

ECONOMIC ASSESSMENT OF THE ENGINEERING AND DESIGN SERVICES INDUSTRY

2025



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Introduction

This is the sixth annual release of the Engineering and Design Services industry assessment and forecast. The ACEC Research Institute first launched the Industry Impact Series in 2020 to analyze the performance of the Engineering and Design Services industry. This updated study continues that effort, highlighting the economic significance of engineering, architecture, and design services in shaping the U.S. built environment—everything from buildings to infrastructure.

Conducted by Rockport Analytics, the study uses a mix of public, private, and proprietary data to track industry performance, analyze current market trends, and model future revenue scenarios. The research aims to provide valuable insights for ACEC members to aid in planning, advocacy, and education.

The overarching goals of this research are to:

Build on the previously defined Engineering and Design Services industry by updating published recurring data and tracking performance for ACEC's many constituencies.

Provide a comprehensive view of the size, growth, and composition of the engineering and related professional services industry using the most current and comprehensive data available.

Measure the economic contribution of the Engineering and Design Services industry using established metrics found in virtually all industry economic impact analyses.

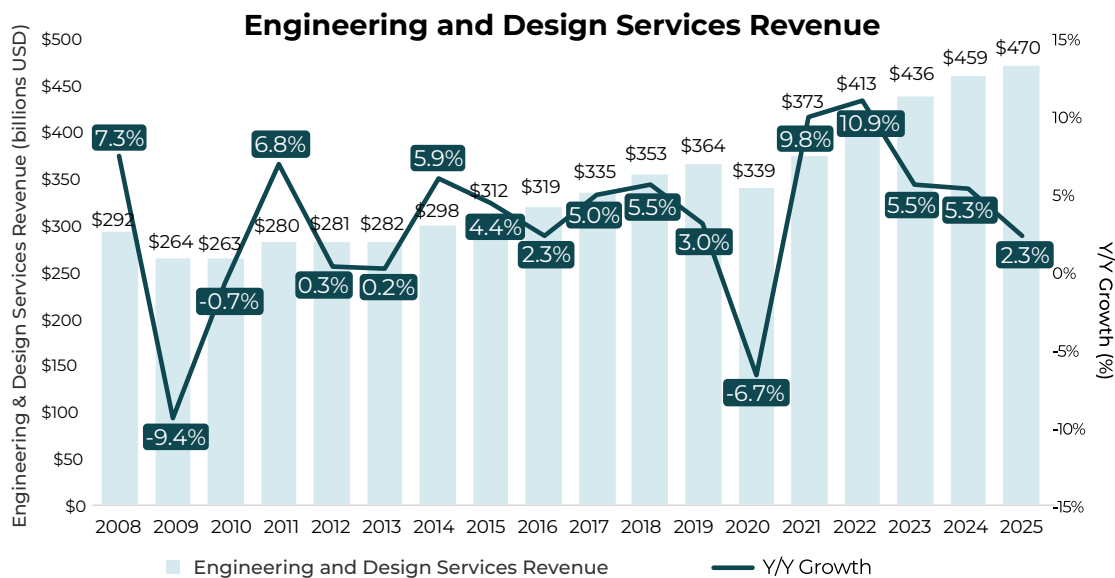
Analyze the current market for the Engineering and Design Services industry, focusing on key challenges, opportunities, and drivers. This includes forecasting industry revenue and evaluating scenarios related to policy, geopolitical, and other future conditions.

This research is intended to be of value to ACEC members and their constituents by providing industry insight to members and can be leveraged as a planning and educational resource. It will also assist ACEC advocacy, communications, and other outreach efforts.

Industry Performance

Growth in the Engineering and Design Services industry has continued to moderate following record-high growth in 2021 and 2022. Industry revenue was up 5.3 percent in 2024. Growth in industry revenue continues to slow in 2025 as the industry faces mounting macroeconomic pressures. Elevated interest rates, disruptive tariff uncertainty, labor force challenges, and rising input costs have delayed projects and triggered widespread supply chain restructuring.

The economy has proven resilient amid uncertainty, and although GDP contracted in the first quarter of 2025, it continues to outperform economists' expectations and Wall Street forecasts. Moreover, two powerful fiscal catalysts provide counterbalance to industry challenges: the deployment of over \$400 billion in remaining IIJA infrastructure funding and the extension of critical Tax Cuts and Jobs Act provisions—including pass-through entity deductions and immediate R&D amortization—that will directly boost project financing and reduce operational costs for Engineering and Design Services firms. Firms and households are also beginning to see more favorable interest rates as the Federal Reserve Bank has begun a loosening cycle as inflation continues to cool.



Sources: Quarterly Census of Employment and Wages, Rockport Analytics

Key Findings and Decision Points

Industry Overview

Engineering and Design Services revenue grew 5.3 percent in 2024, reaching \$459 billion.

Growth is expected to slow to 2.3 percent in 2025 due to the effects of high interest rates, as well as tariffs and the trade uncertainty surrounding them on the broader economy.

The industry contributed \$685 billion to U.S. GDP in 2024, including \$262 billion in direct value added and \$423 billion from supply chain and household spending impacts.

Federal tax revenues generated totaled \$94.6 billion, while state and local governments collected \$44.8 billion through sales, income, property, and excise taxes.

The industry directly employed 1.7 million Americans and supported a total of 5.7 million jobs when including supply chain and household spending effects, generating \$424.7 billion in labor income.

Texas (\$96B) and California (\$94B) led all states in value added, with Florida rising to third at \$41B; together, the three states represented over one-third of national industry output.

Tariffs and Trade Uncertainty

The administration's broad import tariffs and reciprocal trade measures have destabilized global supply chains, with legal challenges adding to prolonged uncertainty unlikely to be resolved before 2026.

U.S. GDP contracted in Q1 2025 as businesses stockpiled ahead of tariffs but rebounded in Q2; long-term growth is still projected to decline 0.4 percent due to unresolved tensions, particularly with China.

Aggressive tariffs on steel, aluminum, and other materials are inflating input costs, disrupting supply chains, and pressuring margins in construction and related design industries.

The construction industry has been the most impacted, with tariffs and foreign retaliation causing industry GDP to decrease 3.6 percent in the long run.

The Producer Price Index shows significant increases for wood products and other building inputs due to tariff-related distortions.

Fiscal Stimulus and Industry Tailwinds

Only about 40 percent of IIJA funds had been disbursed by Q3 2025, with over 70 percent under binding agreements but nearly 30 percent still without recipients.

These remaining funds may serve to counterbalance and offset some of the negative effects of tariffs and high interest rates on the industry.

The One Big Beautiful Bill Act (OBBBA) extended the Tax Cuts and Jobs Act (TCJA) provisions and introduced temporary tax cuts that can further help to relieve pressure on the industry.

Section 199A's 20 percent pass-through deduction was made permanent, providing critical relief for ACEC member firms, most of which operate as pass-throughs.

Restored R&D expensing rules and lower effective tax rates are expected to free up cash flow, supporting payroll expansion, capital investment, and industry revenue growth.

Labor Shortages and Skills Gap

Many ACEC firms reported turning down work due to insufficient staffing, highlighting lost revenue opportunities and worsening conditions compared to the prior year.

Rising wages, now a top concern for firm leaders, are forcing project cost restructuring and sparking pay level restructuring across organizations.

Despite stable weekly hours, industry unemployment has risen from a 1.7 percent average (2022–2024) to 2.4 percent in Q1 2025, while the ratio of unemployed workers to job openings is inching upward.

The labor supply metrics signal that a skills mismatch between available workers and what firms are looking for is one of the key drivers in the labor shortage cited by industry leaders.

Engineering and architecture degree completions have remained flat since 2020, offering little relief to the industry's growing demand for skilled workers.

With 25.6 percent of workers over age 55 and retirements potentially accelerating, firms face risks to productivity and a potential loss of institutional knowledge.

Firms are scaling up artificial intelligence (AI) to increase productivity and output. However, the long-term productivity benefits may be delayed due to the large upfront costs and new skill requirements.

Key Trends Driving the Industry



Trade Uncertainty Weighs on Economic Growth

Despite the industry outperforming previous year's revenue projections in 2024, revenue slowed in 2025 in large part due to uncertainty surrounding tariffs and trade agreements, as many global trade partners reassess their current trading relationships and look to rely more heavily on internal suppliers and supply chains. Additionally, tariffs on lumber products have raised construction costs and have led to a contraction in construction output on a year-over-year basis.



Elevated Interest Rate Climate

The federal funds rate was reduced several times in 2024, marking the first cuts since March 2020, with an additional quarter-point cut announced in mid-September 2025. Even so, rates remain at heights not seen since the Great Recession, driving up borrowing costs, discouraging new investment, stalling capacity expansion, and weighing on hiring. Still, The Fed retains room for further reductions in the months ahead, which could ease pressure stemming from tariffs and trade uncertainty.



Labor Shortages and Knowledge Gaps

Throughout 2024, many Engineering and Design firms faced ongoing labor shortages that forced them to turn down projects—constraining revenue potential and driving up wage pressures amid fierce competition for talent. As seasoned architects and engineers retire, firms are grappling with a widening gap in institutional knowledge and technical expertise. This transition also complicates onboarding and training, placing additional strain on already stretched resources needed to sustain project capacity.



Artificial Intelligence Integration into Workflows

The use of AI tools continues to be a hot-button issue globally, and the Engineering and Design Services industry is no exception. AI-powered systems may alleviate pressure from critical skills gaps by enhancing efficiency and boosting productivity. These technologies are increasingly being integrated across the project pipeline—from early-stage design using digital twins, generative design tools, and automated code compliance, to construction phase applications—helping firms streamline workflows and optimize performance.

Engineering and Design Services: By the Numbers

2023

2024

Y/Y Growth

Industry Revenue
\$436B

5.3% ↑

Industry Revenue
\$459B

Direct Annual Full
& Part-Time Jobs
1.65M

2.1% ↑

Direct Annual Full
& Part-Time Jobs
1.69M

Total
Establishments
167,200

3.6% ↑

Total
Establishments
172,900

Average Wages
\$109,300

5.0% ↑

Average Wages
\$114,700

Direct Economic
Contribution
\$251B

4.4% ↑

Direct Economic
Contribution
\$262B

Total Federal,
State & Local
Tax Collections
\$135B

3.1% ↑

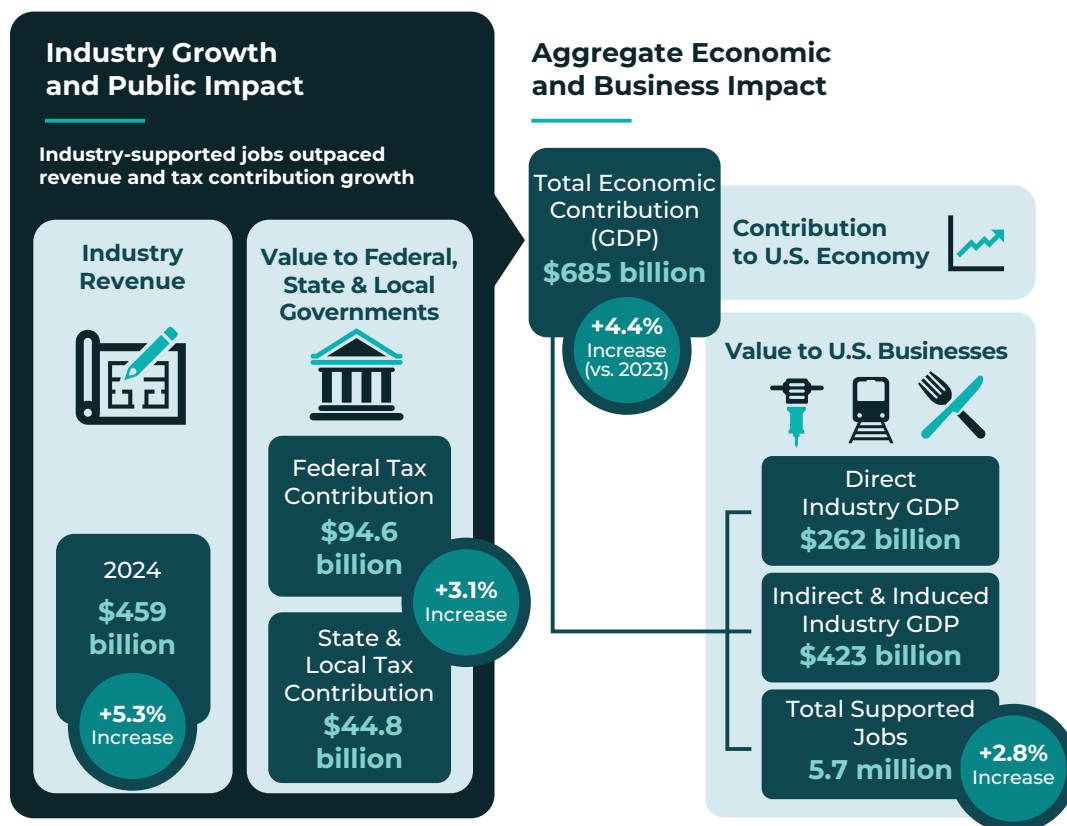
Total Federal,
State & Local
Tax Collections
\$139B

Sources: Bureau of Economic Analysis, Quarterly Census of Employment and Wages, Bureau of Labor Statistics, IMPLAN, Rockport Analytics

The Bottom Line: Engineering and Design Services Contribution to the U.S. Economy

An industry's economic significance is typically measured through four key metrics: product or service revenue, purchases from other sectors, direct and indirect job creation, and tax revenue generation. This standardized approach enables meaningful comparisons across all industries through universal economic contribution metrics.

