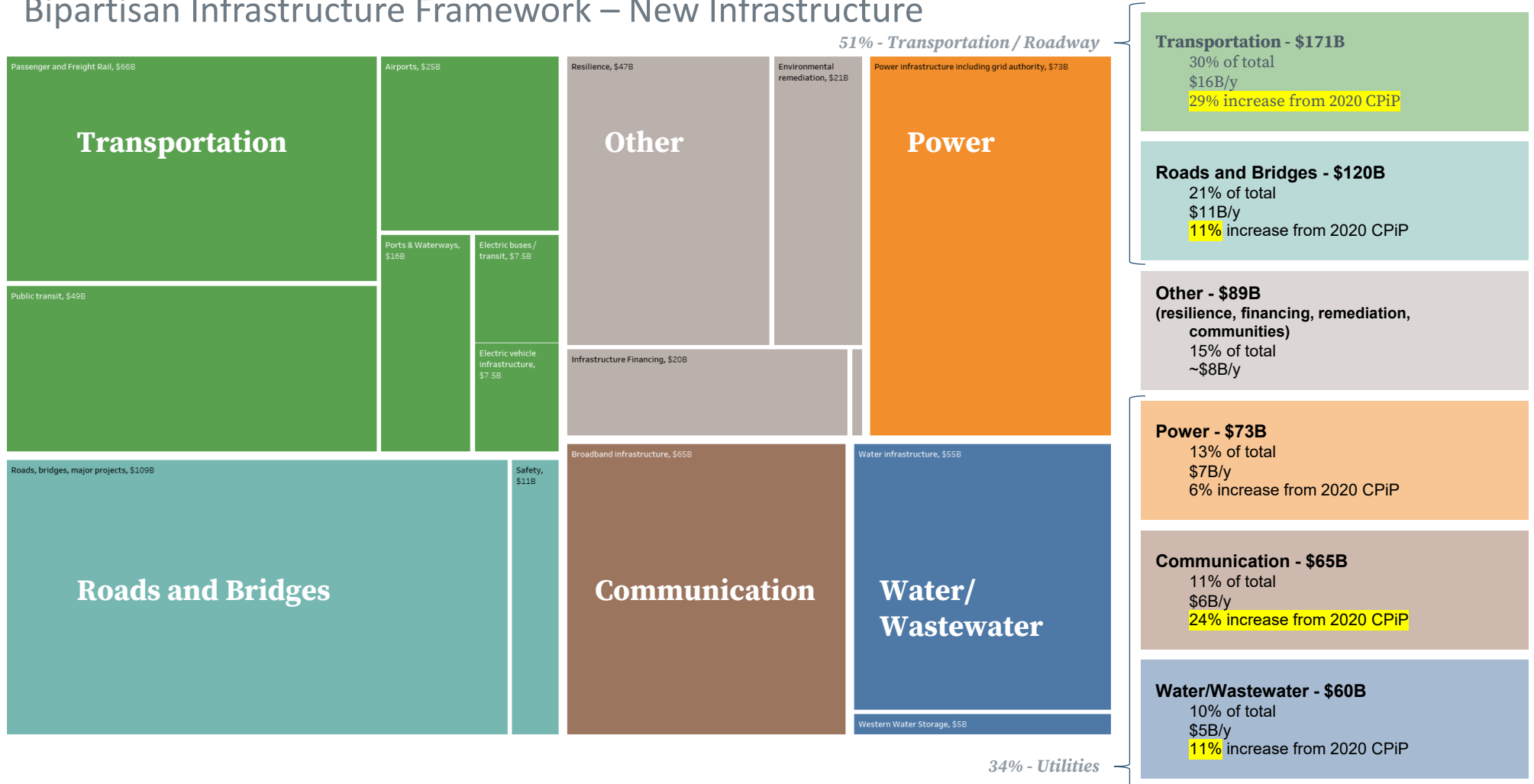
*"The Framework is financed through a combination of closing the tax gap, redirecting unspent emergency relief funds, targeted corporate user fees, and the macro-economic impact of infrastructure investment."*

