THE HOME BUILDERS INSTITUTE (HBI) CONSTRUCTION LABOR MARKET REPORT

Spring 2024

Building Careers.
Changing Lives.

Executive Summary

The health of the labor market is key to the outlook for monetary policy, interest rates and housing affordability. A return to stable inflation readings is dependent on gains for labor productivity (via worker training), labor recruitment and reductions for shelter price growth. The residential construction labor workforce lies at the center of these economic and social policy objectives via its connection to adding attainable housing that will reduce shelter inflation.

Gains for single-family home building in 2024 and 2025 will increase the demand for construction labor. Additional skilled construction workers will be needed to reduce the nation's housing deficit during the second part of this decade, a shortfall NAHB estimates to total 1.5 million homes.[1]

This report provides an overview of the current state of the nation's construction labor market. Key findings include:

- There are currently 8.2 million payroll construction workers
- The estimated, required amount of construction worker hiring is approximately 723,000 per year, according to NAHB analysis of BLS data and projections
- Year-over-year gains remain for construction employment are solid, with 75,600 net residential construction jobs added over the last 12 months
- The 6-month moving average of job gains for residential construction was 5,217 a month, as of April
- Average hourly wages in the overall construction industry have increased 5% over the last year, with average wage levels exceeding national private sector averages
- Women make up a growing share of the construction employment, reaching 10.9% in 2022.This is a noticeable increase from 9.1% in 2017 and just below the record high share of 11% recorded in 2021.
- Construction payroll employment currently totals 8.2 million
    - Residential construction represents 3.4 million of this total
- The number of open construction sector jobs was above 400,000 at the start of the year. The count fell in March, but this data point may be revised
- Construction employment is broad-based geographically across the nation
- Self-employment in construction dipped below 23% of the labor force, down from 26% in 2010
- Immigrant workers now account for 24.7% of the construction workforce, a new historic high
- Hispanics make up close to a third of the construction labor force (31.5%), a record high share
- Construction attracts 6.5% of all employed veterans
- The median age of workers in construction is 42
    - As a new encouraging development, the share of younger workers ages 25 and under increased from 9% in 2015 to 10.8% in 2022
    - However, due to aging trends, the share of construction workers ages 25 to 54 decreased from 72% in 2015 to 67.3% in 2022
- At the start of 2023, about 30% of workers worked at home at least two days a week boosting housing demand

[1] https://eyeonhousing.org/2022/12/the-size-of-the-housing-shortage-2021-data/https://eyeonhousing.org/2022/12/the-size-of-the-housing-shortage-2021-data/

Macroeconomic and Construction Employment Outlook

Demand for new construction remains weaker than in 2020-2021 yet still solid despite the current "higher for longer" interest rate environment. The progress for lower inflation has stalled in recent quarters. Consequently, the Federal Reserve has been on hold since July of 2023. Monetary policy easing certainly lies in the future, but the start of such actions has clearly been delayed. NAHB's revised monetary policy forecast now calls for the first rate cut of the cycle to occur in December 2024, with six more in 2025.

During this policy delay, which extends back to July of 2023, shelter inflation remains the dominant driver of inflation. For much of the last year, shelter inflation - rent and homeownership costs - has been the responsible for most of the increase for consumer inflation. For the last leg of the fight against inflation to be completed, the housing market must come into balance. However, with existing home inventory at levels making up half of what would be considered a balanced market and new construction constrained by supply-side headwinds - most notably the lack of skilled construction labor - the total increase in attainable housing supply the market needs appears to years away.

Ironically, the higher interest rates being used to fight inflation are making this needed increase in home building that much more difficult. By raising the cost and lowering the availability of AD&C loan financing for builders and land development firms, ongoing restrictive monetary policy is harming housing supply and limiting the ability of market forces to lower shelter inflation, delaying the larger policy objective of bringing inflation down to the Fed's 2% target.

However, despite elevated interest rates, according to an NAHB survey conducted at the end of 2023, home builders ranked the skilled labor shortage as the top challenge they faced in 2023 and the top expected challenge for 2024. While some cooling has been observed in the construction labor market with respect to open, unfilled jobs, the market remains tight. As of February, there were 456,000 open construction sector jobs. This is off only slightly from an all-time high of 488,000 in December of 2022.

