



**2022**  
**HEAVY CIVIL**  
**CONSTRUCTION INDEX**  
**Second Quarter Report**



May 2022

# EXECUTIVE SUMMARY

The Heavy Civil Construction Index improved in the second quarter of 2022, jumping to 57.7 from 55.4 in the first quarter. This is the second consecutive quarter of increasing momentum and the fifth consecutive quarter where the index is above 50, suggesting future industry expansion.

Optimism receded across nearly all of the components, with backlogs as the only area to improve this quarter. Though respondents remain confident in their local markets and business operations, a majority are pessimistic about expectations toward the overall U.S. economy. Similarly, productivity losses and ongoing rising costs of materials and labor weigh heavily against more positive index results.

Continuing the trend seen over the past several quarters, expectations are improving across all heavy civil segments. Not one segment has greater than 15% of respondents who believe conditions will be worse next quarter. These segment-led responses have largely upheld the index through the second half of the year against wavering economic sentiment.

Contractors continue to book backlog faster than they are burning it off. Thirty-seven percent have seen year-over-year backlog book/burn rates grow, while only 19% experienced a decline. In last quarter's survey, those measures were 38% and 15%, respectively. Open commentary suggests a variety of reasons, including weather, workload continuing to pick up post-COVID, and more intentional (i.e., selective) bidding, for the slight decline in this ratio.

Consistent with results from last quarter, more than one-third of respondents reported improving margins on work acquired; yet 23% see margins below levels from this time last year. Similarly, more contractors have seen margins improve this quarter compared to last quarter, with 30% reporting higher margins, versus only 14% reporting lower margins.

A growing majority, or 68%, of contractors reported an increase in competitors this quarter, compared to the 58% in the first quarter. However, this quarter fewer companies reported nontraditional civil firms entering their markets. Even with rising competition, just under 4 out of 5 participants reported increased bid prices.

Given the near-universal challenge to hire people, we focused several current issues questions on the topic of talent retention, acquisition and development. When asked about effectiveness in retaining top talent, only 1 in 5 rated themselves as either a 9 or 10, on a 10-point scale, where 10 is extremely effective. Most participants share a common challenge with turnover and filling nonmanagement field staff roles. Also, likely as a combined result of these challenges, survey participants maintain training programs heavily focused on leadership, management and technical skills.

A majority, or 63%, of contractors report they are operating at or above optimum capacity as defined by their desired balance between resources and workload. Providing some comfort for the nearly one-third of respondents operating below optimum capacity, nearly all, or 94%, do not expect any impact to future revenues from Infrastructure Investment and Jobs Act (IIJA) opportunities until 2023 or 2024.

HCCI INDEX MOVEMENT			
Current Reading for Q2 2022		Previous Reading for Q1 2022	
57.7		Q2 2022	Q1 2022
Overall U.S. Economy	↓	49.4	56.6
Economy Where We Do Business	↓	53.3	59.7
Our Engineering and Construction Business	↓	58.4	64.9
Engineering and Construction Where We Do Business	↓	63.9	64.9
Backlog	↑	64.6	61.2
Book/Burn Rate	↓	59.7	61.0
Cost of Materials	↓	3.4	4.4
Cost of Labor	↓	8.5	9.1
Productivity	↓	42.6	48.6