**\$530 Billion**  
expected in CPiP  
~90% of total

*\*New spending + baseline (over 5 years) = \$973B*

*\*New spending + baseline (over 8 years) = \$1,209B*

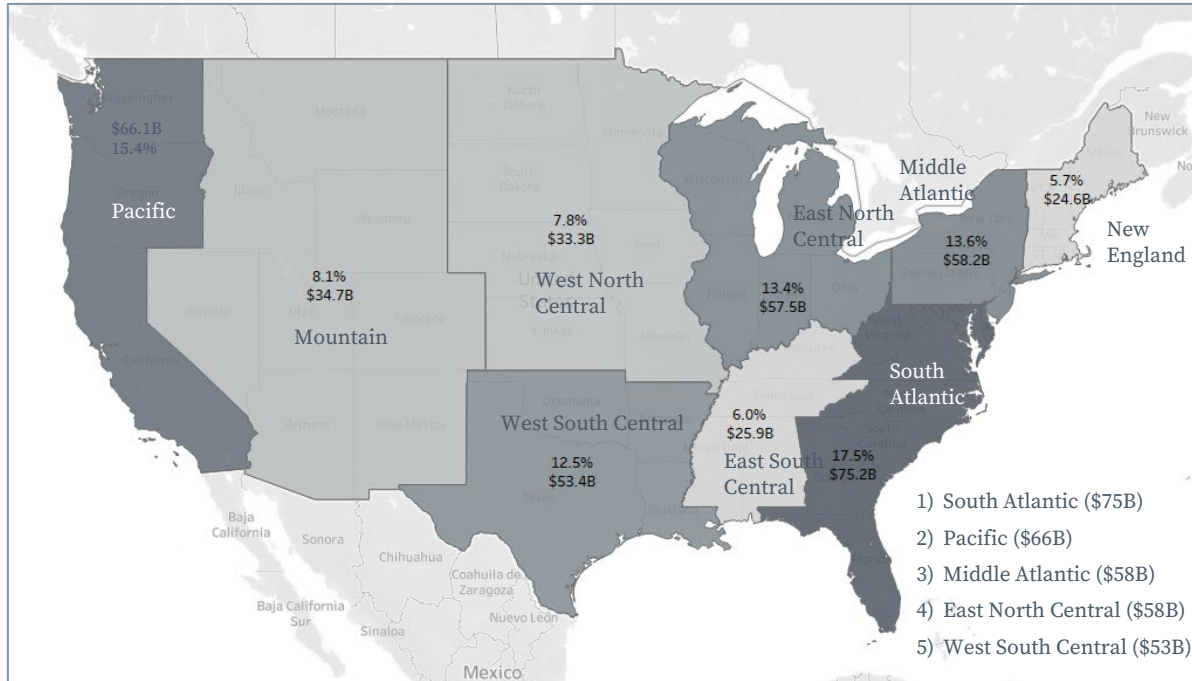
# Bipartisan Infrastructure Framework – New Infrastructure



# Bipartisan Infrastructure Framework

## Geographic Segmentation by Census Division

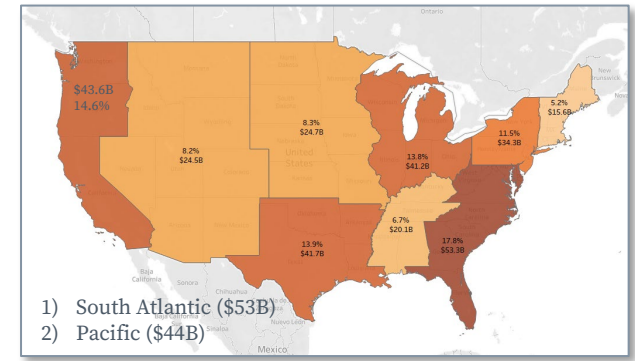
Total Geographic Distribution (\$430B)



Note: White House estimates are summaries based on allocation of funds in prior legislation and are subject to change.  
Source: The White House  
Map data: Telegrams/NPR

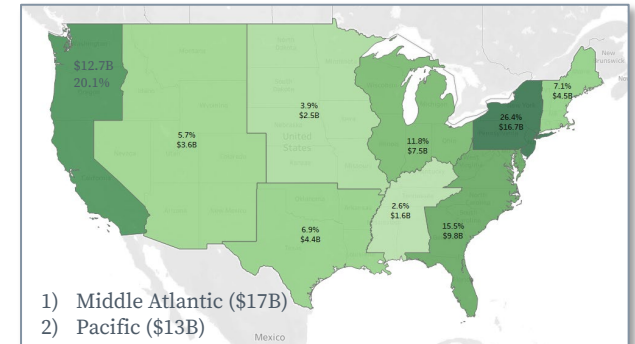


Highway and Bridge  
(\$300B)