Looking forward, the Fed will eventually begin to ease monetary policy. Certainly, the start of this process has been delayed. But as inflation moves closer to the 2% price growth target, nominal rates will move lower. This will improve housing supply and housing demand. And in turn, the nation will require additional construction workers to reduce the existing housing deficit of approximately one and a half million homes.

As explored in this report, there are several ways to measure the current need for additional workers. According to NAHB Economics analysis of Bureau of Labor Statistics (BLS) data and projections, the average annual number of occupational openings in construction totals approximately 723,000 a year.[2] This estimate is determined by estimating the required net growth in employment due to construction expansion ***plus*** workers required to replace individuals who leave the sector permanently. This estimate reflects a need of more than 60,000 adjusted net hires a month. Over the course of 2024-2026, this total represents a need for an additional 2.17 million adjusted net hires for construction.

[2] BLS occupational projections are found here: https://www.bls.gov/emp/tables/occupational-projections-and-characteristics.htm

This measure can be broken down for a few, specific occupations. For example, the number of occupational job openings for carpenters totals 9,100 per year. And the number of annual occupational job openings totals almost 8,000 for electricians, almost 5,200 for pipelayers, more than 5,000 for construction equipment operators, and more than 1,000 for drywall installers.

On a gross basis, over the period 2020-2022, total hires in the sector averaged approximately 4.57 million annually. These larger estimates reflect rehires (or intrafirm churn) in the sector as workers shift from business to business within the sector.

On a simple net basis, the 2021 BLS estimates find that total construction employment is forecasted to rise from 7.03 million in 20201 to 7.28 million in 2031, for a net need of more than 25,000 workers per year. This represents a forecast of average annual construction employment growth of 3.6% per year.

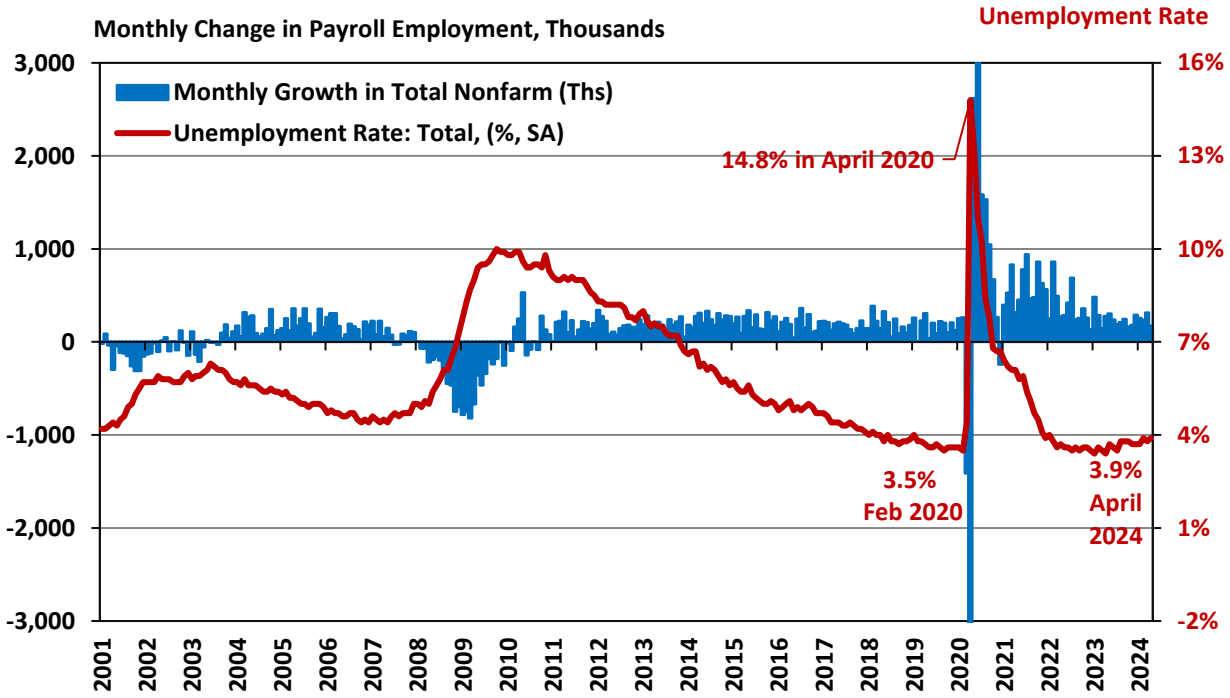
US Employment

The latest economic data show that labor markets remain healthy after a strong start to the year but show increasing signs of cooling with job and wage growth continuing to slow and unemployment rising to 3.9%. Additional easing in labor markets will be necessary to bring Inflation down to the Federal Reserve's target of 2%.