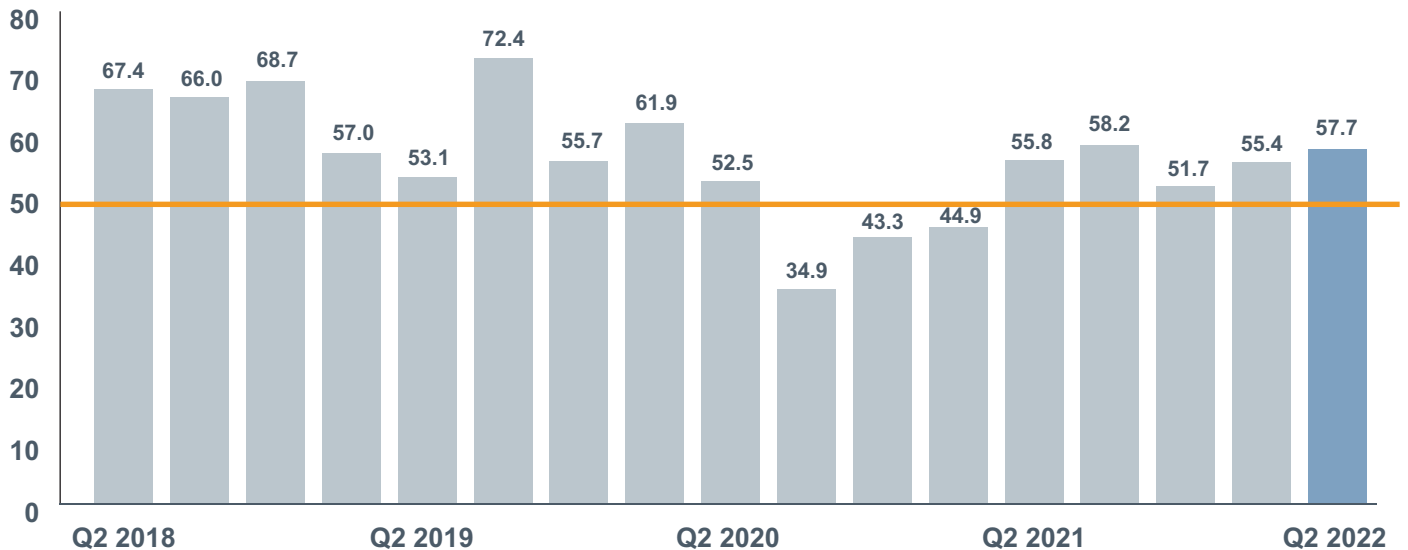


## Heavy Civil Construction Index (HCCI)

### Q2 2018 to Q2 2022

Scores above 50 indicate expansion; below 50, contraction

Index Score



Current HCCI Reading  
for Q2 2022

57.7

Survey dates:  
March 2-15

Previous Reading  
December 2-14

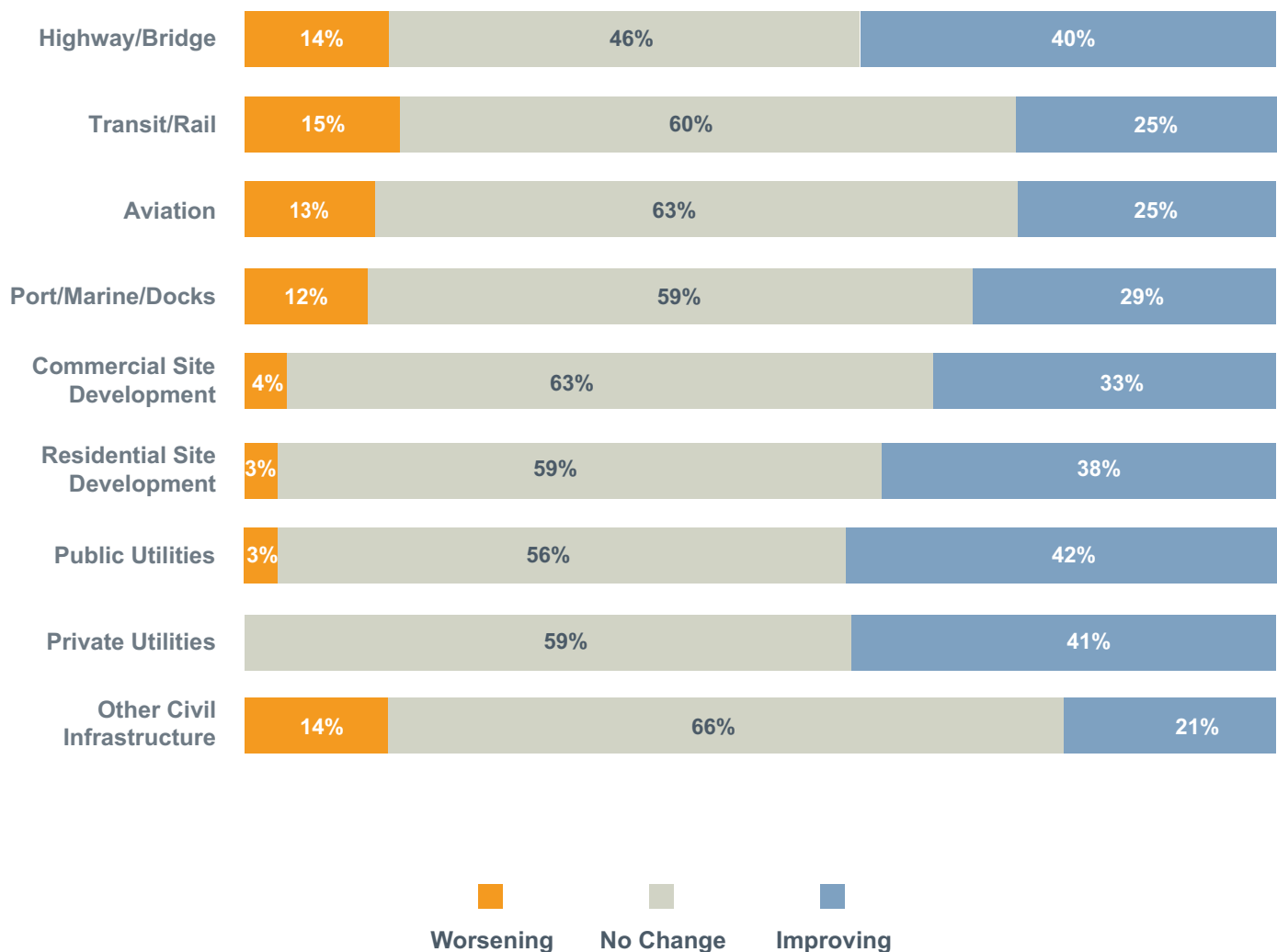
55.4

Source: FMI Heavy Civil Construction Survey Q2 2022

# EXECUTIVE SUMMARY



## Perception of Change by Segment for Next Quarter

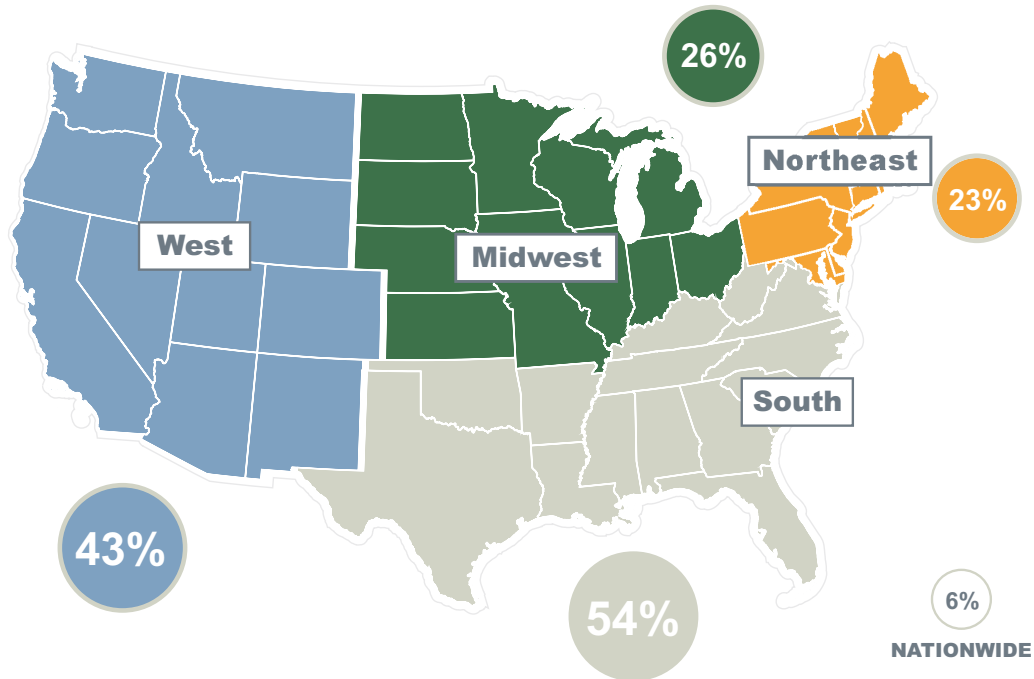


# DEMOGRAPHIC INFORMATION

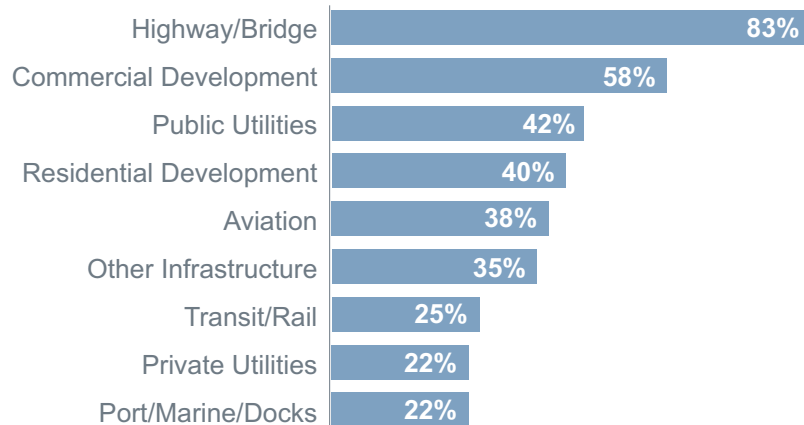


## Where Survey Participants Work

### By Geography



### By Discipline



Respondents are able to select more than one option.