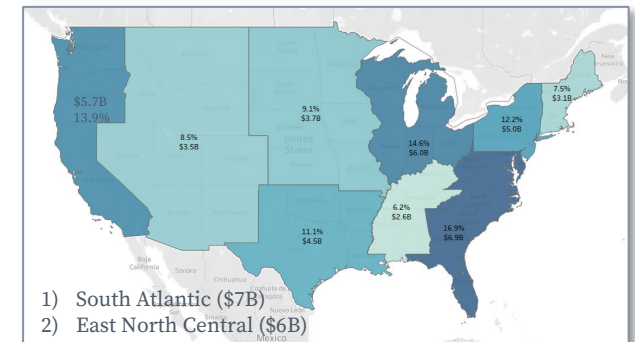
- 1) South Atlantic (\$53B)
- 2) Pacific (\$44B)

Transportation  
(\$63B)



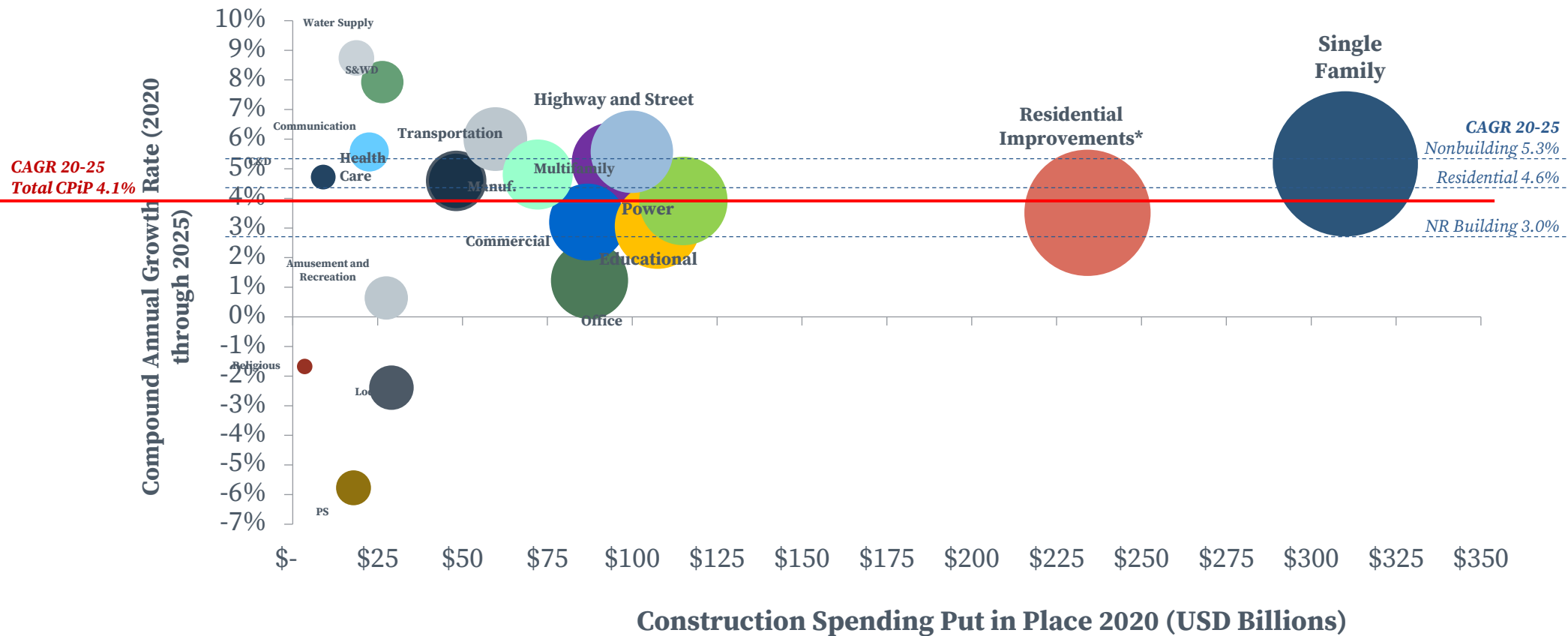
- 1) Middle Atlantic (\$17B)
- 2) Pacific (\$13B)