Total nonfarm payroll employment increased by 175,000 in April, following the upwardly revised increase of 315,000 jobs in March, as reported in the Employment Situation Summary. This marks the slowest monthly gain in the past 13 months. The monthly change in total nonfarm payroll employment for February was revised down by 34,000, from +270,000 to +236,000, while the change for March was revised up by 12,000, from +303,000 to +315,000. Combined, the revisions were 22,000 lower than the original estimates. Despite restrictive monetary policy, nearly 7.4 million jobs have been created since March 2022, when the Fed enacted the first interest rate hike of this cycle. In the first four months of 2024, 982,000 jobs were created, and monthly employment growth averaged 246,000 per month, compared with a 251,000 monthly average gain for 2023.

Employment in the overall construction sector increased by 9,000 in April, following an upwardly revised 40,000 gains in March, and now stands at 8.2 million. While residential construction gained 1,100 jobs, non-residential construction employment added 7,800 jobs for the month. In addition to construction, job gains occurred in health care (+56,000), social assistance (+31,000), transportation and warehousing (+22,000), and retail trade (+20,000) in April.

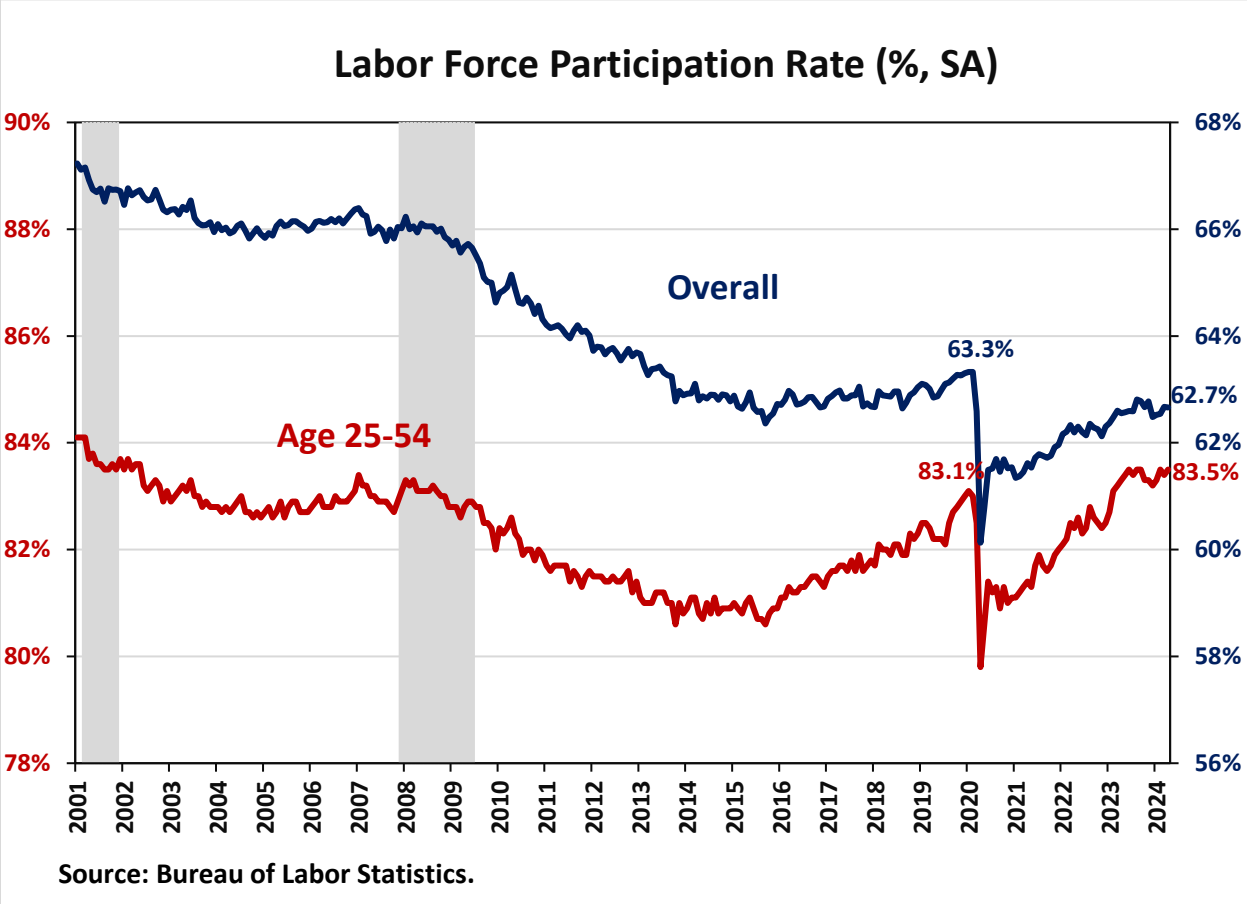
Monthly Change in Payroll Employment and Unemployment