Although the Engineering and Design Services industry plays a crucial role in the Construction industry, the analysis presented here excludes the broader value of the built environment they help create, as that value is attributed to the Construction industry itself. These figures focus exclusively on the direct economic impact generated by the Engineering and Design Services industry alone.



Engineering and Design Services revenue grew 5.3 percent in 2024, reaching \$459 billion. This increase was fueled by demand across several industries, including construction, business services, mining, manufacturing, and exports.

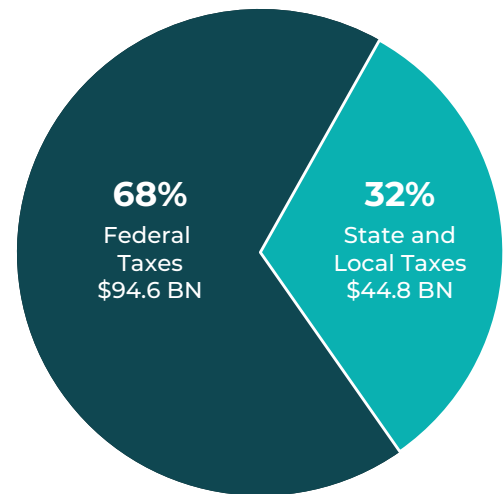
The industry contributed \$685 billion to U.S. GDP in 2024, marking a 4.4 percent increase over the previous year. This total includes direct value added from core activities like engineering, architecture, and surveying services (NAICS 5413), totaling \$262 billion. Indirect contributions stem from supply chain activity, while induced contributions result from household spending by employees in both the direct and indirect segments. Together, indirect and induced impacts accounted for \$423 billion in additional economic value.

In 2024, the industry generated **\$94.6 billion in federal tax revenues**, including corporate and personal income taxes, Social Security contributions, and excise taxes. **It also contributed \$44.8 billion in state and local taxes** through sales, income, property, and excise taxes, as well as licenses and other fees.

Engineering and Design Services Industry Initiated Taxes

	2024 Tax Collections (in millions \$)	2024 % of Total
Federal - U.S.		
Corporate Income	\$3,896	2.8%
Personal Income	\$36,255	26.0%
Excise & Fees	\$3,993	2.9%
Social Security & Other Taxes	\$50,498	36.2%
Federal Tax Total	\$94,642	67.9%
State & Local		
Corporate Income	\$1,705	1.2%
Personal Income	\$9,419	6.8%
Social Insurance Taxes	\$842	0.6%
Business Taxes	\$16,973	12.2%
Household Taxes	\$2,382	1.7%
Property Taxes	\$13,492	9.7%
State & Local Tax Total	\$44,814	32.1%
Total Initiated Taxes	\$139,457	100.0%

Engineering and Design Services Tax Impact



Sources: Rockport Analytics, IMPLAN, Bureau of Economic Analysis, Bureau of Labor Statistics, U.S. Census Bureau

Engineering and Design Services directly employed nearly 1.7 million Americans in 2024. When accounting for both upstream supply chain activity and downstream household spending, **the industry supported more than 5.7 million full- and part-time jobs**. Total labor income generated across all supported positions reached \$424.7 billion for the year.

2024 Engineering and Design Services Industry Bottom Line

For the U.S. Economy in billions of \$ unless otherwise noted	Direct	Indirect (Supply Chain)	Induced (Ripple Effect)	Total	% vs 2023
Total Industry Revenue				\$459.1	5.3%
Total Economic Contribution					
Contribution to GDP	\$262.0	\$154.2	\$269.3	\$685.5	4.4%
Jobs Supported (Full & Part-Time, in thousands)	1,689	1,480	2,558	5,728	2.8%
Contribution to Payrolls	\$193.8	\$94.6	\$136.3	\$424.7	7.2%
Total Tax Receipts (in billions)	\$51.1	\$30.6	\$57.7	\$139.5	3.1%
Federal	\$41.4	\$20.8	\$32.4	\$94.6	3.1%
State & Local	\$9.7	\$9.8	\$25.3	\$44.8	3.1%

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, IMPLAN, Rockport Analytics

Economic Contribution by Industry and State

Understanding the economic impact of the Engineering and Design Services industry involves examining the industry's interconnectedness with a wide range of related sectors. This analysis can be performed at both the national and state levels to capture the full scope of its influence.

- At the national level in 2024, the industry supported over 5.7 million jobs. Of these, nearly 1.7 million were direct positions within engineering, architectural, and related firms accounting for nearly one-third of the total employment impact. The remaining two-thirds were split between 1.5 million jobs in the industry's supply chain (indirect) and 2.6 million jobs supported through household spending by industry workers and their suppliers (induced).

A/E Contribution to U.S. Employment by Industry Sector

Industry (NAICS) ¹	Direct	Indirect	Induced	Total
54 Professional, Scientific & Tech Services	1,689,169	404,085	136,597	2,229,850
56 Administrative & Waste Services	0	409,730	152,986	562,716
62 Health & Social Services	0	22	456,644	456,666
72 Accommodation & Food Services	0	140,394	306,579	446,973
44-45 Retail Trade	0	7,709	327,024	334,734
81 Other Services	0	37,191	250,998	288,189
53 Real Estate & Rental	0	107,621	126,416	234,037
52 Finance & Insurance	0	48,439	182,058	230,497
31-33 Manufacturing	0	76,658	111,271	187,928
48-49 Transportation & Warehousing	0	71,988	112,341	184,329
42 Wholesale Trade	0	38,061	67,843	105,903
71 Arts, Entertainment & Recreation	0	22,610	76,884	99,495
55 Management of Companies	0	50,285	32,825	83,109
51 Information	0	34,203	44,516	78,720
61 Educational Services	0	1,601	75,462	77,063
11 Agriculture, Forestry, Fish & Hunting	0	5,844	46,150	51,994
23 Construction	0	7,944	19,275	27,219
92 Government	0	3,757	14,912	18,669
22 Utilities	0	5,798	10,976	16,774
21 Mining	0	6,492	6,520	13,011
Total	1,689,169	1,480,431	2,558,276	5,727,876

¹North American Industrial Classification System (NAICS). For specific industry definitions, see www.census.gov
Sources: Rockport Analytics, IMPLAN

Impact by State

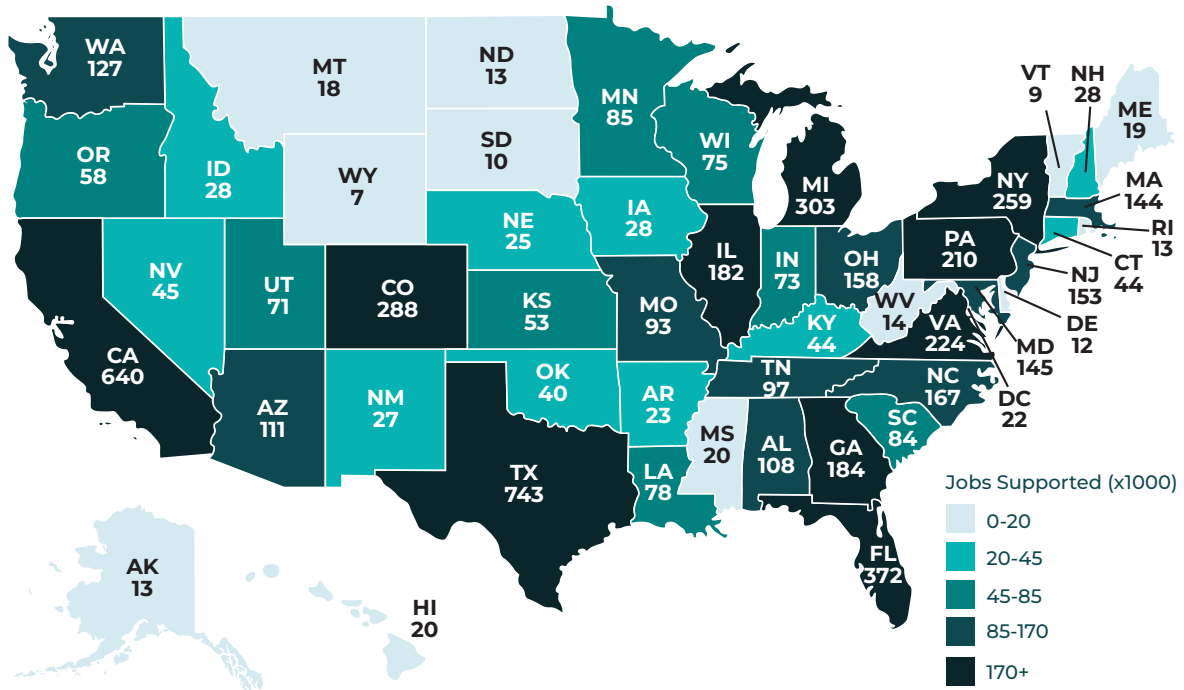
- Texas and California led in terms of Engineering and Design Services total value added in 2024, contributing \$96 billion and \$94 billion, respectively. Florida surpassed Michigan to rank third, with \$41 billion in total economic contribution.
- The Engineering and Design Services industry in Texas supported the largest number of jobs—over 743,000 full- and part-time positions. California followed with more than 640,000 jobs but surpassed Texas in total wages paid. In 2024, California also had the second-highest average wage in the industry at \$105,000, trailing only the District of Columbia at \$115,000.
- Together, Texas, California, and Florida accounted for over one-third of the industry's total economic contribution and nearly one-third of all jobs supported nationwide.

Engineering & Design Services Industry Total Economic Contribution

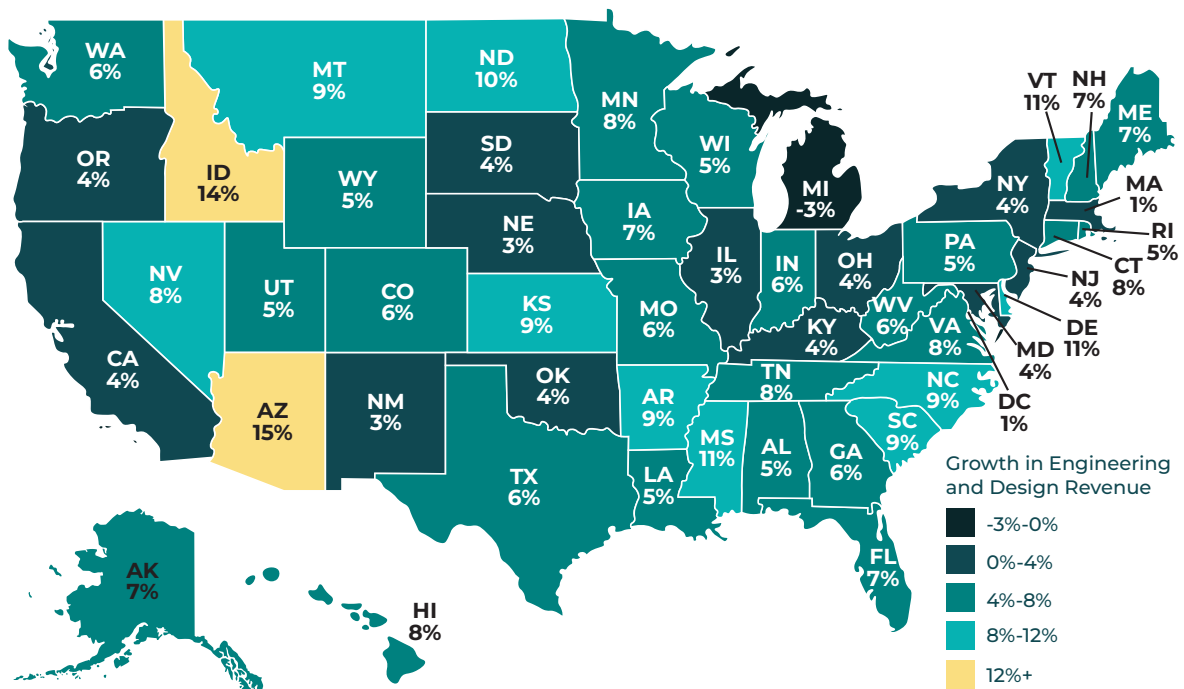
States in 2024							
Rank	State	Total Value Added (GDP, in bils \$)	% of Total Value Added by the Industry	Cumulative %	Total Jobs Supported (x1000)	% of U.S	Total Paid Wages (in mils \$)
1	Texas	\$96.0	14.0%	14.0%	743	13.0%	\$54
2	California	\$93.6	13.7%	27.7%	640	11.2%	\$58
3	Florida	\$40.5	5.9%	33.6%	372	6.5%	\$24
4	Michigan	\$37.0	5.4%	39.0%	303	5.3%	\$23
5	New York	\$29.9	4.4%	43.3%	259	4.5%	\$20
6	Colorado	\$28.2	4.1%	47.4%	208	3.6%	\$17
7	Virginia	\$26.5	3.9%	51.3%	224	3.9%	\$17
8	Pennsylvania	\$23.6	3.4%	54.8%	210	3.7%	\$15
9	Georgia	\$21.5	3.1%	57.9%	184	3.2%	\$13
10	Illinois	\$20.7	3.0%	60.9%	182	3.2%	\$12
11	Massachusetts	\$20.3	3.0%	63.9%	144	2.5%	\$13
12	North Carolina	\$19.4	2.8%	66.7%	167	2.9%	\$12
13	New Jersey	\$18.8	2.7%	69.4%	153	2.7%	\$12
14	Ohio	\$16.5	2.4%	71.8%	158	2.8%	\$10
15	Washington	\$16.0	2.3%	74.2%	127	2.2%	\$10
16	Maryland	\$15.9	2.3%	76.5%	145	2.5%	\$10
17	Arizona	\$13.7	2.0%	78.5%	111	1.9%	\$8
18	Alabama	\$12.0	1.8%	80.2%	108	1.9%	\$8
19	Tennessee	\$11.2	1.6%	81.9%	97	1.7%	\$7
20	Minnesota	\$10.1	1.5%	83.3%	85	1.5%	\$6

Sources: Rockport Analytics, IMPLAN

2024 State-by-State Total Supported Jobs



2024 Engineering and Design Revenue Growth



Sources: Rockport Analytics, IMPLAN

The table below shows Engineering and Design Services industry revenue for the top 20 states, ranked by 2024 growth over the previous year.