# MARKET CONDITIONS

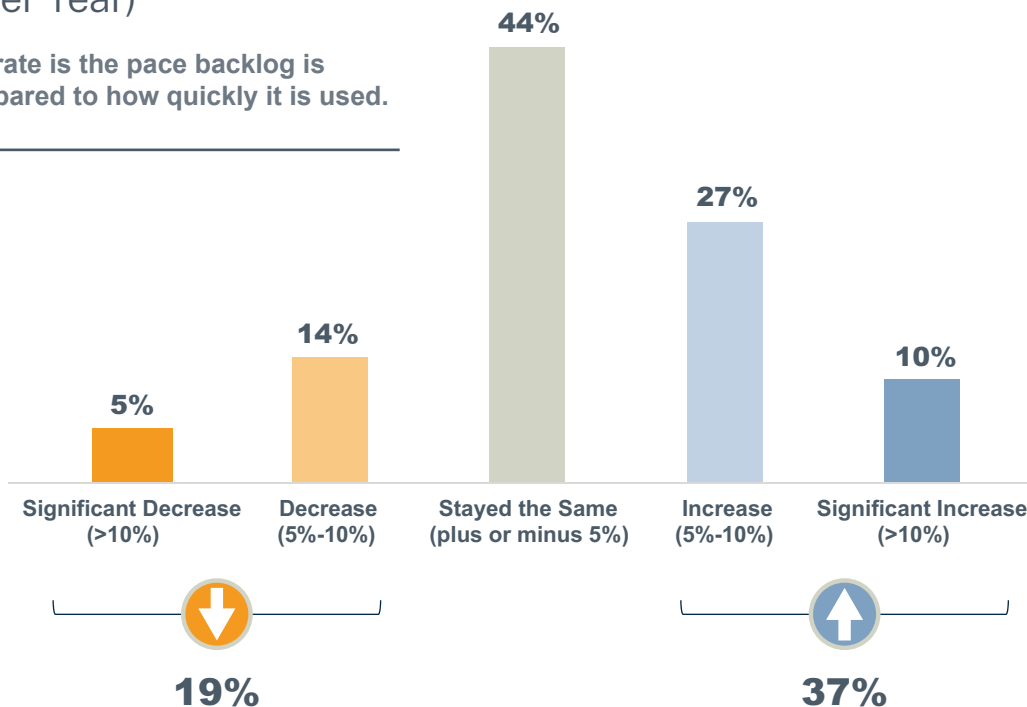


## Key Findings

- The market is signaling improved conditions when you take into consideration the number of contractors who indicate strong backlogs compared to last year and those who are at or ahead of anticipated backlogs.
- Contractors continue to book backlog faster than they are burning it off. Thirty-seven percent have seen year-over-year backlog book/burn rate grow, while only 19% saw a decline. In last quarter's survey, those measures were 38% and 15%, respectively. Commentary indicates a variety of reasons, including weather, workload continuing to pick up post-COVID, and more intentional (i.e., selective) bidding, for the slight decline in this ratio.
- Consistent with results from last quarter, more than one-third of respondents have reported improving margins on work acquired; yet 23% see margins below levels from this time last year. Similarly, more contractors have seen margins improve this quarter compared to last quarter, with 30% reporting higher margins, versus only 14% reporting lower margins.
- A growing majority, or 68%, of contractors reported an increase in competitors this quarter, compared to 58% in the first quarter. However, this quarter fewer companies reported nontraditional civil firms entering their markets (21% this quarter, compared to 30% last quarter).
- Even with rising competition, 4 out of 5 participants (78%) reported increased bid prices this last quarter.

## Backlog Book/Burn Rate (Year Over Year)

Book/burn rate is the pace backlog is added compared to how quickly it is used.



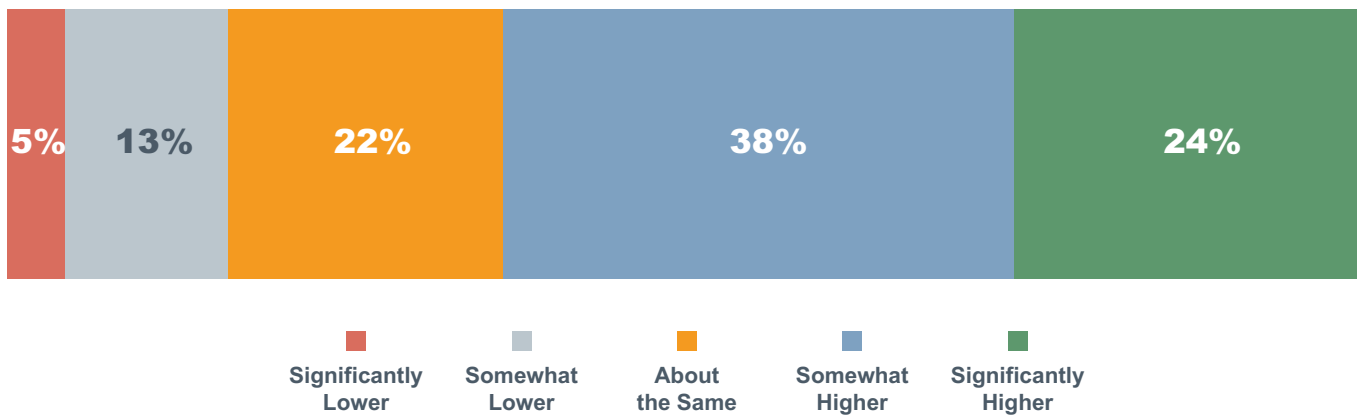
Source: FMI Heavy Civil Construction Survey Q2 2022

# MARKET CONDITIONS

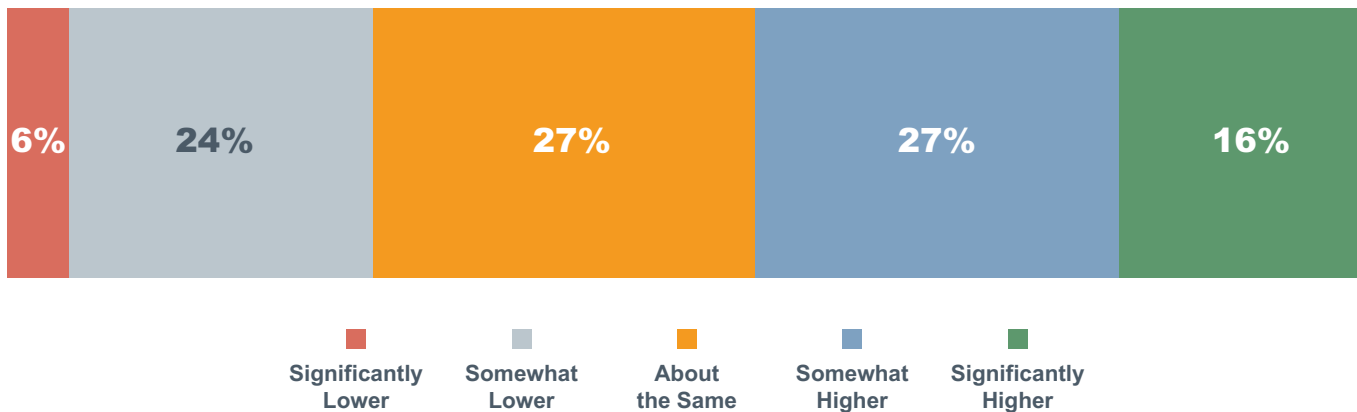


## Backlogs

How does your backlog in the most recent quarter compare to the same quarter last year?



What is your current backlog compared to your anticipated/needed backlog at this point in the year?