Source: Bureau of Labor Statistics.

As another sign of easing in labor markets, the unemployment rate rose to 3.9% In April, from 3.8% in March. The number of unemployed persons rose by 63,000, while the number of employed persons rose by 25,000. Nevertheless, as a sign of a resilient labor market and despite the unprecedented interest rate hikes by the Federal Reserve, the US unemployment rate has remained below 4% for the 27th straight month, the longest streak since the 1960s.

The labor force participation rate, the proportion of the population either looking for a job or already holding a job, held steady at 62.7% for April. Moreover, the labor force participation rate for people ages between 25 and 54 bounced back to 83.5%. Despite the steady gains over the three post-pandemic years, the US labor force participation rate remains historically low, below its pre-pandemic levels at the beginning of 2020. The higher share of older Americans, particularly aged 55 years and older, that continues to stay out of the labor force helps explains the ongoing tightness in the US labor market. Nevertheless, the labor force participation rate for people ages between 25 and 54 currently exceeds the pre-pandemic level of 83.1%.



Source: Bureau of Labor Statistics.

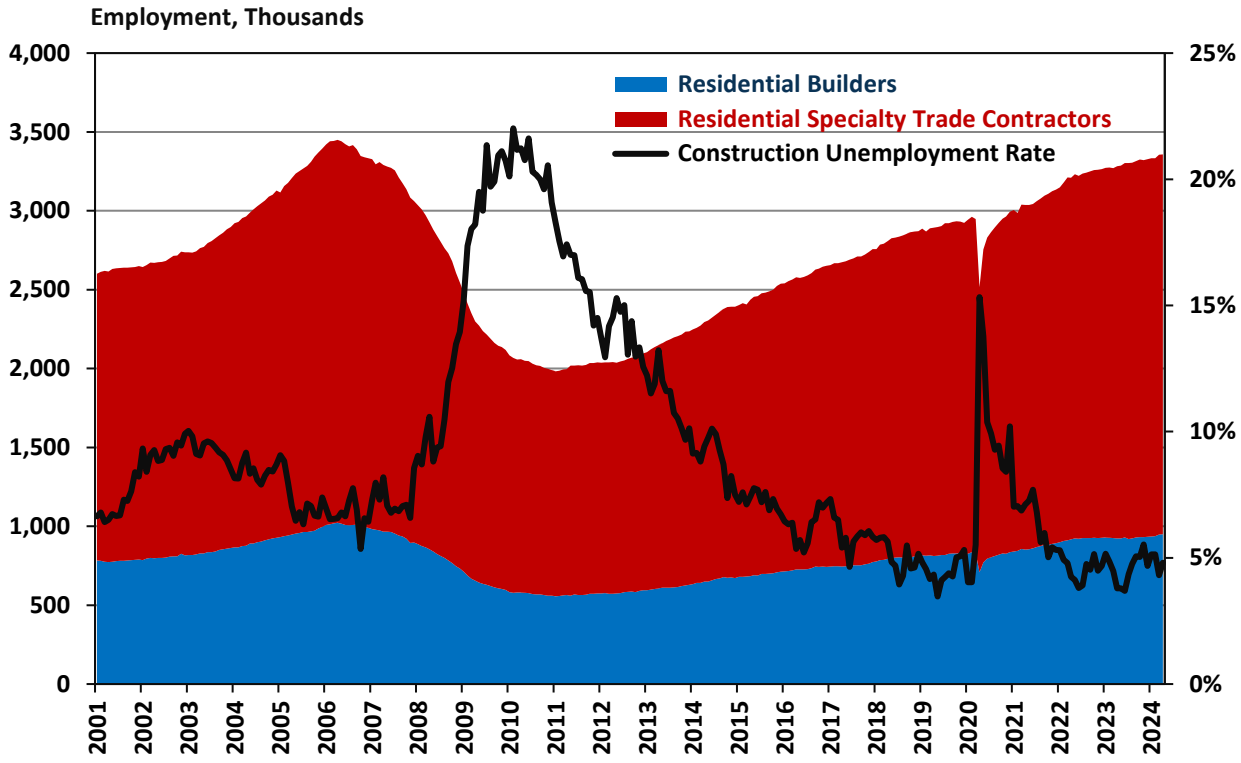
As another sign of cooling in labor markets, wage growth continued to slow in response to the Federal Reserve's monetary tightening. In April, wages grew at a 3.9% year-over-year (YOY) growth rate, down 0.7 percentage points from a year ago. This measure of wage Inflation was 4.3% as recently as February. The current reading marks the lowest 12-month wage gain in nearly three years.