Engineering and Design Services Revenue by State: Top 20

Ranked by 2024 Growth in Revenue (in mils \$)

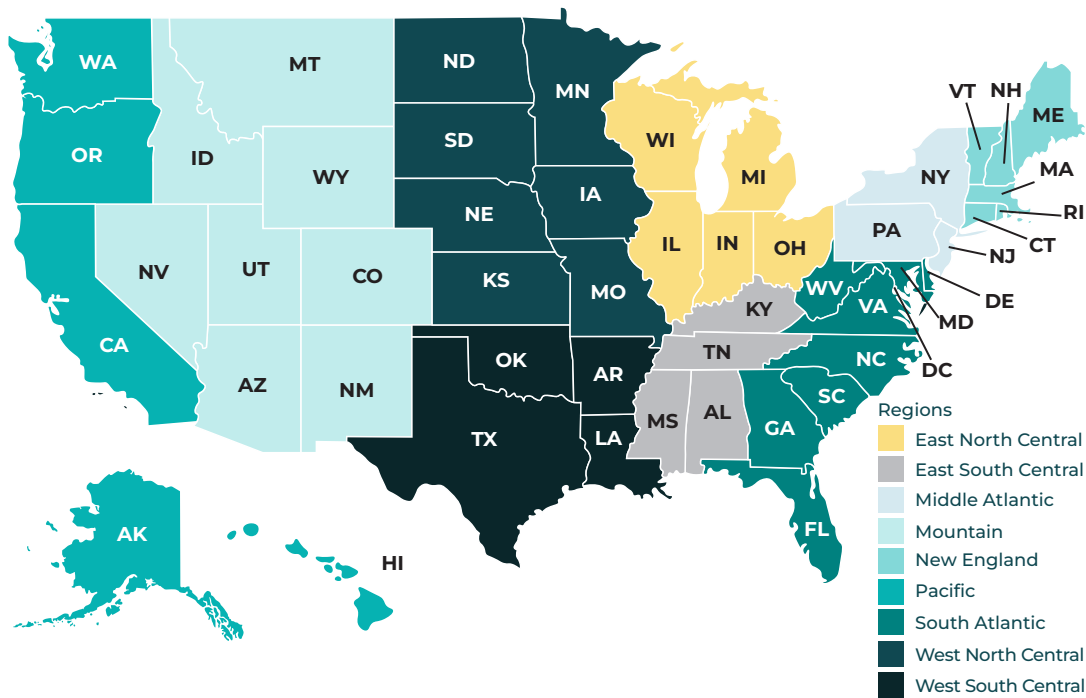
State	2024	2023	Annual Growth
Arizona	\$8,865	\$7,696	15.2%
Idaho	\$2,192	\$1,917	14.4%
Delaware	\$1,024	\$919	11.4%
Mississippi	\$1,486	\$1,339	10.9%
Vermont	\$791	\$715	10.5%
North Dakota	\$1,135	\$1,034	9.8%
South Carolina	\$5,871	\$5,371	9.3%
Arkansas	\$1,661	\$1,521	9.2%
Montana	\$1,496	\$1,372	9.0%
Kansas	\$4,264	\$3,922	8.7%
North Carolina	\$12,343	\$11,367	8.6%
Hawaii	\$1,758	\$1,622	8.4%
Nevada	\$3,582	\$3,309	8.2%
Virginia	\$18,685	\$17,276	8.2%
Connecticut	\$3,703	\$3,427	8.0%
Minnesota	\$7,073	\$6,554	7.9%
Tennessee	\$6,888	\$6,405	7.5%
Iowa	\$2,387	\$2,227	7.2%
Alaska	\$1,180	\$1,102	7.1%
Maine	\$1,518	\$1,418	7.0%
Other States	\$371,223	\$355,585	4.7%
Total U.S.	\$459,125	\$436,099	5.3%

Sources: Rockport Analytics, U.S. Census Bureau

- Three states combined high industry revenue with exceptional growth rates: Arizona (ranked 18th nationally) led all states with 15.2 percent growth, followed by North Carolina (12th) at 8.6 percent and Virginia (6th) at 8.2 percent.
- The Mountain region posted the strongest performance with 8.2 percent revenue growth and 10.1 percent wage growth, driven by robust expansion in Idaho, Arizona, and Montana. This region also made strong gains last year, moving from second place in revenue growth in 2024—behind the South Atlantic region—to first place this year.
- West South Central (led by Arkansas and Texas) and West North Central (led by North Dakota and Nebraska) tied for highest job growth at 3.6 percent each, with the Mountain region close behind at 3.2 percent.

- The individual states with the highest industry job growth in 2024 were Idaho (7.2 percent), Mississippi (6.1 percent), and Vermont (6.1 percent). In terms of wage growth, the leading states were Arizona (17.2 percent), Idaho (16.4 percent), and Delaware (13.4 percent).
- Detailed tables showing Engineering and Design Services industry contribution for each state across all metrics are available in Appendix I on page 34 of this report.

U.S. Regional Map



2024 Revenue, Wage, and Job Growth by Region

Region	Revenue (in bils \$)	% Growth	Wages	% Growth	Jobs (x 1,000)	% Growth
South Atlantic	\$92.6	6.7%	\$39.1	8.6%	361	3.1%
Pacific	\$80.4	6.0%	\$33.9	7.9%	261	2.2%
West South Central	\$65.4	6.2%	\$27.6	8.1%	236	3.6%
East North Central	\$59.7	3.2%	\$25.2	5.0%	231	0.4%
Middle Atlantic	\$51.0	4.3%	\$21.5	6.2%	188	1.8%
Mountain	\$41.2	8.2%	\$17.4	10.1%	155	3.2%
West North Central	\$24.7	6.7%	\$10.4	8.6%	95	3.6%
New England	\$23.5	6.4%	\$9.9	8.3%	81	2.9%
East South Central	\$20.6	6.9%	\$8.7	8.8%	81	3.1%

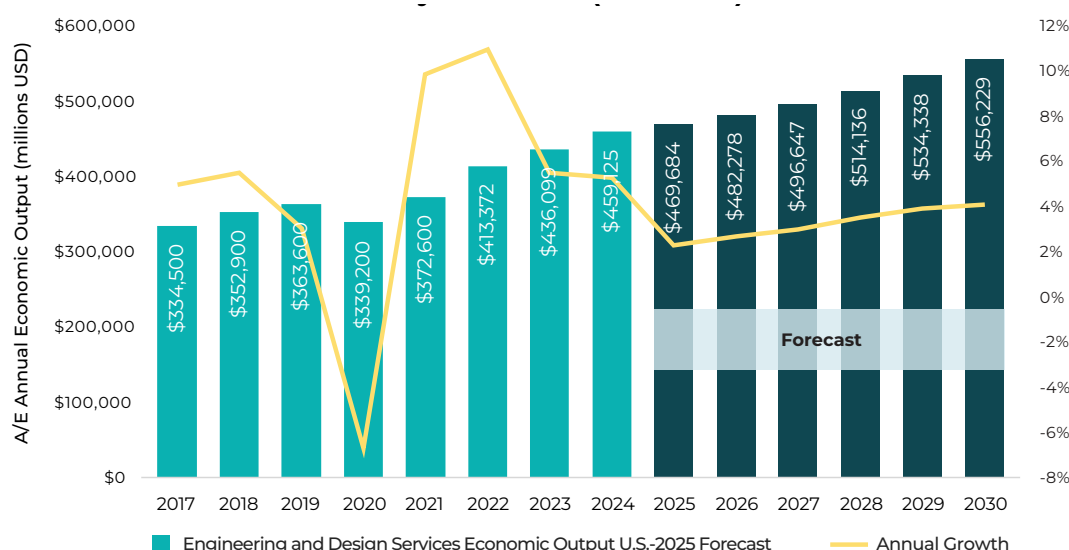
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, IMPLAN, Rockport Analytics

Engineering and Design Services Industry in 2024 and Beyond

Industry Revenue Growth Slows as Higher Interest Rates and a Slowing U.S. Economy Challenge Performance

The industry exceeded expectations in 2024, growing 5.3 percent to reach a total value of \$459 billion. This growth outpaced the previous year's projection of 4.4 percent. However, this momentum is expected to slow in 2025. Persistent tariff and trade uncertainty and the ripple effects of higher material costs across the economy are projected to temper revenue gains. We anticipate growth will slow to 2.3 percent in 2025. Looking ahead, we expect a gradual recovery. As the industry and the broader construction sector adapt to the new tariff environment, we project an average growth rate of 3.3 percent between 2025 and 2030, with total industry output reaching \$556 billion by the end of the decade.

Engineering and Design Services Nominal Economic Output in the United States: History & Forecast (2017-2030)

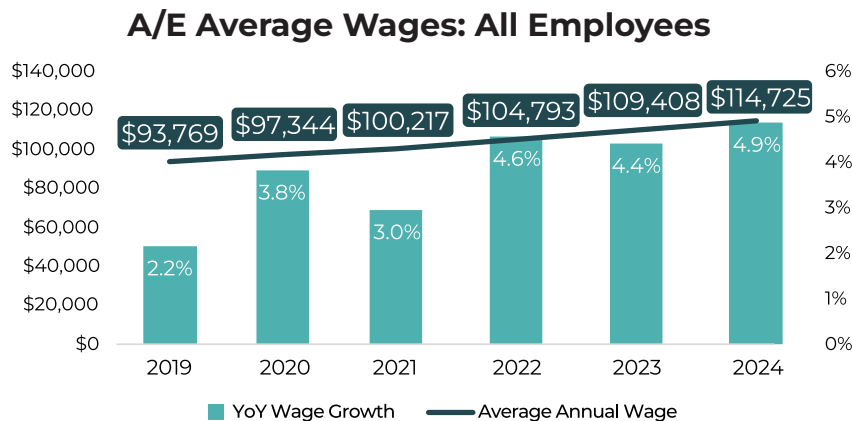


2025 Forecast	2025	2026	2027	2028	2029	2030
Nominal Output Growth	2.3%	2.7%	3.0%	3.5%	3.9%	4.1%
Real Output Growth	0.7%	0.3%	0.7%	1.3%	1.7%	1.8%

Sources: Rockport Analytics, IMPLAN, Moody's Analytics, Bureau of Economic Analysis, Quarterly Census of Employment and Wages

Industry Revenue, Employment, and Wages

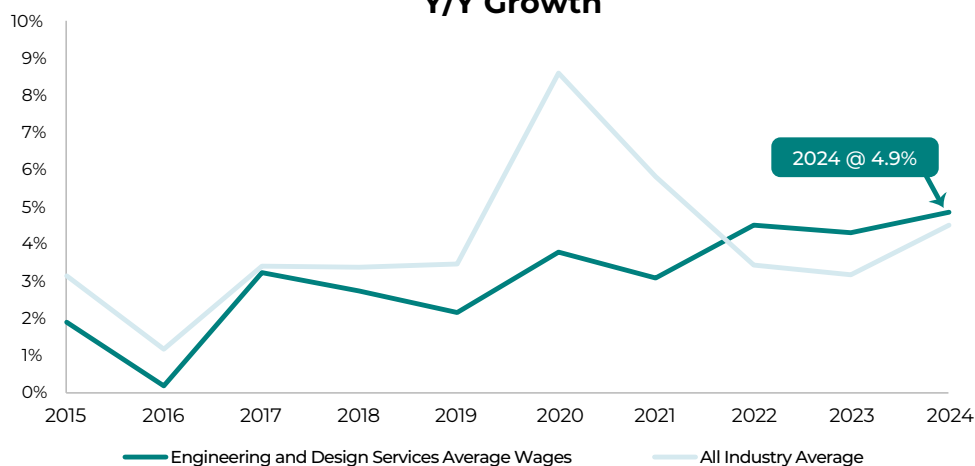
Engineering and Design Services wages continued to climb at levels over 4 percent in 2024, marking the highest growth since 2022 at 4.9 percent—well above the pre-pandemic average of 2 percent. Average industry wages were \$114,725, compared to the all-industry average of \$75,868. This means that Engineering and Design industry wages were over 51 percent higher than average U.S. wages in 2024.