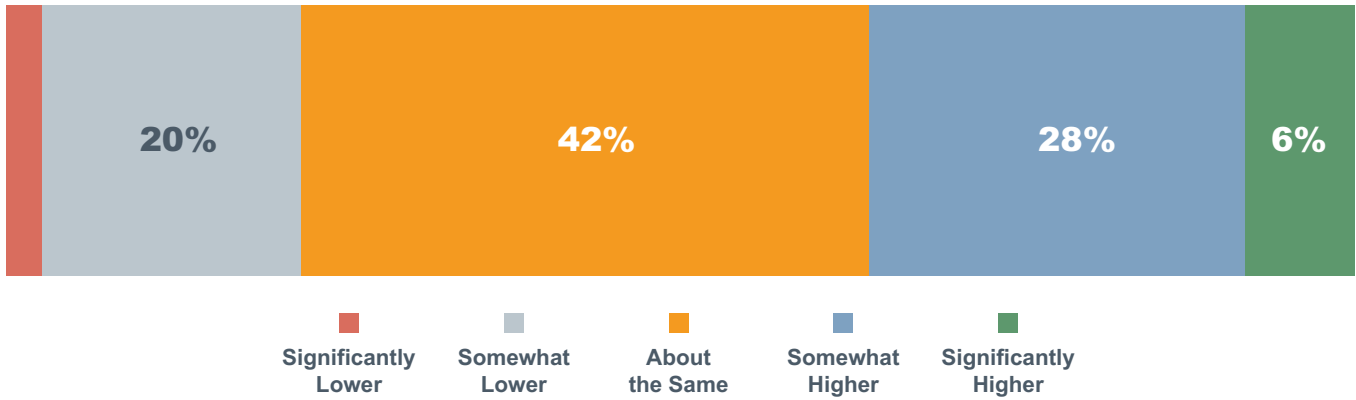


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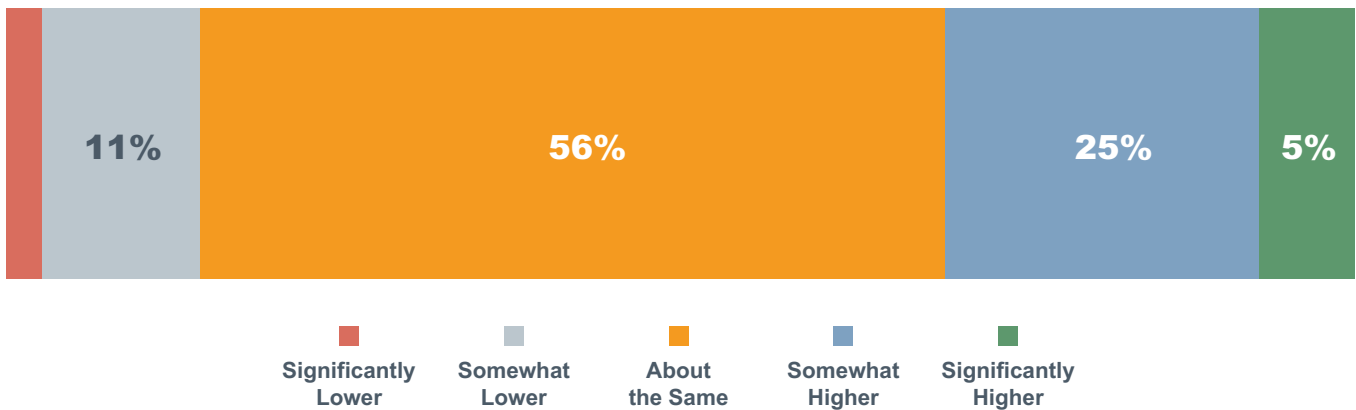


## Margin

How would you compare margin on the work you have acquired in this quarter compared to the same quarter last year? (i.e., year-over-year change)



How would you compare margin on the work you have acquired in this quarter compared to the previous quarter?

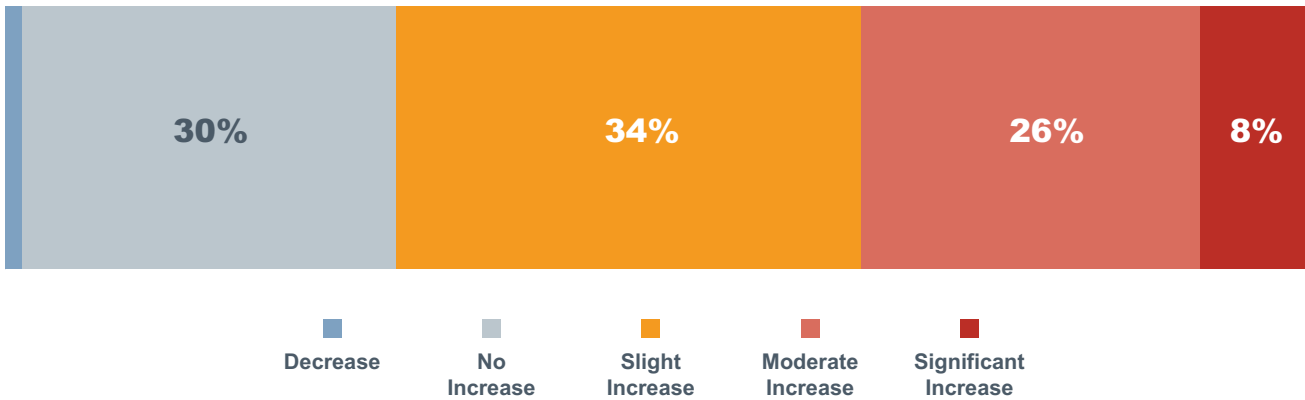


# MARKET CONDITIONS

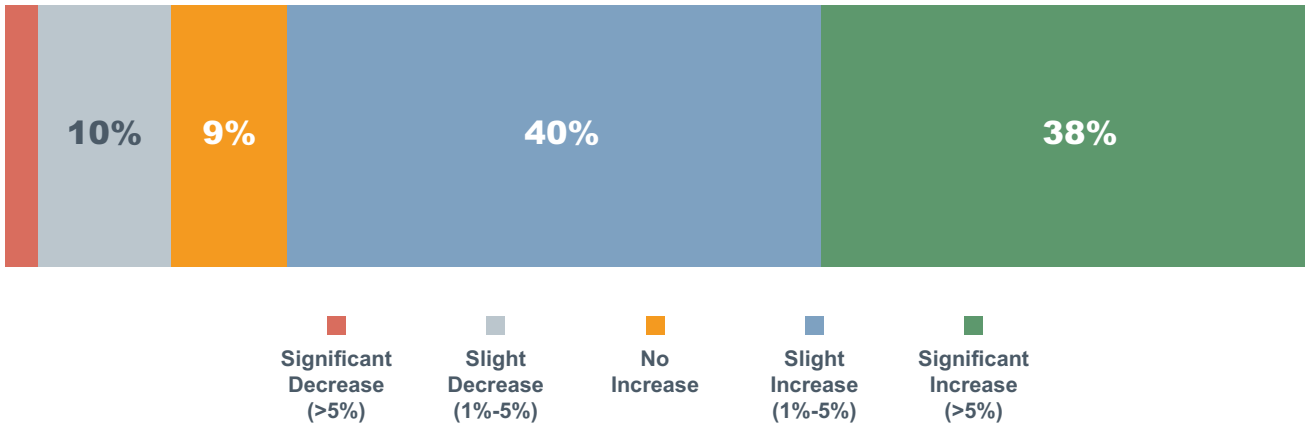


## Competitive Landscape

How has the competitive landscape changed in the last quarter in terms of the number of competitors?



How have bid prices been impacted in the last quarter?



In the past six months, have you experienced an increase in nontraditional civil firms (new entrants) in the market?