Water  
(\$41B)



- 1) South Atlantic (\$7B)
- 2) East North Central (\$6B)

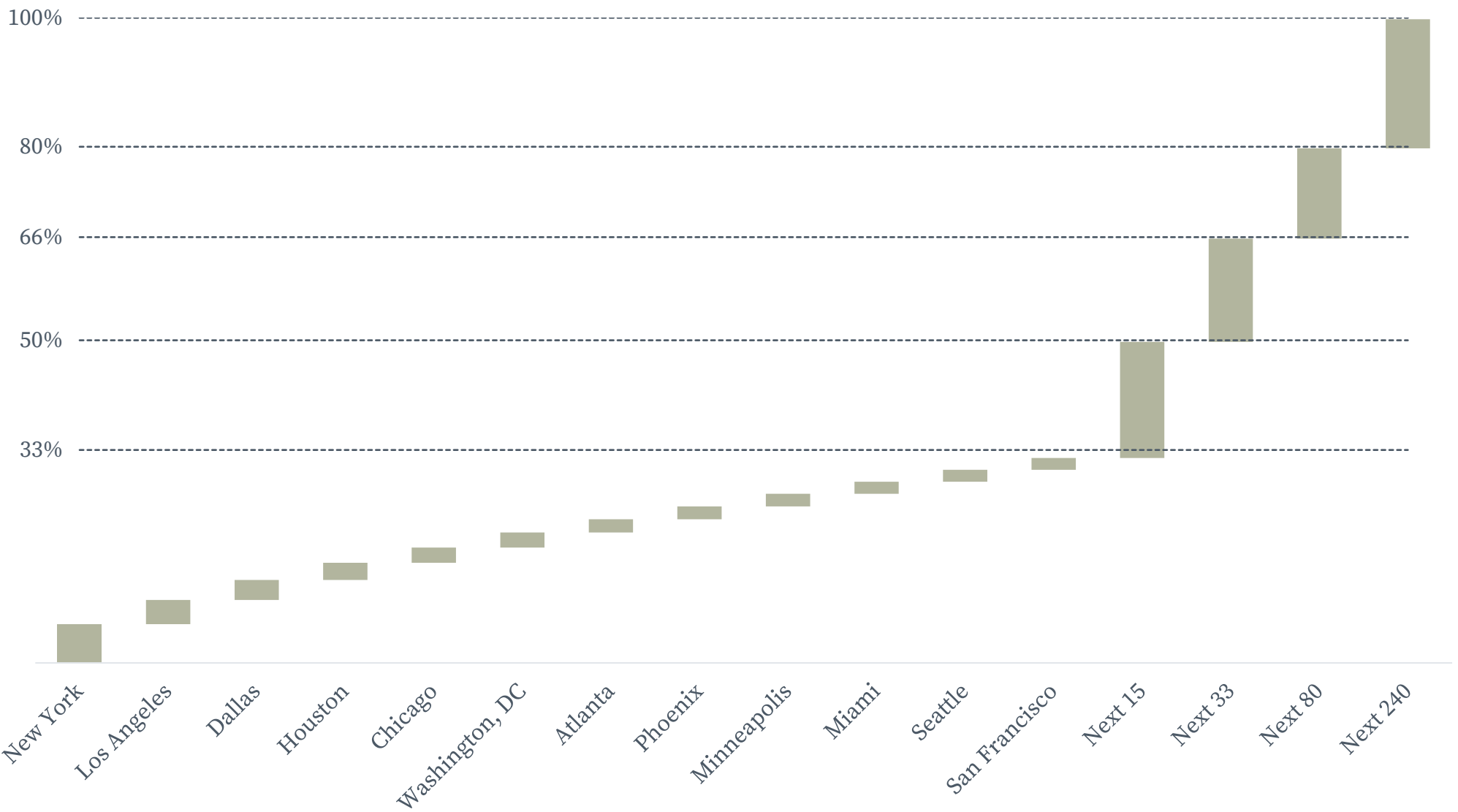
## Total U.S. Construction Spending Put in Place 2020 and Forecast Growth (2020-2025) by Construction Segment



\*Improvements include additions, alterations and major replacements. It does not include maintenance and repairs.