Sources: U.S. Census Bureau, Quarterly Services Survey, Rockport Analytics

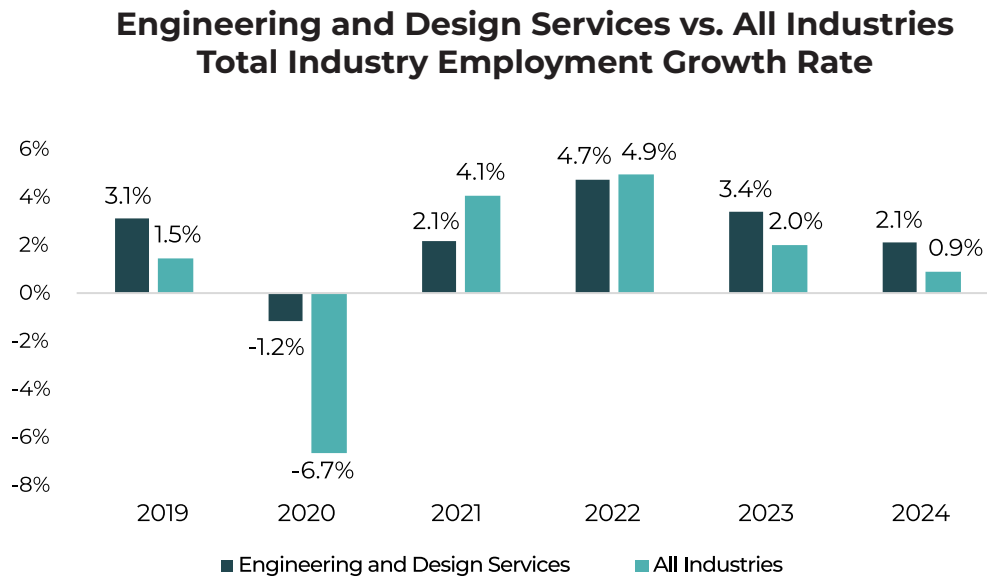
Engineering and Design Services wages have remained above the all-industry average since 2022, with average U.S. wages climbing 4.5 percent in 2024, and industry wages just inching above it at 4.9 percent.

Engineering and Design Services vs. All Industry Average Wages Y/Y Growth



Sources: U.S. Census Bureau, Quarterly Services Survey, Rockport Analytics

Industry employment growth has slowed going into 2024, moving from 3.4 percent to 2.1 percent, but remains higher than all-industry employment growth, which slowed from 2.0 percent in 2023 to just 0.9 percent in 2024.



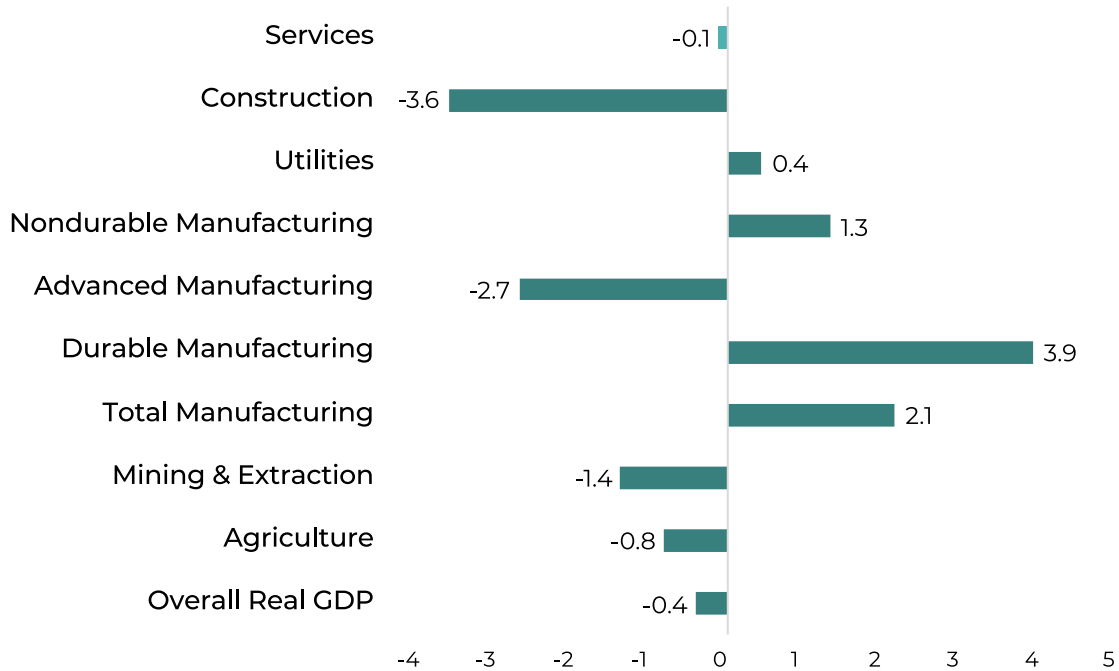
Sources: U.S. Census Bureau, Quarterly Services Survey, Rockport Analytics

Tariff Uncertainty Weighs on Engineering and Design Services Output

Economic uncertainty driven by the current administration's volatile tariff policies, initiated in April under the "Liberation Day" announcement, has become a major source of market instability both domestically and internationally. The administration's sweeping 10 percent tariff on all imports, coupled with country-specific reciprocal measures, created immediate disruption across global supply chains. While some nations negotiated settlements during the initial 90-day grace period—extended through July 2025, progress remains uneven, with major trading partners continuing to resist comprehensive agreements. Adding to the complexity, the U.S. Court of Appeals for the Federal Circuit has ruled several tariffs as illegal under the International Emergency Economic Powers Act of 1977, though final judicial resolution is unlikely before 2026.

This policy turbulence initially sent the U.S. economy into a brief contraction, with real GDP declining 0.5 percent in the first quarter of 2025 as businesses rushed to stockpile inventory ahead of tariff implementation. However, the economy demonstrated a level of resilience in the second quarter, rebounding with 3.3 percent growth as trade tensions eased somewhat following successful negotiations with European nations, Japan, South Korea, and other key partners. Despite this recovery, persistent uncertainty surrounding China trade relations continues to weigh on long-term business planning and investment decisions. Nonetheless, the effect of tariffs will likely end up being net negative in real GDP terms, reducing long-term growth by -0.4 percent, as shown in the chart on the next page.

Change in Long-Run Real GDP by Sector Caused by Tariffs and Foreign Retaliation



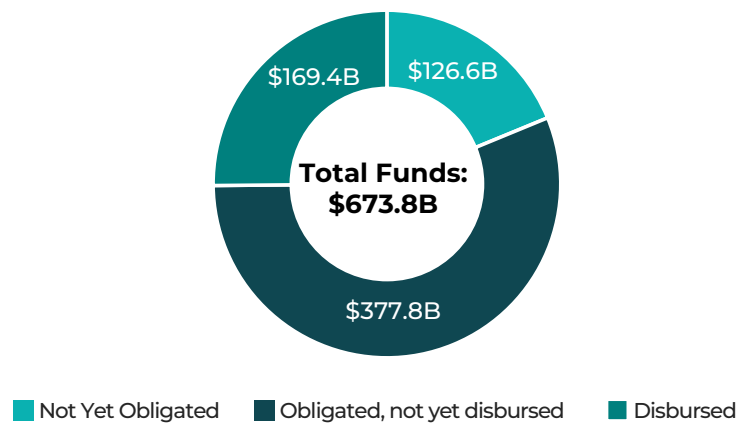
Sources: Yale Budget Lab, Rockport Analytics, 2025

The tariff regime's impact extends deep into construction-critical materials, with the Producer Price Index showing significant increases for wood products and other building inputs. The administration's particularly aggressive 50 percent tariff on steel and aluminum imports, imposed in June, has fundamentally disrupted construction supply chains, forcing builders to reassess supplier relationships while navigating increased costs and extended project timelines. This directly affects the engineering and design firms squeezed by higher materials costs and an unsettled trade environment and project pipelines may slow, bidding may become more competitive, and margins could narrow.

Remaining IIJA Funds and Tax Cuts May Serve as Tailwinds

The Infrastructure Investment and Jobs Act (IIJA) funding timeline spans from Federal Fiscal Year (FFY) 2022 through FFY 2026, and—according to the Department of Transportation's figures—as of the beginning of the third quarter of 2025, only around 40 percent of funds have been disbursed.¹ Despite a small portion of these funds having been frozen and withheld at the beginning of 2025, there is still a sizeable amount of funds yet to be allocated, with over 70 percent already under binding agreements (but yet to be paid), and almost 30 percent of funds still have no recipients. As the chart below shows, over \$540 billion of the almost \$700 billion in transportation infrastructure funds has been assigned for various projects via the Department of Transportation. However, only around \$170 billion has been disbursed, meaning these funds will continue to roll out in the coming years.

Status of IIJA Department of Transportation Funds



Sources: Bureau of Transportation Statistics, "Infrastructure Investment and Jobs Act (IIJA) Transportation Authorizations," U.S. Department of Transportation.

In addition to the benefits stemming from additional IIJA funds, the One Big Beautiful Bill Act (OBBBA) extended several expiring provisions of the 2017 Tax Cuts and Jobs Act (TCJA) while also incorporating temporary tax measures from former President Trump's 2024 campaign, which will serve as an additional tailwind to the industry. The legislation will reduce taxes by an average of about \$2,900 per household in 2026. Importantly, the OBBBA made permanent Section 199A of the tax code, which provides a 20 percent deduction on qualified business income for owners of pass-through entities—a critical benefit for ACEC member firms, the majority of which operate as pass-through businesses. On the individual side, higher after-tax compensation is expected to incentivize labor force participation, easing wage pressures, while businesses benefit from both the lower corporate tax rate and the pass-through deduction, encouraging higher investment and a larger capital stock. Together, these effects are anticipated to bolster industry revenue and job growth. Furthermore, the OBBBA reinstated pre-TCJA rules on research expenses, allowing firms to deduct qualified R&D costs in the year they occur rather than amortizing them over five years. This change will ease tight margins by freeing up cash flow, enabling increased investment, payroll expansion, and capital improvements—an especially valuable adjustment for smaller firms that depend heavily on cash flow.

¹ U.S. Department of Transportation, "Infrastructure Investment and Jobs Act (IIJA) Funding Status," 2025.

Monetary Policy Shifts and Tariff Pressures on Construction

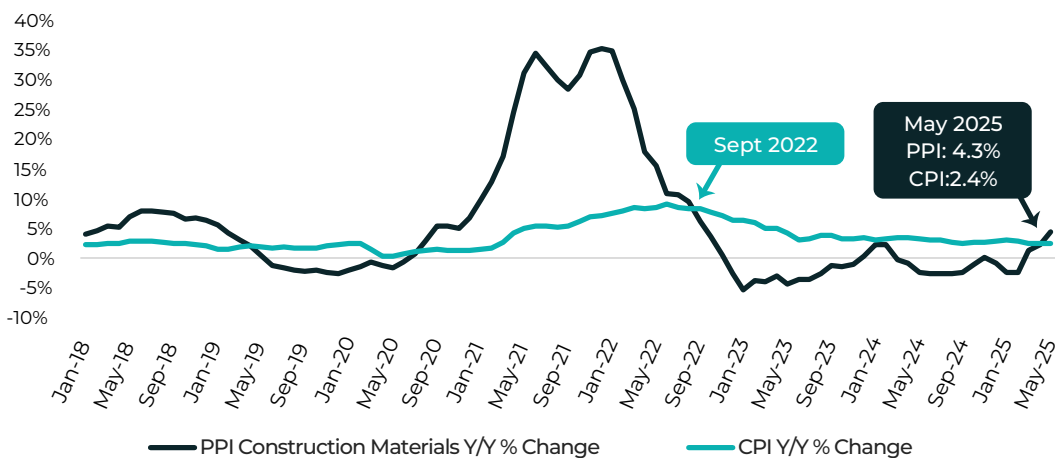
Annual Average Federal Funds Rate 2019-2028



Sources: Federal Reserve Bank of St. Louis, Rockport Analytics

Interest rates were cut in 2024 for the first time since 2020, but trade uncertainty kept them stalled at 4.3 percent. A weak jobs report in the second quarter of 2025 has led The Fed to announce a rate cut on September 17, 2025, lowering the benchmark interest rate to a range of 4 percent to 4.25 percent. Current federal funds rate forecasts project further cuts that would eventually keep rates below 3.5 percent through 2028—assuming trade talks do not trigger further complications.

Construction Materials PPI vs. Consumer Inflation Year-over-Year Percent Change



Sources: Federal Reserve Bank of St. Louis, Rockport Analytics

Falling rates may help cushion the construction industry against headwinds. Inflation growth has continued to ease since its peak in mid-2022, but material costs have started to trend upward again—driven primarily by tariff-related distortions. In fact, in May 2025, the growth rate of the Producer Price Index for construction materials surpassed overall inflation for the first time in nearly three years, indicating that domestic producer prices are climbing faster than consumer prices. This divergence is expected to weigh on construction activity, likely causing a slowdown through the remainder of 2025.