## **CURRENT ISSUES**

# CURRENT ISSUES



## Talent: Retention

One of the top issues on every contractor’s radar is the challenge to retain and hire new employees, with many regularly citing this as the greatest inhibitor to future growth.

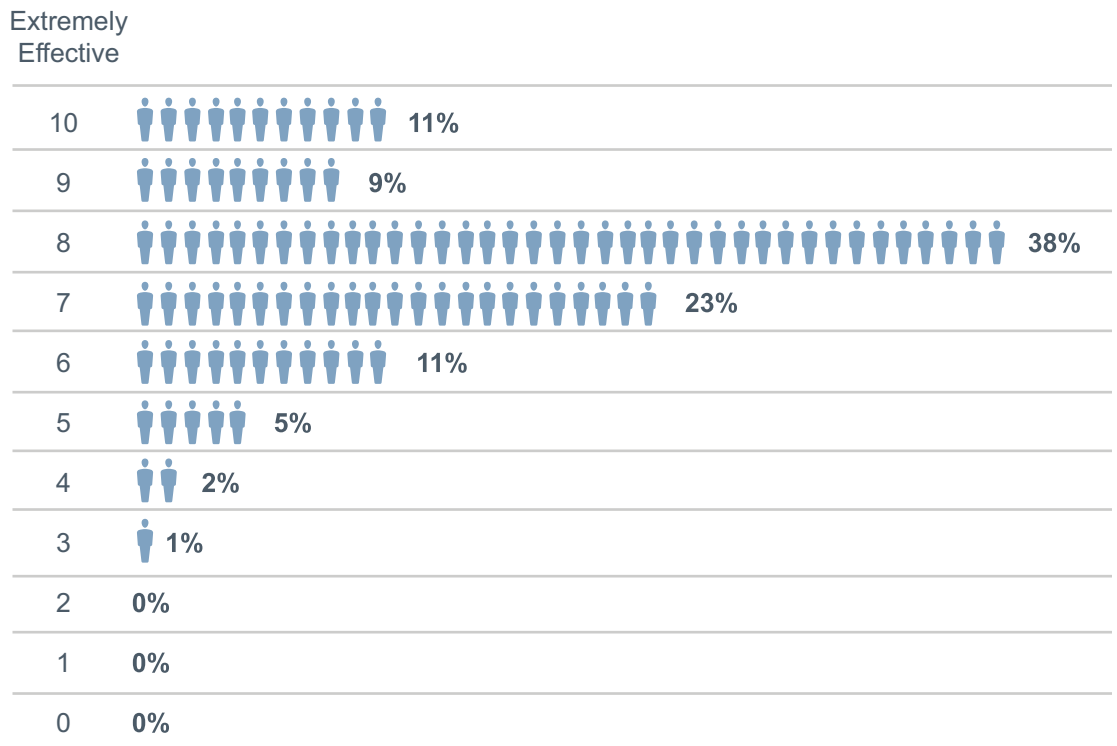
When asked about company effectiveness in retaining its top talent, just over 80% rated themselves as a 7 or higher (on a 10-point scale, where 10 is extremely effective), and only 1 in 5 rated themselves as a 9 or 10.

Most respondents report that nonmanagement field staff roles are a common challenge across the heavy civil sector as they are difficult positions to fill (53%) and have high turnover rates (72%). A close second is field staff managerial positions (i.e., superintendents and field managers), with just over half (52%) finding difficulties in filling those positions.

Likely as a combined result of retention needs, hiring challenges and turnover, most survey participants have training programs with a focus on leadership (66%), management (58%) and technical skills (56%).

Most contractors report they are operating at or above optimum capacity (63%), as defined by their desired balance between resources and workload. Providing some comfort for the nearly one-third of respondents operating below optimum capacity, nearly all (94%) do not expect any impact to future revenues from IIJA opportunities until 2023 or 2024.

How effective is your company in retaining its best employees? (Scale of 1-10 where 1 is ineffective and 10 is extremely effective).



Not Effective



## Talent: Acquisition and Turnover







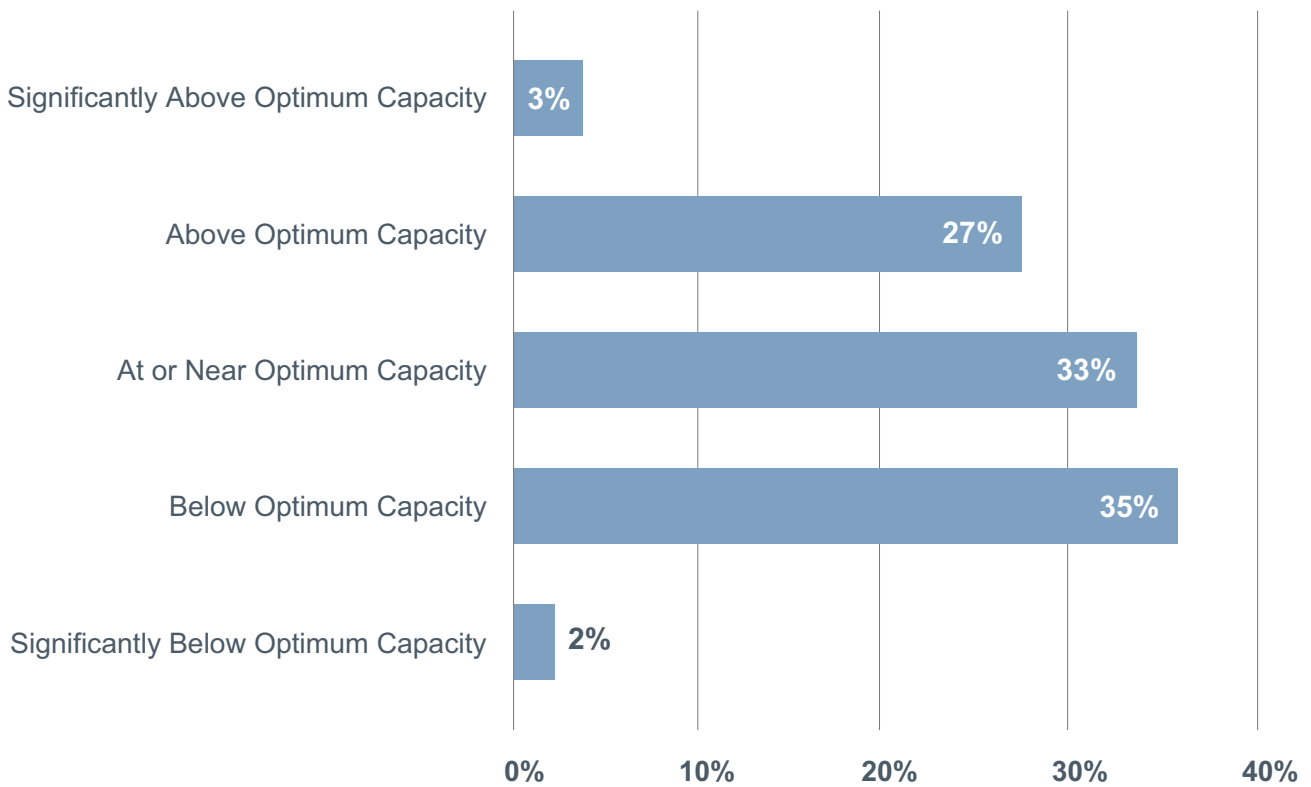
## Optimum Capacity

Optimum capacity is defined as the desired balance between resources and workload, allowing your company to best meet its strategic goals.