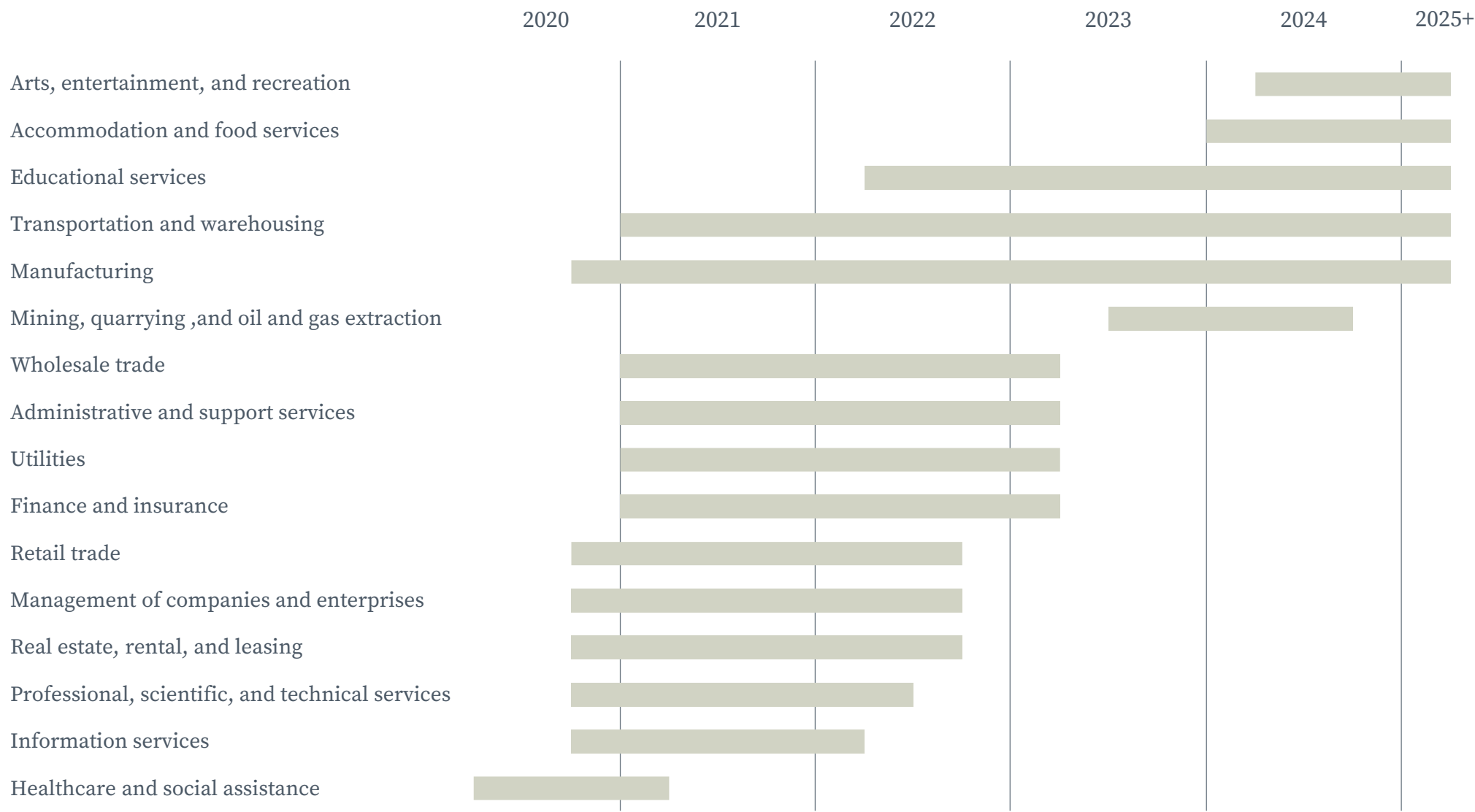
# ONE-IN-THREE CONSTRUCTION DOLLARS ARE SPENT IN JUST 12 MARKETS

Total Construction Spending Put in Place by Metropolitan Statistical Area (MSA)  
2021-2025 sum