Construction Industry Landscape: Engineering and Design Services Industry End Markets, Challenges and Growth Potential

Construction activity saw moderate gains in 2024, led by a residential rebound, but growth slowed sharply across non-residential and non-building sectors. However, tariffs on key materials like lumber, persistent labor shortages, and broader economic uncertainties have created headwinds that are dragging construction performance downward into 2025. However, only around \$170 billion has been disbursed, meaning these funds will continue to roll out in the coming years.

The total value of U.S. construction rose 8.4 percent year-over-year in 2024. However, tariffs on key imports—especially timber and lumber—plus ongoing labor shortages have dragged down construction put-in-place heading into 2025.



Non-Residential & Commercial

Growth in this sector cooled significantly, dropping from 26.1 percent in 2023 to 9.0 percent in 2024. This slowdown was primarily driven by Manufacturing construction, which went from 68.7 percent growth in 2023 to just 21.5 percent in 2024. Other areas also struggled: Lodging fell 2.6 percent, and Commercial projects declined 6.8 percent. Overall, the sector has dropped another 2.4 percent in the first half of 2025.



Non-Building

Growth in this sector slowed in 2024 to 10.4 percent—a sharp decline from 2023 numbers. This was mainly due to a slowdown in Street and Highway construction, which grew only 4.6 percent in 2024 after a strong 21.1 percent growth in 2023. Other areas also saw significant drops: Sewage and Waste Disposal went from 27.3 percent to 9.8 percent and Conservation and Development declined from 33.3 percent to -2.9 percent. The sector has slowed to 1.0 percent growth in the first half of 2025.



Residential

After a decline in 2023 (-4.4 percent), the Residential sector rebounded with a 7.1 percent increase in 2024. Unfortunately, this recovery was short-lived. The sector has started to decline again, dropping 4.2 percent in the first half of 2025. This stagnation is stalling relief for high home prices and the housing shortage amid a sizeable home construction deficit.

Sources: FMI 2025 Q3 North American Engineering and Construction Outlook, U.S. Census Value of Construction Put in Place Survey, Rockport Analytics

2024 CONSTRUCTION PERFORMANCE

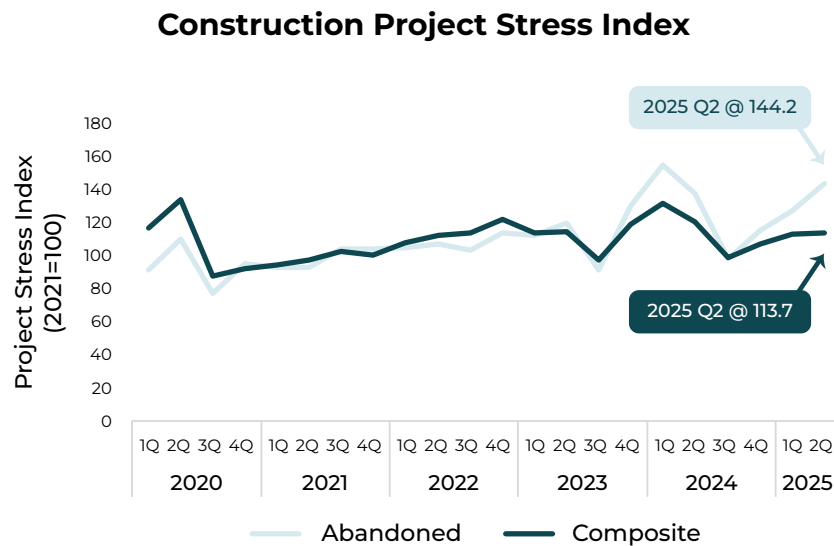
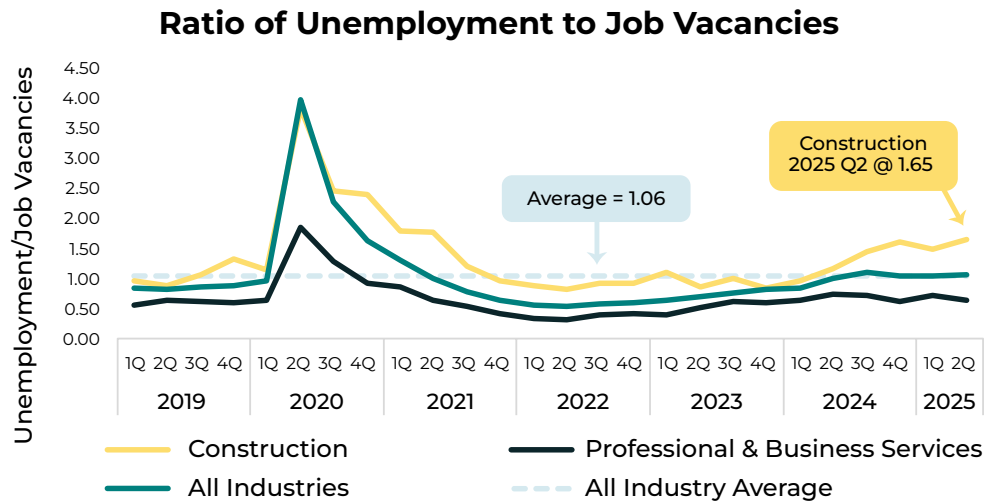
- The residential construction sector climbed 7.1 percent, recovering after dropping 4.4 percent in 2023. The rise in residential construction was driven by single-family home construction, which increased 7 percent in value, whereas multifamily construction value declined 6 percent. This recovery was short-lived, however, as residential construction has once again dipped below 4 percent, with multifamily declining further and single-family construction value slowing to 1 percent. The residential sector is projected to remain sluggish through 2026 and begin to slowly recover in 2027.
- Non-residential and commercial construction slowed considerably in 2024, growing just 9 percent versus 26.1 percent in the previous year. The public safety sector led in terms of construction value growth rates in 2024, at 33 percent, followed by manufacturing (21.5 percent) and educational construction (15.2 percent). Most sectors have declined so far in 2025, with a notable decline of 3.5 percent in manufacturing construction, which is the largest non-residential sector.

Value of Construction Put-in-Place: Non-Residential & Commercial, Non-Building, and Residential 2023-2025

Billions(\$)	GROWTH RATES (PREVIOUS VS. CURRENT YTD)		RAW YEARLY VALUE		
	2024-2023 Y/Y%	2025-2024 YTD Y/Y%	2023	2024	2025 YTD*
Non-Residential & Commercial	9.0%	-2.4%	\$792	\$863	\$842
Public Safety	33.0%	6.0%	\$14	\$19	\$20
Manufacturing	21.5%	-3.5%	\$194	\$236	\$228
Amusement and Recreation	13.8%	3.3%	\$36	\$41	\$42
Educational	15.2%	-1.6%	\$120	\$138	\$136
Transportation	1.1%	3.0%	\$65	\$66	\$68
Religious	5.5%	8.7%	\$4	\$4	\$5
Health Care	6.2%	-0.3%	\$65	\$69	\$69
Communication	5.5%	-1.5%	\$28	\$30	\$29
Office	5.4%	-0.4%	\$99	\$104	\$104
Lodging	-2.6%	-6.1%	\$25	\$24	\$23
Commercial	-6.8%	-9.5%	\$142	\$132	\$120
Non-Building	10.4%	1.0%	\$354	\$391	\$395
Water Supply Systems	17.5%	2.7%	\$28	\$33	\$34
Sewage & Waste Disposal	9.8%	7.8%	\$42	\$46	\$50
Power Plants/Pipeline/ Communications	16.3%	-0.3%	\$134	\$156	\$155
Streets and Highways	4.6%	-0.3%	\$138	\$144	\$144
Total Conservation and Development	-2.9%	1.8%	\$12	\$12	\$12
Residential	7.1%	-4.2%	\$878	\$941	\$901
Total Construction	8.4%	-2.6%	\$2,024	\$2,195	\$2,138
Total Public Construction	10.6%	2.6%	\$451	\$499	\$512
Total Private Construction	7.8%	-4.1%	\$1,573	\$1,696	\$1,627

*2025 is only January – May, and May is preliminary data
Sources: Rockport Analytics, U.S. Census Bureau

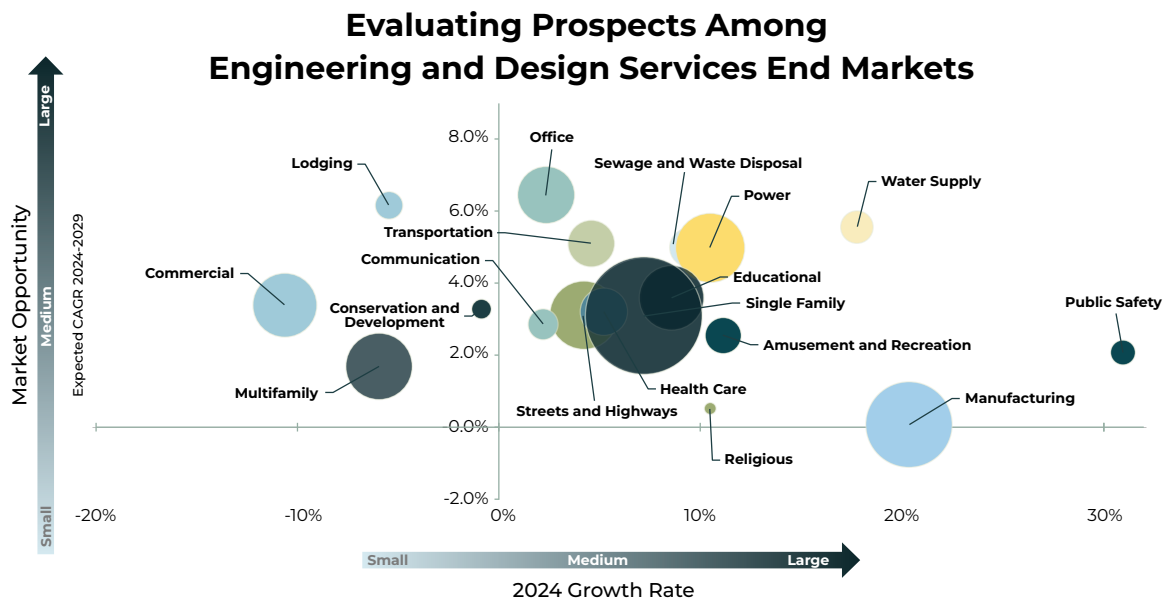
- In the second quarter of 2025, construction unemployment stood at 4.8 percent, compared to the all-industry rate of 4.2 percent. This is slightly lower than the pre-COVID construction average of 5.1 percent; however, shortages are more accurately assessed when comparing them to the trend in job vacancies.
- The ratio of unemployed workers to job vacancies in construction has climbed above the all-industry average since mid-2024, reaching 1.65 in 2025 Q2—meaning there are more than one and a half unemployed workers for every job opening. For comparison, the all-industry ratio is 1.06.
- The Construction Project Stress Index highlights mounting labor pressures, with the composite index rising to 113.7 in 2025. This reflects an increase in projects on hold, delayed, or abandoned, while the abandoned project sub-index surged to 144.2. Since values above 100 indicate above-average stress, these figures point to growing disruption across construction segments, particularly through higher abandonment rates.



Sources: ConstructConnect Project Stress Index, Rockport Analytics, 2025

LOOKING FORWARD

- The chart and table below and on the following page highlight growth prospects for Engineering and Design Services industry end markets through 2029. In the bubble chart, higher placement signals stronger long-term growth, with bubble size representing construction value. Office (+6.4 percent) and Lodging (+6.2 percent) lead projected gains, while markets positioned furthest right show the fastest 2024 expansion—most notably Public Safety (+31 percent).
- Residential construction is the biggest drag on 2025 activity, falling in Q2 to its lowest level since the pandemic. Key pressures include higher tariffs on imported building materials, elevated mortgage rates, stubbornly high prices, and weak demand amid the largest stock of unsold completed homes since the Great Recession.
- Private construction has contracted steadily since mid-2024, a trend likely to persist until trade uncertainty eases and contractors gain clarity on costs and demand. The few bright spots in 2025 are data centers and public infrastructure, which continue to show resilience despite broader softness.
- After three years of double-digit expansion, Manufacturing construction is expected to lag other sectors through 2029. Rising steel costs and limited availability are the main forces impeding growth, compounded by the 50 percent tariffs aimed at reshoring steel and aluminum production. Steel-intensive projects—warehouses, infrastructure upgrades, and large manufacturing facilities—face the greatest risk of delay and disruption in 2025.