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Given current resources and workload, what is your perception of operations in terms of capacity?

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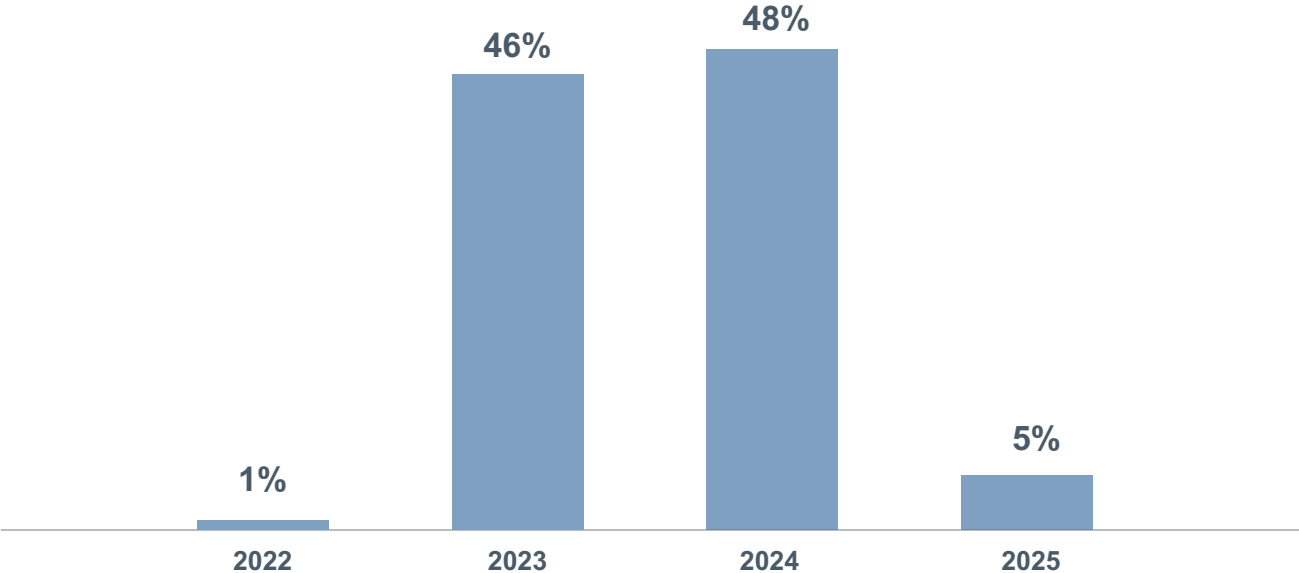


FMI assumes that respondents would ideally like to operate at or near their optimum capacities.



## Infrastructure Investment and Jobs Act (IIJA) Expectations

If you anticipate future revenues based on IIJA opportunities, what year do you expect to realize the largest impact in revenues?







# HEAVY CIVIL CONSTRUCTION OUTLOOK

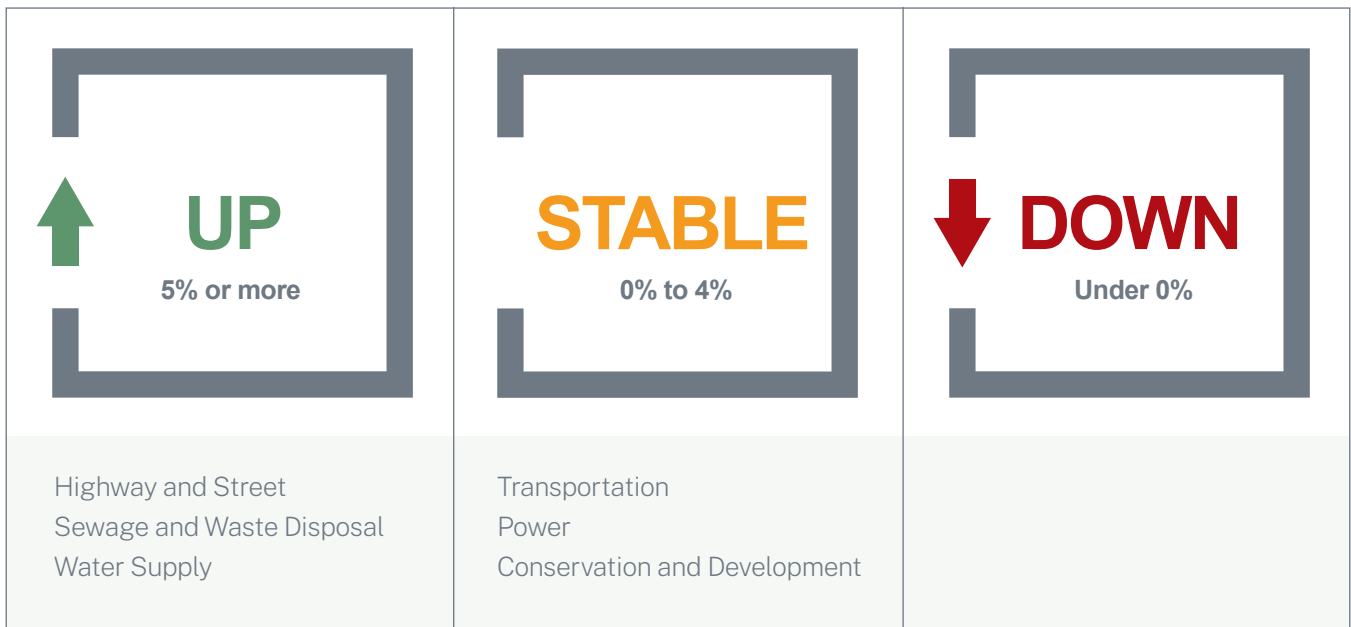
# HEAVY CIVIL CONSTRUCTION OUTLOOK



## Key Findings

- Total heavy civil construction put in place is anticipated to grow by 3.8% in 2022, with growth reported across all segments and subcategories except air transportation.
- Over the full five-year forecast period, all segments and subcategories will experience rising investment.
- The infrastructure package is the foundation for long-term growth prospects through 2026, with water supply, sewage and waste disposal, and conservation and development investment as the fastest-growing segments.
- Similarly, highway and street, one of the largest nonbuilding segments, will see strong growth relative to recent history and supports an overall bullish outlook on the heavy civil construction market.