# WHO RECOVERS FIRST, SECOND, THIRD...

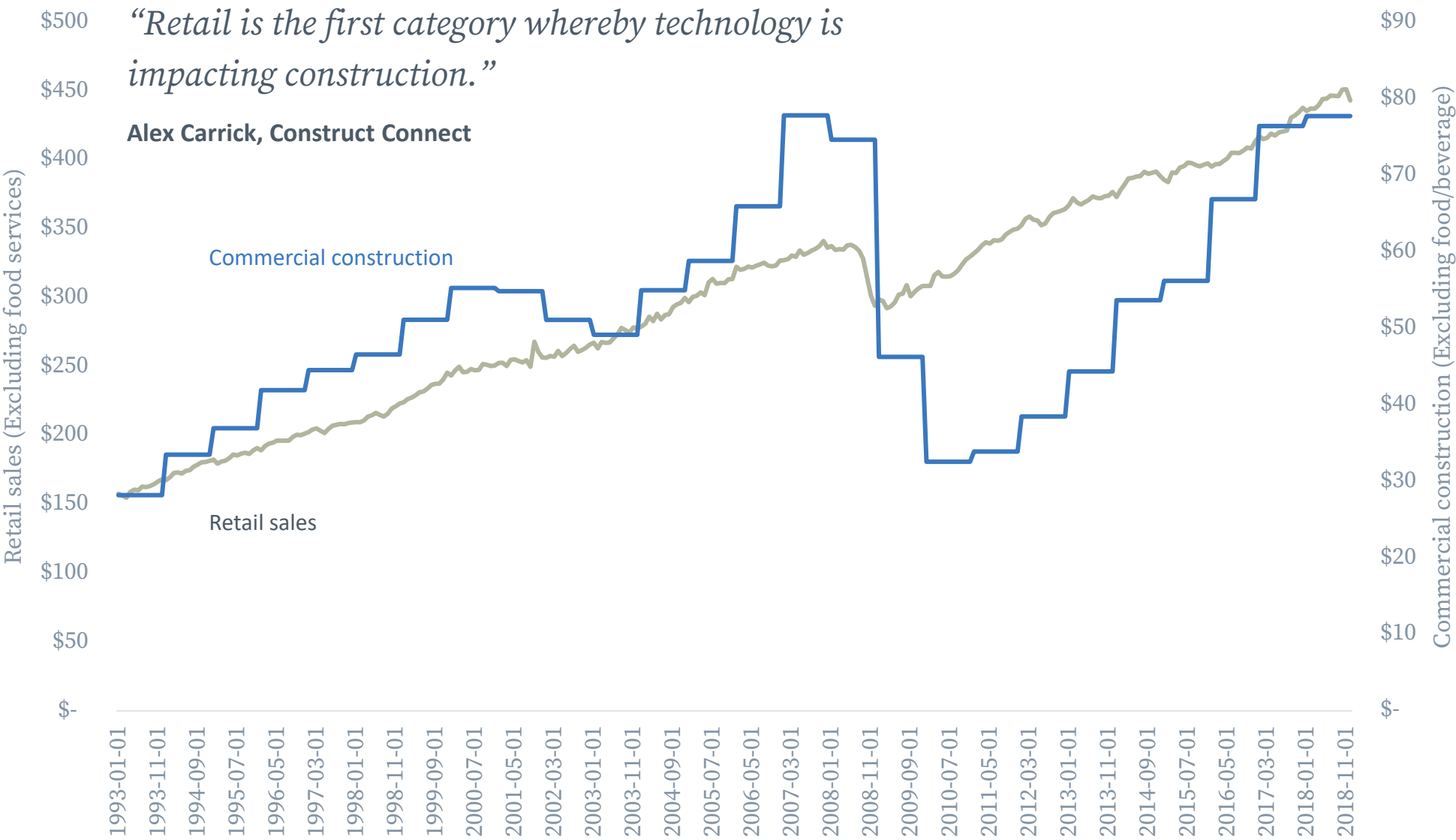
Projected Industry Return to Pre-pandemic Activity Levels Timeline