Sources: FMI 2025 Q3 North American Engineering and Construction Outlook, U.S. Census Value of Construction Put in Place Survey, Rockport Analytics

Construction Segment	2024 Industry Size (\$ Billions)	CAGR 2024-2029	2024 Growth
Public Safety	\$18,852	2.10%	31.00%
Manufacturing	\$233,035	0.10%	20.40%
Water Supply	\$32,973	5.60%	17.80%
Amusement and Recreation	\$40,227	2.50%	11.10%
Religious	\$4,199	0.50%	10.50%
Power	\$148,026	5.00%	10.50%
Sewage & Waste Disposal	\$45,854	5.00%	9.40%
Educational	\$130,500	3.60%	8.50%
Single-family	\$429,737	3.10%	7.20%
Health Care	\$68,823	3.20%	5.20%
Transportation	\$68,229	5.10%	4.60%
Streets and Highways	\$143,858	3.10%	4.20%
Office	\$101,297	6.40%	2.30%
Communication	\$28,615	2.90%	2.20%
Conservation and Development	\$11,617	3.30%	-0.90%
Lodging	\$23,389	6.20%	-5.50%
Multifamily	\$136,905	1.70%	-6.00%
Commercial	\$126,633	3.40%	-10.60%

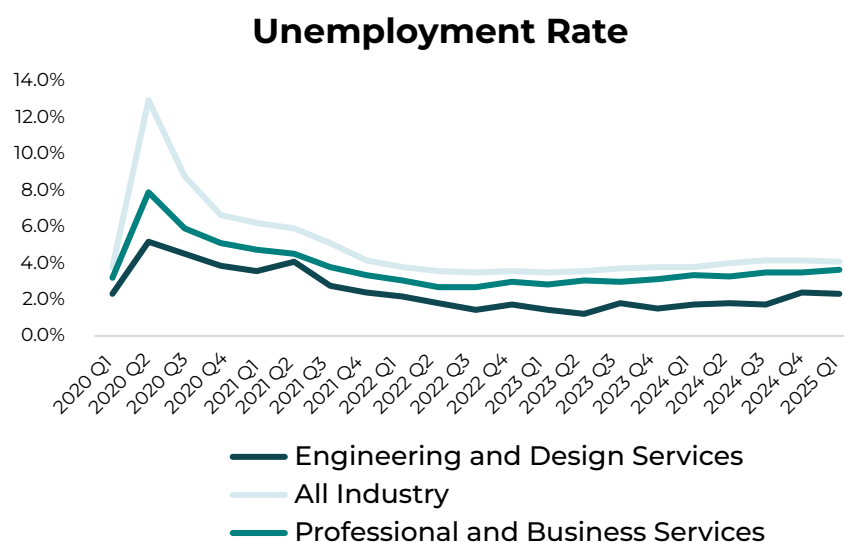
Sources: FMI 2025 Q3 North American Engineering and Construction Outlook, U.S. Census Value of Construction Put in Place Survey, Rockport Analytics

Additional Drivers of Change in Engineering and Design Services

The Industry's Capacity to Grow Is Being Constrained by Staffing Shortages and an Aging Workforce

The Q3 2025 release of the ACEC Research Institute's *Engineering Business Sentiment* revealed that among firm executives who expressed negative sentiment for the next twelve months, 45 percent of these firm executives said they were concerned about labor shortages—which was 13 points higher than in the previous quarter.² This finding underscores the severity of understaffing in ACEC member firms, where companies are being forced to pass up opportunities as well as forgo revenue growth simply because they do not have the required manpower to deliver projects to clients, whether because of quality or time-constraint concerns.

There are some signs that the labor market has slackened, even if slightly, over the past year. Between the first quarter of 2022 and the third quarter of 2024, the average unemployment rate for the Engineering and Design Services industry was just 1.7 percent. But rates climbed 0.7 percentage points in the fourth quarter of 2024 and remained at this elevated level, reaching 2.4 percent in the first quarter of 2025.

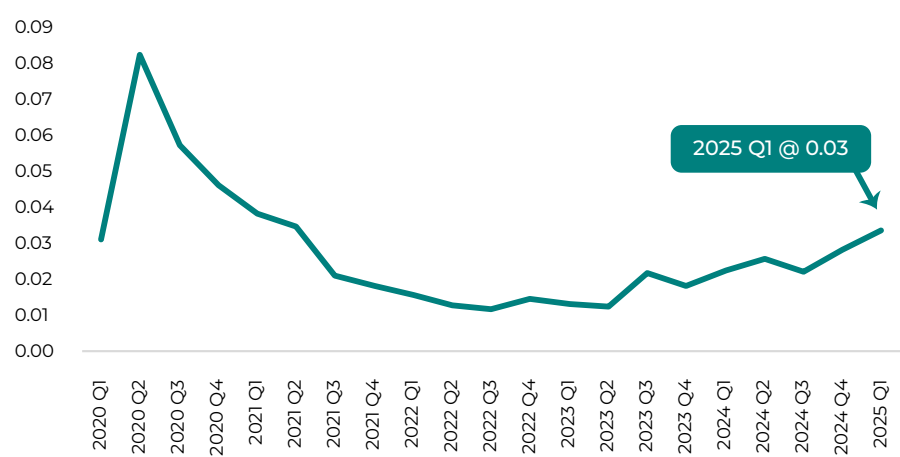


Sources: Bureau of Labor Statistics, Local Area Unemployment Statistics

² ACEC Research Institute, *Engineering Business Sentiment: Q3 2025*, Washington, DC: ACEC Research Institute, September 2025.

Another useful way to measure labor supply pressure is to compare the number of unemployed Engineering and Design industry workers with job openings in the wider professional and business services sector. While job openings are not published specifically for the Engineering and Design Services industry, this comparison still offers valuable insight. From 2021 through 2023, the ratio of unemployed Engineering and Design workers to job openings averaged 0.02. Since 2024, this figure has inched upward, reaching 0.03 in the first quarter of 2025. This suggests that the number of unemployed Engineering and Design workers per unfilled position is increasing. A study on the current state and the future of architecture showed that both students and professionals believed there was a gap between what programs taught and what was actually needed in professional practice, with students lacking certain technical skills and the knowledge to use new technology systems.³

Ratio of Engineering and Design Services Unemployment to Professional and Business Services Job Openings



Sources: Bureau of Labor Statistics, Local Area Unemployment Statistics, Current Population Survey

With a clear and present labor shortage, the question becomes how to address it. The industry needs more skilled workers—not only to maintain productivity, but also to pursue growth without being constrained by staffing limits. Yet degree completion data offers little reassurance. Since 2020–2021, the share of civil engineering and architecture degrees awarded at U.S. universities has been essentially flat. In 2020, about 21,000 civil engineering degrees and 16,700 architecture degrees were awarded; by 2023, the numbers had shifted only slightly to 20,500 and 18,600, respectively. In short, there are too few engineers and architects entering the workforce.

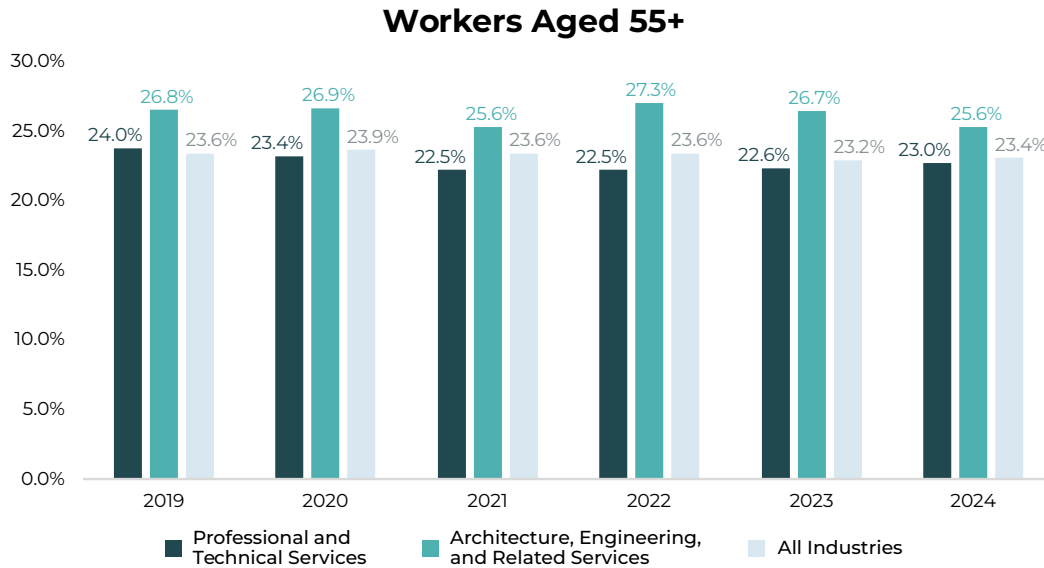
Share of All US College Graduates Earning Degrees in Engineering and Architecture

Academic Year	Degrees Granted		Annual % Change	
	Civil Engineering	Architecture	Civil Engineering	Architecture
2019-2020	21,020	16,690		
2020-2021	20,816	16,449	-1.0%	-1.4%
2021-2022	20,382	17,179	-2.1%	4.4%
2022-2023	20,507	18,580	0.6%	8.2%

Sources: National Center for Education Statistics, IPEDS Data Center, U.S. Department of Education

³ Building Impact: Perspectives and Recommendations on the Current State and Future of Architecture, Rand, March, 2025.

This issue is compounded by the industry's demographic profile. The Engineering and Design Services industry has historically had a larger share of workers over the age of 55 compared to the broader economy. Leaders worry about the impact that retirements—and the resulting loss of institutional knowledge—could have on productivity and workflow. Participation among workers aged 55 and older has fallen to its lowest point since 2021, at 25.6 percent, signaling a potential acceleration in retirements. In response, many firms have turned to internship programs and mentorship arrangements that pair new hires with experienced staff to bridge the skills gap. Others are increasingly adopting artificial intelligence tools to support productivity and to compensate, where possible, for gaps left by departing senior workers.



Sources: Rockport Analytics, U.S. Census Bureau, 2025

Firms Are Increasingly Turning to AI Tools to Offset Staffing Shortages and Maintain Projects

The adoption of artificial intelligence (AI) continues to be a crucial strategy for an industry grappling with a widening skills and knowledge gap. Increasingly, AI is being used to help firms meet deadlines and maintain productivity despite a shortage of qualified labor. What began as individual-level experimentation has quickly scaled to organizational-level implementation. A recent CoLab survey of engineering leaders illustrates this shift: all respondents agreed that full AI adoption within the next two years is important, and nearly half said it was critically important, potentially determining whether a firm stays in business.⁴

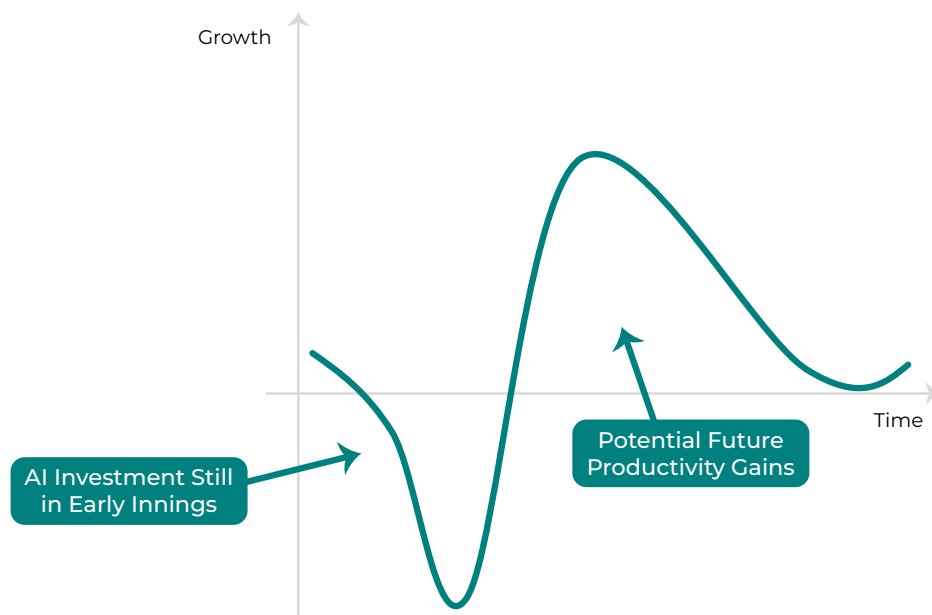
Among the applications gaining the most traction are AI-powered drawing reviews, a notoriously time-consuming process for engineering and design teams. Early evidence also suggests that firm-level AI investment is correlated with modest increases in both sales and employment—about 2 percent higher compared to non-investing firms—though these effects take time to materialize because companies must also invest in complementary assets to maximize the benefits of new systems.⁵

⁴ Jon Filson, "The AI Shift in Engineering: Moving from Individual Effort to Organizational Adoption," Colab Software, September 10, 2025.

⁵ Peter Dizikes, "Daron Acemoglu: What Do We Know about the Economics of AI?," MIT Economics, December 6, 2024.