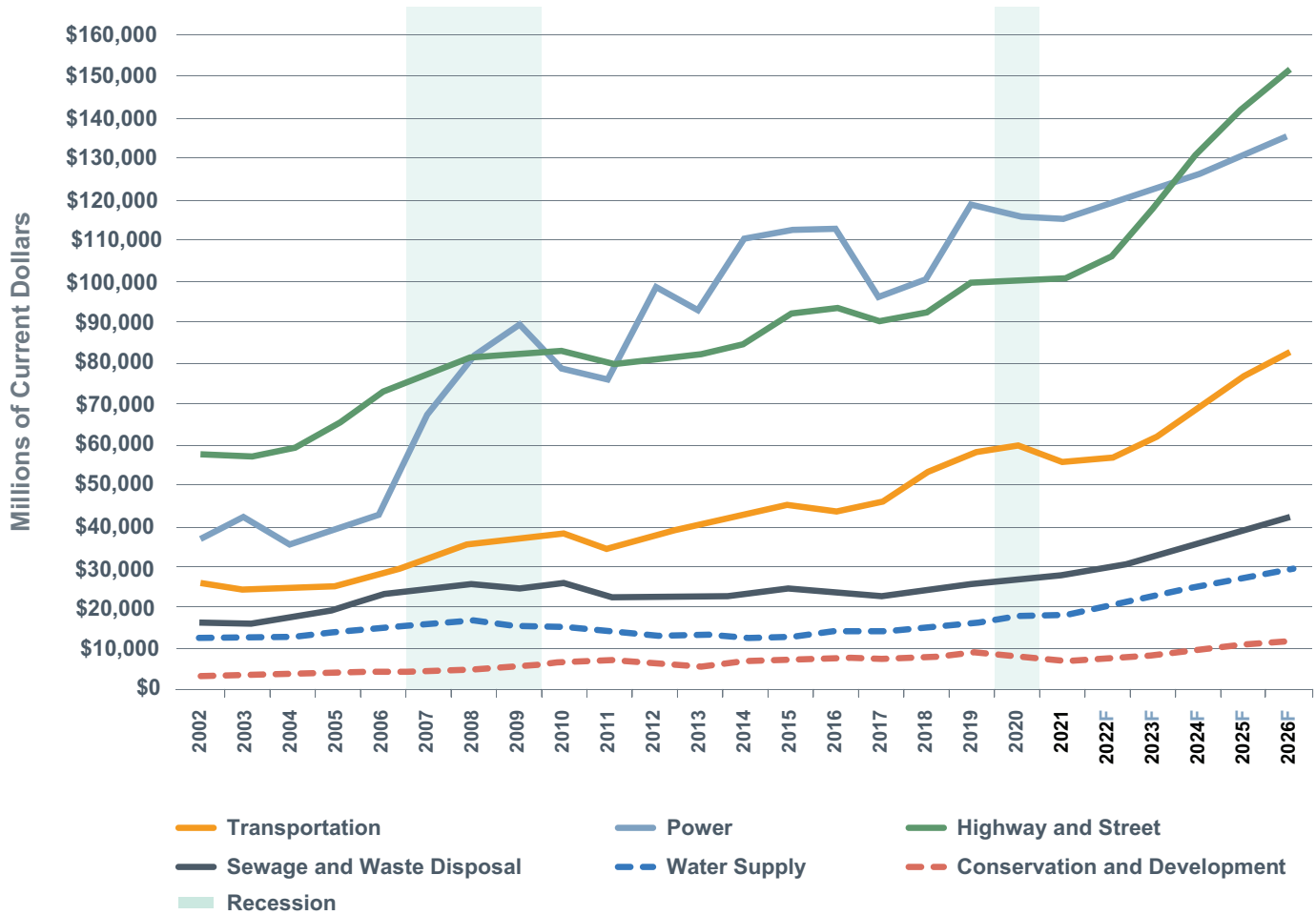
## U.S. 2022 Segment Performance 2022/2021 Comparison



# HEAVY CIVIL CONSTRUCTION OUTLOOK



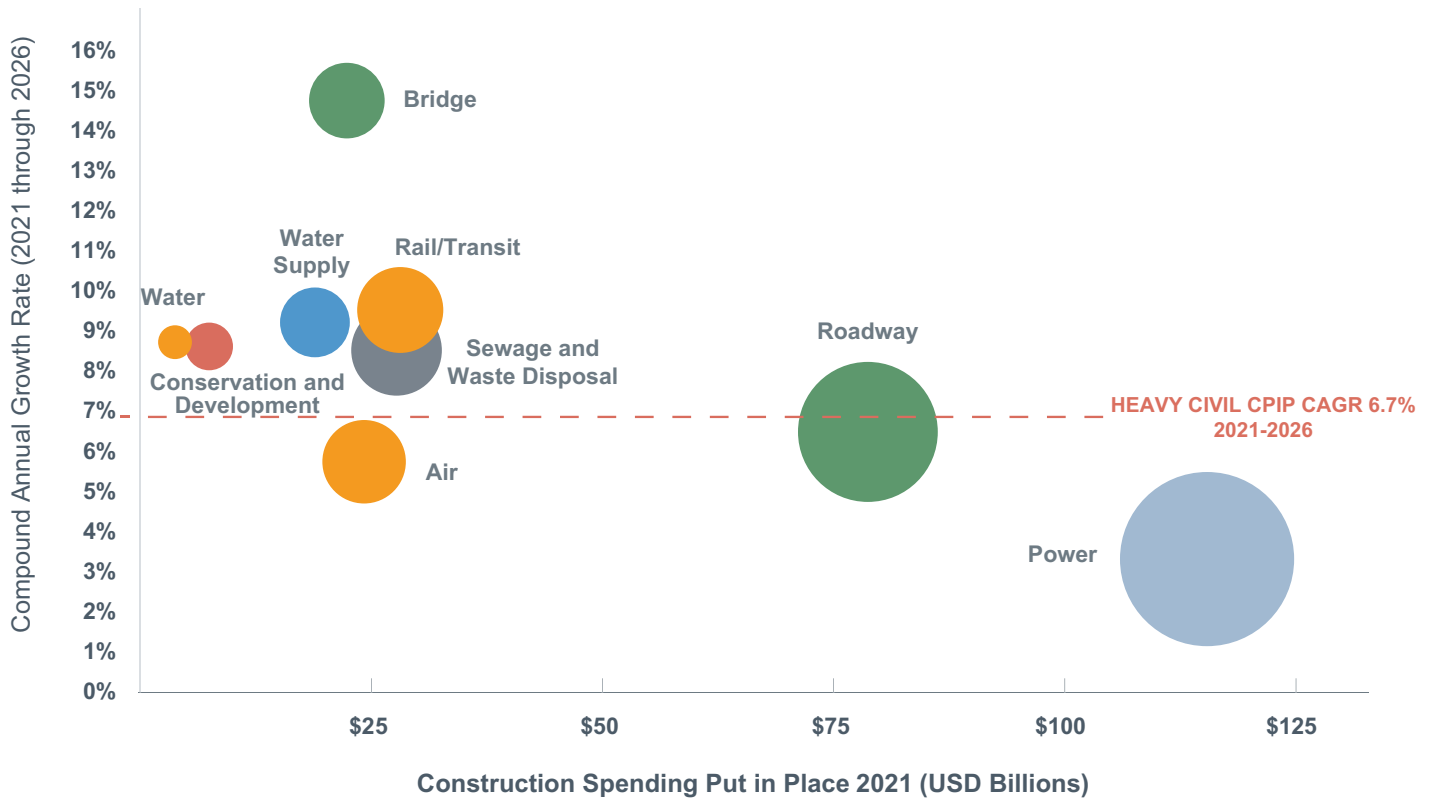
## Heavy Civil Construction Put in Place



# HEAVY CIVIL CONSTRUCTION OUTLOOK



## Heavy Civil Construction Spending Put in Place 2021 and Forecast Growth (2021 through 2026) by Segment



# HEAVY CIVIL CONSTRUCTION OUTLOOK



## Construction Put in Place Estimated for the United States

Millions of Current Dollars

2nd Quarter 2022 Forecast (Based on 4th Quarter 2021 Actuals and 1st Quarter 2022 Assumptions)