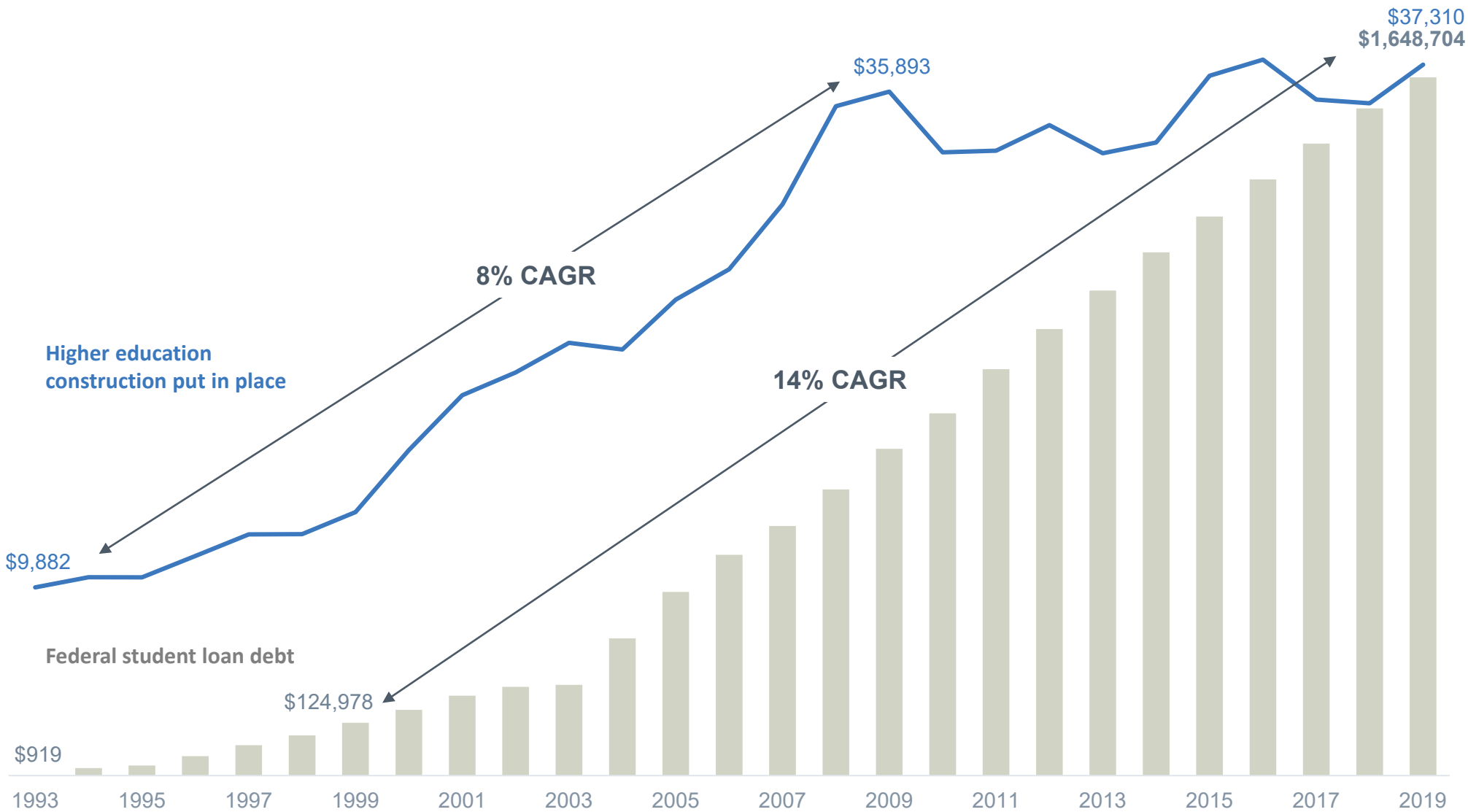
MORE THAN 20% OF RETAIL SALES ARE FORECAST TO BE ON-LINE BY 2025

US retail sales vs retail construction spending put in place  
Billions of US dollars



“VIRTUAL” PRESENCE WILL HAVE LASTING IMPACTS ON MANY SEGMENTS

Higher education construction spending put in place and federal student loan debt  
US; Millions of current dollars



BIGGER, FASTER, BETTER

What project characteristics should we expect over the next several years?