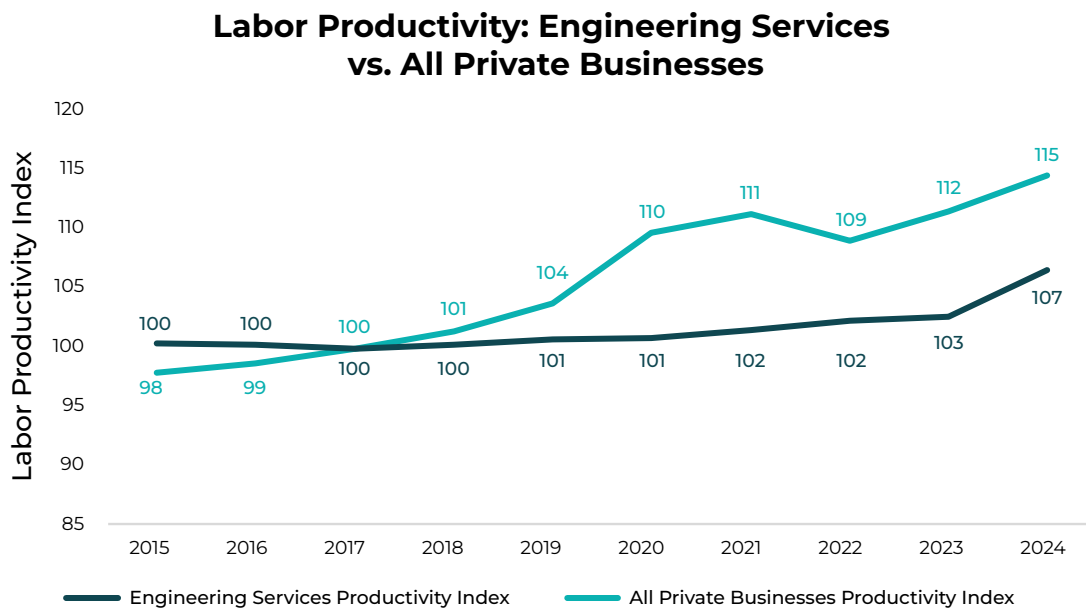
An important caveat is that the effective use of AI requires new skills in its own right. As firms adopt these tools, they must identify and recruit the right skill sets to ensure the technology can be fully leveraged. The ACEC Research Institute's 2025 study on *The Role of Artificial Intelligence in the Engineering Industry* suggests that firm leaders are optimistic, with many expecting AI to automate as much as 29 percent of current work tasks.⁶ However, current research has not yet established a clear link between AI investments and improvements in sales per worker or total factor productivity. Some of this may reflect timing: large up-front investments often obscure near-term gains, while productivity benefits tend to emerge in the longer run. This pattern reflects the so-called productivity J-curve, where returns appear muted or negative initially but accelerate once complementary assets and processes catch up to the new technology.

It Will Take Time & Investment for the Engineering and Design Services Industry to Realize Productivity Gains from the AI Revolution



⁶ ACEC Research Institute, *The Role of Artificial Intelligence in the Engineering Industry* (Washington, D.C.: ACEC Research Institute, May 2025).

Still, there is debate about whether technological adoption alone can solve the industry's labor challenges. Some economists argue that the skills gap may ultimately be better filled through human capital rather than technological capital, since the productivity boost from AI may prove moderate even once it materializes. That said, there are signs of improvement already visible in the Engineering Services industry. Labor productivity, measured as output per hour, rose 4 percent from 2023 to 2024 after years of stagnation below 1 percent since 2015. While industry productivity still lags the all-industry average, continued growth could help close the gap that has gradually widened since 2018.



Sources: Bureau of Labor Statistics, Detailed Industry Productivity

Appendix I: Industry Economic Impact Measures by State

Engineering and Design Services Industry State-Level Impacts

Total Industry GDP 2024 (in millions \$)				
State	Direct	Indirect	Induced	Total GDP
Alabama	\$5,033	\$2,558	\$4,446	\$12,037
Alaska	\$680	\$225	\$431	\$1,337
Arizona	\$5,085	\$2,876	\$5,705	\$13,666
Arkansas	\$941	\$391	\$671	\$2,003
California	\$35,258	\$21,351	\$37,038	\$93,647
Colorado	\$10,068	\$6,219	\$11,874	\$28,161
Connecticut	\$2,118	\$1,146	\$1,725	\$4,989
Delaware	\$587	\$262	\$314	\$1,163
District of Columbia	\$1,561	\$661	\$114	\$2,336
Florida	\$15,134	\$8,766	\$16,601	\$40,501
Georgia	\$7,615	\$4,874	\$8,967	\$21,455
Hawaii	\$1,012	\$425	\$889	\$2,326
Idaho	\$1,255	\$584	\$1,044	\$2,883
Illinois	\$7,239	\$4,769	\$8,669	\$20,677
Indiana	\$3,021	\$1,556	\$2,836	\$7,413
Iowa	\$1,355	\$543	\$918	\$2,816
Kansas	\$2,422	\$1,320	\$1,796	\$5,538
Kentucky	\$1,859	\$920	\$1,522	\$4,301
Louisiana	\$3,383	\$1,613	\$2,827	\$7,823
Maine	\$871	\$394	\$738	\$2,003
Maryland	\$6,525	\$3,667	\$5,745	\$15,937
Massachusetts	\$8,021	\$4,840	\$7,453	\$20,314
Michigan	\$13,942	\$8,492	\$14,536	\$36,970

Engineering and Design Services Industry State-Level Impacts

Total Industry GDP 2024 (in millions \$)

State	Direct	Indirect	Induced	Total GDP
Minnesota	\$4,019	\$2,256	\$3,817	\$10,092
Mississippi	\$845	\$334	\$604	\$1,783
Missouri	\$3,967	\$2,336	\$3,567	\$9,871
Montana	\$860	\$356	\$636	\$1,852
Nebraska	\$1,147	\$544	\$847	\$2,538
Nevada	\$2,056	\$979	\$1,712	\$4,747
New Hampshire	\$1,464	\$811	\$1,210	\$3,485
New Jersey	\$6,877	\$4,582	\$7,298	\$18,756
New Mexico	\$1,227	\$472	\$864	\$2,563
New York	\$13,222	\$7,006	\$9,682	\$29,910
North Carolina	\$7,028	\$4,363	\$8,038	\$19,429
North Dakota	\$648	\$250	\$401	\$1,299
Ohio	\$6,343	\$3,628	\$6,523	\$16,494
Oklahoma	\$1,617	\$752	\$1,438	\$3,807
Oregon	\$2,677	\$1,481	\$2,427	\$6,585
Pennsylvania	\$9,074	\$5,483	\$9,077	\$23,635
Rhode Island	\$585	\$287	\$423	\$1,295
South Carolina	\$3,326	\$1,982	\$3,462	\$8,771
South Dakota	\$480	\$176	\$328	\$984
Tennessee	\$3,905	\$2,463	\$4,786	\$11,154
Texas	\$31,170	\$21,603	\$43,193	\$95,966
Utah	\$2,734	\$1,659	\$2,902	\$7,295
Vermont	\$455	\$193	\$327	\$975
Virginia	\$10,697	\$6,354	\$9,460	\$26,512
Washington	\$6,455	\$3,449	\$6,062	\$15,966
West Virginia	\$574	\$220	\$341	\$1,134
Wisconsin	\$3,278	\$1,604	\$2,805	\$7,687
Wyoming	\$322	\$103	\$170	\$595
U.S. TOTAL	\$262,034	\$154,179	\$269,261	\$685,473

Sources: Rockport Analytics, IMPLAN

Engineering and Design Services Industry State-Level Impacts

Jobs Supported 2024

State	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs
Alabama	32,771	26,551	48,551	107,872
Alaska	4,745	2,479	6,035	13,258
Arizona	33,651	27,548	49,720	110,919
Arkansas	8,141	4,653	10,425	23,219
California	191,304	165,464	283,658	640,425
Colorado	59,074	54,017	94,842	207,934
Connecticut	13,932	10,960	19,122	44,013
Delaware	4,140	2,917	5,147	12,204
District of Columbia	8,310	5,926	7,349	21,584
Florida	110,729	94,252	166,689	371,670
Georgia	51,940	49,585	82,239	183,765
Hawaii	6,558	4,338	9,126	20,022
Idaho	9,384	6,346	12,598	28,327
Illinois	49,884	49,086	83,254	182,225
Indiana	24,330	16,362	32,657	73,348
Iowa	9,613	5,483	12,423	27,519
Kansas	16,582	13,980	22,865	53,428
Kentucky	14,576	9,854	19,236	43,666
Louisiana	24,655	18,125	34,809	77,589
Maine	6,426	4,088	8,514	19,028
Maryland	41,319	40,471	62,826	144,616
Massachusetts	43,565	38,148	62,446	144,159
Michigan	84,482	83,464	135,259	303,204
Minnesota	26,023	20,799	38,011	84,833
Mississippi	7,024	4,098	9,134	20,256
Missouri	26,215	25,874	40,577	92,665
Montana	6,146	3,695	7,870	17,710
Nebraska	8,284	5,713	11,023	25,019
Nevada	14,439	10,976	19,746	45,161
New Hampshire	8,952	7,245	12,198	28,395
New Jersey	43,019	42,849	67,216	153,084
New Mexico	9,122	5,460	11,926	26,508
New York	80,671	67,908	110,791	259,369
North Carolina	51,333	40,991	74,329	166,653

Engineering and Design Services Industry State-Level Impacts

Jobs Supported 2024				
State	Direct Jobs	Indirect Jobs	Induced Jobs	Total Jobs
North Dakota	4,655	2,512	5,733	12,900
Ohio	47,874	38,805	71,598	158,277
Oklahoma	12,937	9,184	18,033	40,154
Oregon	19,088	13,669	25,259	58,017
Pennsylvania	63,879	52,775	93,163	209,816
Rhode Island	4,622	3,107	5,719	13,447
South Carolina	24,750	21,905	37,555	84,210
South Dakota	3,763	1,790	4,635	10,188
Tennessee	26,506	26,142	44,128	96,775
Texas	190,280	207,030	345,873	743,183
Utah	20,642	19,166	31,651	71,459
Vermont	3,286	1,924	4,080	9,290
Virginia	63,462	62,196	98,478	224,136
Washington	39,725	30,003	56,850	126,578
West Virginia	5,013	2,674	6,020	13,707
Wisconsin	24,650	16,567	33,677	74,894
Wyoming	2,701	1,279	3,214	7,194
U.S. TOTAL	1,689,169	1,480,431	2,558,276	5,727,876

Sources: Rockport Analytics, IMPLAN

Engineering and Design Services Industry State-Level Impacts

Wages Supported 2024 (in millions \$)

State	Direct Wages	Indirect Wages	Induced Wages	Total Wages
Alabama	\$3,758	\$1,492	\$2,526	\$7,776
Alaska	\$498	\$144	\$312	\$954
Arizona	\$3,742	\$1,739	\$2,683	\$8,165
Arkansas	\$701	\$225	\$448	\$1,375
California	\$25,968	\$13,283	\$18,358	\$57,609
Colorado	\$7,403	\$3,858	\$5,426	\$16,686
Connecticut	\$1,563	\$698	\$1,031	\$3,292
Delaware	\$432	\$171	\$267	\$870
District of Columbia	\$1,133	\$442	\$570	\$2,145
Florida	\$11,119	\$5,432	\$7,924	\$24,475
Georgia	\$5,630	\$2,954	\$4,099	\$12,683
Hawaii	\$742	\$256	\$495	\$1,492
Idaho	\$925	\$357	\$612	\$1,894
Illinois	\$5,398	\$2,847	\$3,970	\$12,215
Indiana	\$2,259	\$906	\$1,542	\$4,706
Iowa	\$1,008	\$304	\$634	\$1,946
Kansas	\$1,800	\$826	\$1,180	\$3,806
Kentucky	\$1,391	\$538	\$922	\$2,850
Louisiana	\$2,509	\$1,000	\$1,684	\$5,193
Maine	\$641	\$247	\$431	\$1,319
Maryland	\$4,787	\$2,314	\$3,233	\$10,333
Massachusetts	\$5,891	\$2,999	\$4,014	\$12,904
Michigan	\$10,374	\$5,201	\$7,341	\$22,916
Minnesota	\$2,986	\$1,368	\$2,058	\$6,412
Mississippi	\$627	\$199	\$404	\$1,230
Missouri	\$2,948	\$1,494	\$2,052	\$6,494
Montana	\$632	\$220	\$407	\$1,259
Nebraska	\$849	\$328	\$549	\$1,726
Nevada	\$1,512	\$587	\$993	\$3,092
New Hampshire	\$1,078	\$509	\$715	\$2,302
New Jersey	\$5,090	\$2,794	\$3,618	\$11,502
New Mexico	\$902	\$299	\$578	\$1,778
New York	\$9,688	\$4,410	\$6,279	\$20,377

Engineering and Design Services Industry State-Level Impacts

Wages Supported 2024 (in millions \$)

State	Direct Wages	Indirect Wages	Induced Wages	Total Wages
North Carolina	\$5,210	\$2,627	\$3,759	\$11,596
North Dakota	\$479	\$147	\$297	\$923
Ohio	\$4,745	\$2,165	\$3,355	\$10,265
Oklahoma	\$1,195	\$465	\$813	\$2,473
Oregon	\$1,974	\$909	\$1,336	\$4,220
Pennsylvania	\$6,749	\$3,370	\$4,760	\$14,880
Rhode Island	\$430	\$177	\$278	\$886
South Carolina	\$2,478	\$1,187	\$1,743	\$5,409
South Dakota	\$355	\$102	\$224	\$681
Tennessee	\$2,907	\$1,466	\$2,155	\$6,528
Texas	\$23,186	\$13,068	\$17,925	\$54,179
Utah	\$2,022	\$1,019	\$1,429	\$4,470
Vermont	\$334	\$122	\$213	\$669
Virginia	\$7,887	\$4,091	\$5,386	\$17,364
Washington	\$4,757	\$2,100	\$3,237	\$10,094
West Virginia	\$426	\$129	\$262	\$817
Wisconsin	\$2,437	\$940	\$1,639	\$5,017
Wyoming	\$236	\$61	\$142	\$439