	2017	2018	2019	2020	2021	2022F	2023F	2024F	2025F	2026F
<b>TRANSPORTATION</b>	<b>46,138</b>	<b>53,218</b>	<b>57,449</b>	<b>59,661</b>	<b>56,274</b>	<b>56,298</b>	<b>61,214</b>	<b>68,846</b>	<b>76,639</b>	<b>82,435</b>
Air	17,194	22,008	24,428	26,619	24,360	23,858	25,256	27,396	29,800	32,284
Rail/Transit	26,588	28,200	28,898	28,956	28,218	28,621	31,731	36,634	41,538	44,551
Port/Water	2,356	3,010	4,123	4,086	3,696	3,818	4,227	4,816	5,301	5,599
<b>POWER</b>	<b>95,951</b>	<b>99,569</b>	<b>117,960</b>	<b>115,048</b>	<b>114,845</b>	<b>118,804</b>	<b>122,176</b>	<b>125,613</b>	<b>130,853</b>	<b>135,237</b>
<b>HIGHWAY AND STREET</b>	<b>89,620</b>	<b>91,745</b>	<b>99,402</b>	<b>99,888</b>	<b>100,354</b>	<b>105,456</b>	<b>117,087</b>	<b>130,838</b>	<b>142,125</b>	<b>151,099</b>
Roadway	59,188	63,344	72,675	78,213	78,170	82,589	91,437	97,571	102,389	106,933
Bridge	30,432	28,401	26,727	21,675	22,184	22,867	25,650	33,266	39,736	44,167
<b>SEWAGE AND WASTE DISPOSAL</b>	<b>22,901</b>	<b>23,931</b>	<b>26,119</b>	<b>26,379</b>	<b>27,598</b>	<b>29,512</b>	<b>32,254</b>	<b>35,570</b>	<b>38,741</b>	<b>41,657</b>
<b>WATER SUPPLY</b>	<b>14,168</b>	<b>15,477</b>	<b>16,397</b>	<b>18,727</b>	<b>18,927</b>	<b>19,946</b>	<b>22,088</b>	<b>24,717</b>	<b>27,284</b>	<b>29,395</b>
<b>CONSERVATION AND DEVELOPMENT</b>	<b>7,464</b>	<b>8,229</b>	<b>9,207</b>	<b>8,955</b>	<b>7,576</b>	<b>7,776</b>	<b>8,554</b>	<b>9,500</b>	<b>10,529</b>	<b>11,448</b>
<b>TOTAL HEAVY CIVIL PUT IN PLACE</b>	<b>\$276,242</b>	<b>\$292,169</b>	<b>\$326,534</b>	<b>\$328,658</b>	<b>\$325,574</b>	<b>\$337,793</b>	<b>\$363,373</b>	<b>\$395,084</b>	<b>\$426,171</b>	<b>\$451,272</b>

## Construction Put in Place Estimated for the United States

Change From Prior Year Current Dollar Basis

2nd Quarter 2022 Forecast (Based on 4th Quarter 2021 Actuals and 1st Quarter 2022 Assumptions)

	2017	2018	2019	2020	2021	2022F	2023F	2024F	2025F	2026F
<b>TRANSPORTATION</b>	<b>6.5%</b>	<b>15.3%</b>	<b>8.0%</b>	<b>3.9%</b>	<b>-5.7%</b>	<b>0.0%</b>	<b>8.7%</b>	<b>12.5%</b>	<b>11.3%</b>	<b>7.6%</b>
Air	20.8%	28.0%	11.0%	9.0%	-8.5%	-2.1%	5.9%	8.5%	8.8%	8.3%
Rail/Transit	-0.8%	6.1%	2.5%	0.2%	-2.6%	1.4%	10.9%	15.5%	13.4%	7.3%
Port/Water	1.8%	27.8%	37.0%	-0.9%	-9.5%	3.3%	10.7%	13.9%	10.1%	5.6%
<b>POWER</b>	<b>-14.4%</b>	<b>3.8%</b>	<b>18.5%</b>	<b>-2.5%</b>	<b>-0.2%</b>	<b>3.4%</b>	<b>2.8%</b>	<b>2.8%</b>	<b>4.2%</b>	<b>3.4%</b>
<b>HIGHWAY AND STREET</b>	<b>-3.8%</b>	<b>2.4%</b>	<b>8.3%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>5.1%</b>	<b>11.0%</b>	<b>11.7%</b>	<b>8.6%</b>	<b>6.3%</b>
Roadway	-2.5%	7.0%	14.7%	7.6%	-0.1%	5.7%	10.7%	6.7%	4.9%	4.4%
Bridge	-6.4%	-6.7%	-5.9%	-18.9%	2.3%	3.1%	12.2%	29.7%	19.4%	11.1%
<b>SEWAGE AND WASTE DISPOSAL</b>	<b>-5.2%</b>	<b>4.5%</b>	<b>9.1%</b>	<b>1.0%</b>	<b>4.6%</b>	<b>6.9%</b>	<b>9.3%</b>	<b>10.3%</b>	<b>8.9%</b>	<b>7.5%</b>
<b>WATER SUPPLY</b>	<b>1.6%</b>	<b>9.2%</b>	<b>5.9%</b>	<b>14.2%</b>	<b>1.1%</b>	<b>5.4%</b>	<b>10.7%</b>	<b>11.9%</b>	<b>10.4%</b>	<b>7.7%</b>
<b>CONSERVATION AND DEVELOPMENT</b>	<b>-3.6%</b>	<b>10.2%</b>	<b>11.9%</b>	<b>-2.7%</b>	<b>-15.4%</b>	<b>2.6%</b>	<b>10.0%</b>	<b>11.1%</b>	<b>10.8%</b>	<b>8.7%</b>
<b>TOTAL HEAVY CIVIL PUT IN PLACE</b>	<b>-6.2%</b>	<b>5.8%</b>	<b>11.8%</b>	<b>0.7%</b>	<b>-0.9%</b>	<b>3.8%</b>	<b>7.6%</b>	<b>8.7%</b>	<b>7.9%</b>	<b>5.9%</b>

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**Brian Moore** is a partner at FMI, focusing on consulting with contractors on various strategic, organizational and operational issues. Brian works in identifying future construction trends, market conditions and competitive issues that impact strategic decisions. Brian's clients count on him as a thought leader and trusted advisor as they plan the future of their business. Often this involves combining in-depth market and company analysis with judgment and experience to chart the organization's future. He works with clients to help them develop the organizational capabilities that match their chosen strategy so they can achieve desired results. Brian can be reached at [\*\*\*brian.moore@fmicorp.com\*\*\*](mailto:brian.moore@fmicorp.com).



**Brian Strawberry** is chief economist at FMI. Brian leads FMI's efforts in market sizing, forecasting, building products and construction material pricing, and consumption trends. He focuses on primary research methods, including the implementation and analysis of surveys and interviews. Brian also leads and manages various external market research engagements and constructs tools and models for efficiently performing high-quality analyses. He can be reached at [\*\*\*brian.strawberry@fmicorp.com\*\*\*](mailto:brian.strawberry@fmicorp.com).



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