Bigger	Faster	Better
Megaprojects consume an increasing share of construction spending	Project schedules continue to compress	When alternative delivery becomes normal delivery
<ul style="list-style-type: none"><li>• <b>Annual megaproject CPiP is expected to increase almost 500% over the next five years</b>, growing from slightly more than \$50 billion to just almost \$300 billion. Over the next decade, annual megaproject spending is expected to increase nearly 600%, reaching just over \$350 billion.</li><li>• <b>Total annual megaproject spend as a percent of total CPiP</b> is expected to increase from 10% in 2020 to <b>just over 20% by 2023</b> and remain stable between 20% and 25% through end of the decade.</li><li>• <b>More than \$2.5 trillion in megaprojects are currently in planning or design through 2050</b></li></ul>	<ul style="list-style-type: none"><li>• <b>Accelerated schedule and schedule certainty are increasingly influencing contractor selections.</b> This is particularly true in mission critical and time sensitive industries.</li><li>• For nonresidential building projects valued over \$25 million, the <b>average schedule has shortened by over a year</b> during the past decade.</li></ul>	<ul style="list-style-type: none"><li>• Alternative delivery methods have experienced continued growth since 2015; up 67%.</li><li>• It is anticipated that <b>alternative delivery methods will increase at a compound annual growth rate of 8% CAGR over the next five years.</b></li><li>• <b>As legislation has enabled greater use of alternative methods</b>, and familiarity with these methods has grown, these methods are <b>anticipated to represent over 60% of spending</b> over the forecast period.</li><li>• Industry stakeholders consistently identify the <b>ability to deliver a project in an expedited manner as a main driver of alternative delivery method utilization.</b></li></ul>

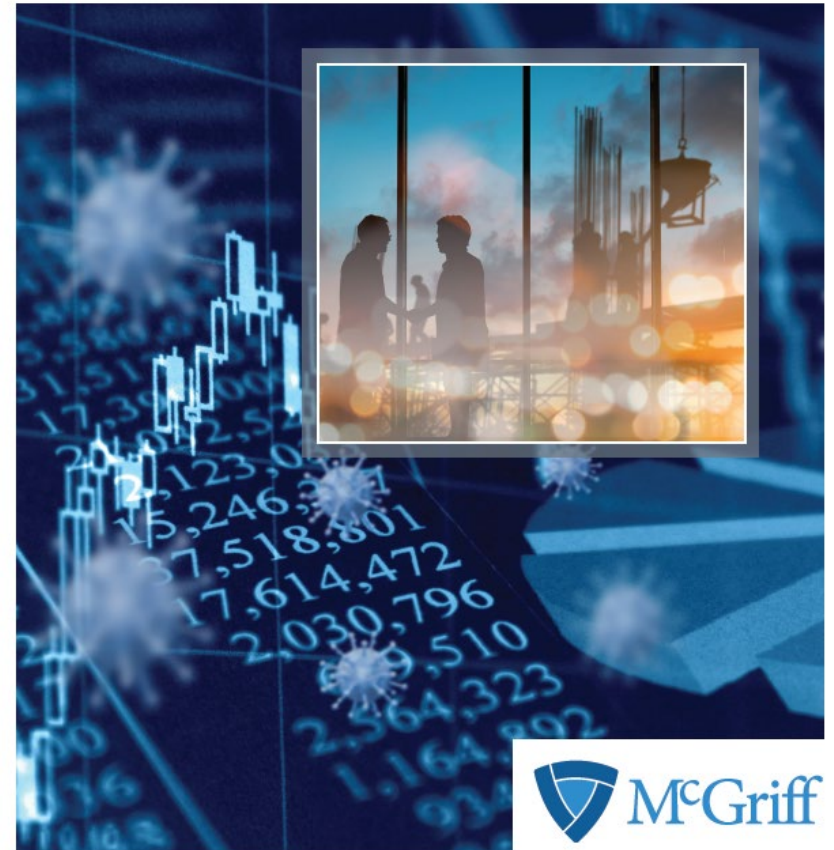
## WHAT ELSE SHOULD WE BE CONSIDERING?

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1. The Impact of Minimum Wage Increase
2. The Skilled Labor Shortage
3. Vaccination of Employees and Subcontractors
4. Succession Planning
5. Contractual Risk Shifting by Owners
6. Cryptocurrency and Blockchain
7. Autonomous Vehicles
8. Distributed Energy Resources
9. Stimulus and Other Infrastructure Spending
10. Diversity, Equity and Inclusion



### **LOOKING AHEAD:** 10 Things E&C Leaders Must Consider in a Post-Pandemic World





#### Denver

44 Cook Street  
Suite 900  
Denver, Colorado 80206  
303.377.4740

#### Houston

1301 McKinney Street  
Suite 2000  
Houston, TX 77010  
713.936.5400

#### Raleigh

223 S. West Street  
Suite 1200  
Raleigh, NC 27603  
919.787.8400

#### Tampa

4300 W. Cypress Street  
Suite 950  
Tampa, FL 33607  
813.636.1364