U.S. TOTAL	\$193,790	\$94,586	\$136,310	\$424,686
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Sources: Rockport Analytics, IMPLAN

Engineering and Design Services Industry State-Level Impacts

Taxes 2024 (in millions \$)

State	Total Federal Taxes	Total State & Local Taxes	Total Taxes
Alabama	\$1,703	\$801	\$2,504
Alaska	\$189	\$87	\$276
Arizona	\$1,934	\$781	\$2,715
Arkansas	\$283	\$146	\$430
California	\$13,251	\$6,814	\$20,066
Colorado	\$3,985	\$1,703	\$5,688
Connecticut	\$706	\$395	\$1,101
Delaware	\$165	\$76	\$240
District of Columbia	\$331	\$109	\$440
Florida	\$5,731	\$2,368	\$8,099
Georgia	\$3,036	\$1,233	\$4,269
Hawaii	\$329	\$238	\$568
Idaho	\$408	\$188	\$596
Illinois	\$2,926	\$1,594	\$4,520
Indiana	\$1,049	\$488	\$1,537
Iowa	\$399	\$185	\$584
Kansas	\$784	\$380	\$1,163
Kentucky	\$609	\$305	\$914
Louisiana	\$1,107	\$538	\$1,645
Maine	\$283	\$174	\$457
Maryland	\$2,255	\$1,255	\$3,510
Massachusetts	\$2,874	\$1,418	\$4,293
Michigan	\$5,231	\$2,404	\$7,636
Minnesota	\$1,428	\$757	\$2,185
Mississippi	\$252	\$136	\$388
Missouri	\$1,397	\$604	\$2,001
Montana	\$262	\$134	\$396
Nebraska	\$359	\$148	\$507
Nevada	\$672	\$316	\$987
New Hampshire	\$493	\$199	\$692
New Jersey	\$2,654	\$1,602	\$4,256
New Mexico	\$363	\$289	\$652
New York	\$4,232	\$2,731	\$6,963

Engineering and Design Services Industry State-Level Impacts

Taxes 2024 (in millions \$)

State	Total Federal Taxes	Total State & Local Taxes	Total Taxes
North Carolina	\$2,749	\$1,151	\$3,900
North Dakota	\$184	\$106	\$290
Ohio	\$2,334	\$1,037	\$3,371
Oklahoma	\$539	\$256	\$795
Oregon	\$932	\$537	\$1,468
Pennsylvania	\$3,344	\$1,738	\$5,082
Rhode Island	\$183	\$101	\$284
South Carolina	\$1,241	\$573	\$1,814
South Dakota	\$139	\$52	\$191
Tennessee	\$1,578	\$598	\$2,177
Texas	\$13,580	\$5,211	\$18,791
Utah	\$1,032	\$445	\$1,477
Vermont	\$138	\$99	\$237
Virginia	\$3,752	\$1,816	\$5,568
Washington	\$2,259	\$963	\$3,222
West Virginia	\$160	\$90	\$251
Wisconsin	\$1,088	\$515	\$1,602
Wyoming	\$84	\$43	\$127

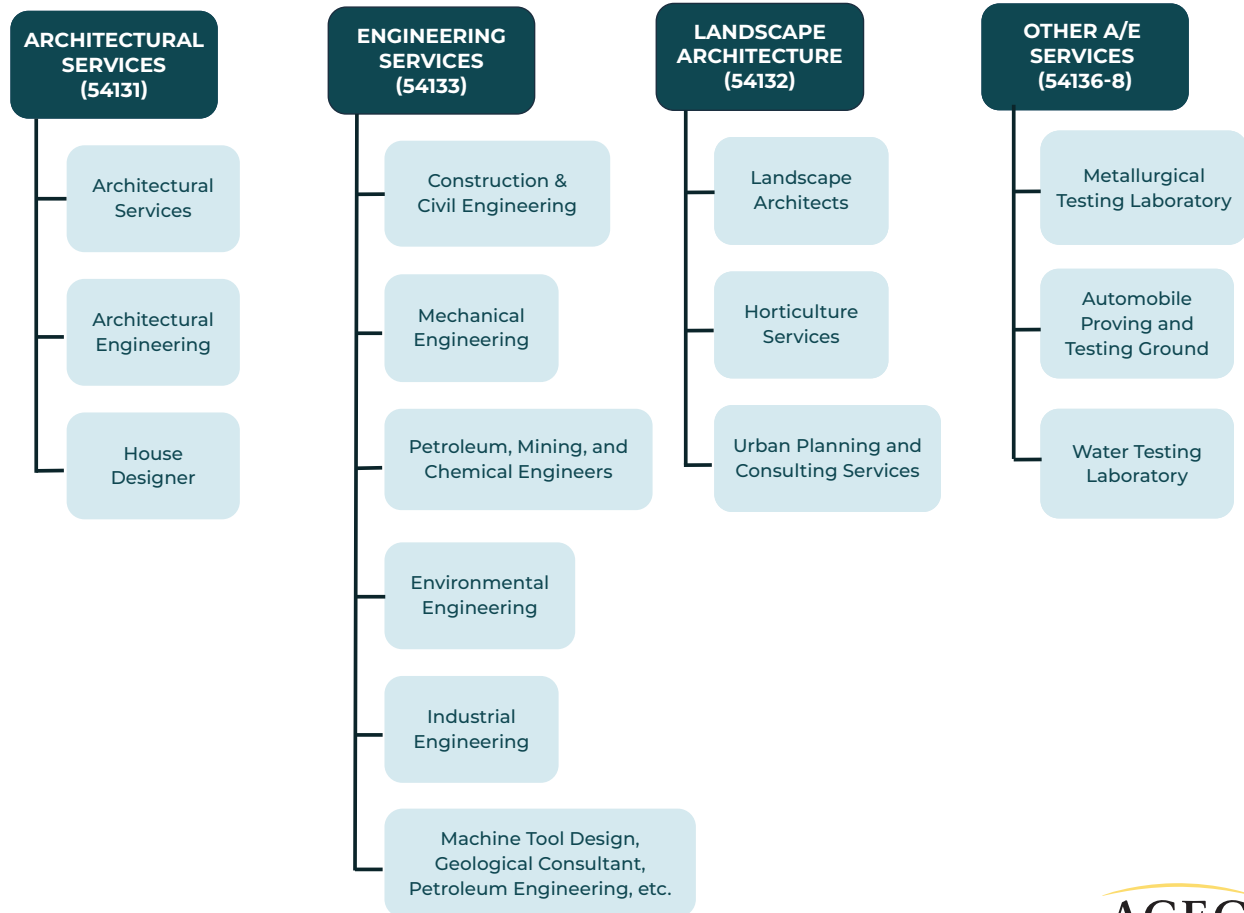
U.S. TOTAL	\$96,998	\$45,930	\$142,927
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Sources: Rockport Analytics, IMPLAN, Bureau of Economic Analysis, Bureau of Labor Statistics, U.S. Census Bureau

Appendix II: Engineering and Design Services Industry Definition

The definition of the Engineering and Design Services industry has been primarily developed based upon the ways in which public and private data sources collect and publish information from all businesses across the U.S. – the North American Industry Classification System, or NAICS. NAICS is a hierarchical industry taxonomy that provides classification standards for businesses according to their stated activities. Most public and private data collection conforms to these standards.

The NAICS code “5413, Architectural, Engineering, and Related Services” is part of the broad category, “54 - Professional, Scientific, and Technical Services” and includes both private and public sector organizations from a number of sub-sectors including:



This study will focus on the all-inclusive NAICS 5413 category to define Engineering and Design Services activity for several reasons:

- More data with higher frequencies and greater regional detail are available at the 4-digit (5413) NAICS level. The deeper we drill into the NAICS structure, the less available and robust the data describing industry performance.
- Second, as a result of mergers and/or vertical integration strategies, more and more traditional ACEC members do operate across many of the sub-sectors within 5413.
- Third, given the economic and policy drivers of the Engineering and Design Services industry, it is likely that measured trends for NAICS 5413 will hold for most, if not all, of its member sub-sectors.
- Finally, a broader definition of Engineering and Design may bring more potential members into the ACEC family.

One important note regarding the analysis and interpretation of the results in this study. Our focus on NAICS 5413 in its entirety is not perfectly representative of board licensed professionals providing engineering services for the built environment (physical infrastructure) and the firms for which they work. Such firms are notable and different for a number of reasons, including:

- Professional licensure creates direct moral and liability considerations for the licensed professional and their firms, regarding the safety and health of people and property.
- Federal, state, and local governments have laws and statutes which provide for separate procurement processes that involve the selection of providers of licensed professional and related services based on capability and experience criteria.
- Services can only be provided in disciplines (civil, mechanical, electrical, structural, environmental, etc.) the professionals are qualified to perform, and in many states, firm ownership is required to consist of all or a certain percentage of active professionals in the firm. This has the effect of also limiting the size of many such firms.
- Design work usually requires the teaming of firms with varied discipline capabilities and experience.
- Board licensing is for individual states or territories, resulting in geographical emphasis or limits on where work can be performed by individual firms.
- Since built environment involves facilities and infrastructure that are unique, due to the physical conditions involved, their designs must be correct when complete. Prototypes and beta testing are not an option since the initial construction costs and later corrections are prohibitive. The designs must be right the first time.

Since the definitions of NAICS Code 5413 and 541330 do not distinguish design of built environment from the design of equipment, systems, materials, instruments, software, and similar repeatable products and most data gathering surveys and processes allow for self-determination of NAICS Code reporting, many manufacturing, industrial, and management firms are included in the results. Often these are large enterprises that may skew the results.

While these firms may be “applying physical laws and principles of engineering in their design work,” they are essentially operating in a different business sector of the Engineering and Design industry. ACEC represents the business interests of firms across all NAICS Code 5413, but recognizes the difference involved. We have attempted to provide context and insight where we have evidence that the more relevant data might deviate from the broader findings.

It must be emphasized that while the data contained in this report is suitable for many purposes, including understanding the size and impact of the Engineering and Design Services industry, the data available and presented is not suitable for evaluating and establishing guidance for decisions on procurement practices or developing size standards for either the aggregate industry or the portion of the industry focused on design of the built environment. The latter portion is heavily concentrated in physical infrastructure design services provided to federal, state, and local governments and entities involved in public works. The firms operating in this sector of the Engineering and Design Services industry make up the largest portion of ACEC membership.

The Industry Forecast Methodology

The foundation for the forecast for Engineering and Design Services includes the historical trends of sector-level industry revenue that were established in earlier phases of research. The goal of this phase of research is to:

1 Update the previous quantitative forecast for Engineering and Design Services activity over the next five years

2 Provide context around the key drivers of the forecast for Engineering and Design Services

3 Analyze key trends, risks, and opportunities

The Engineering and Design Services industry forecast is developed by analyzing historical correlations between key driver variables of the industry with overall industry revenue. Using these mathematical correlations allows us to make inferences around the direction of Engineering and Design Services activity in the future. The forecast is further informed by quantitative data and industry insight to account for additional factors that may not be included in the econometric model.

The Industry Forecast Data Sources

The data-driven effort to profile the Engineering and Design Services industry took advantage of a comprehensive set of published data from several public and private sources including:

U.S. Census Bureau

Statistics of U.S. Business (SUBS) - demographics, housing, income, employment, and business establishment data and trends

U.S. Census Bureau

Value of Construction Put in Place

U.S. Census Bureau

Quarterly Services Survey (QSS)

U.S. Census Bureau

Statistics of U.S. Business (SUBS) - demographics, housing, income, employment and business establishment data and trends

U.S. Bureau of Labor Statistics (BLS)

Industry employment and earnings plus occupational employment and annual salary statistics

U.S. Bureau of Economic Analysis (BEA)

National Income and Product Accounts (GDP), employment, sales, wages, and supply chain purchases

Dodge Data and Analytics

Commercial construction project data

Other public and private sources

About ACEC Research Institute

The ACEC Research Institute's mission is to deliver knowledge and business strategies that guide and elevate the engineering industry and to be the leading source of knowledge and thought leadership for creating a more sustainable, safe, secure, and technically advanced built environment. The ACEC Research Institute is an independent 501c3 non-profit organization.

About Rockport Analytics

Rockport Analytics is a research and analytical consulting firm providing high quality quantitative and qualitative research solutions to business, government, and non-profit organization clients across the globe. The firm provides nimble service in a completely transparent environment. Capabilities include:

- Industry/Market Analysis and Forecasting
- Economic Impact Assessment and Economic Development
- Market Modeling and Decision Support Tools
- Project Feasibility Assessment
- Primary and Secondary Research Synthesis

The ACEC Research Institute provides the engineering industry with cutting edge research, trend data, and economic analysis to help firm owners make decisions and delivers thought leadership that advances engineering's essential value to society.

The ACEC Research Institute wishes to extend its sincere appreciation to its generous contributors.

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