Residential Construction Employment

Residential construction payroll employment now stands at 3.4 million, broken down as 950,000 builders and 2.4 million residential specialty trade contractors. As of April, the 6-month moving average of job gains for residential construction was 5,217 a month. Over the last 12 months, home builders and remodelers added 75,600 jobs on a net basis. Since the low point following the Great Recession, residential construction has gained 1,375,000 positions.

In April, the unemployment rate for construction workers rose to 4.8% on a seasonally adjusted basis. Despite the current uptick, the unemployment rate for construction workers remains historically low by the standards of the last 20 years. After reaching 14.2% in April 2020, the trend was downward reflecting fundamental shortages of construction labor.

Residential Construction Employment and Unemployment Rate



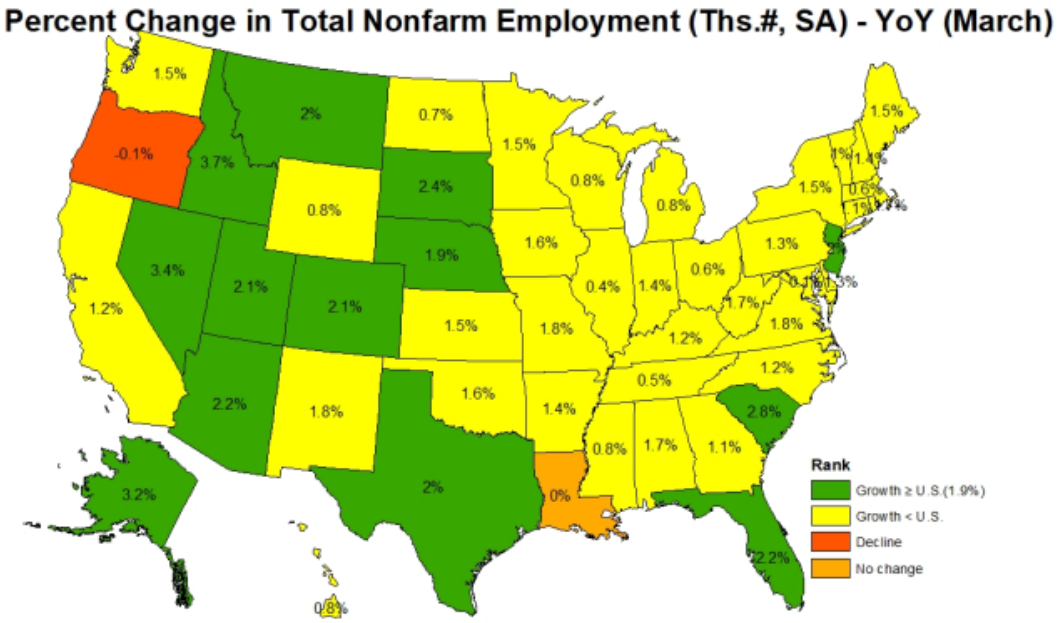
Source: Bureau of Labor Statistics.

State-Level Employment Data

Recent employment gains were unevenly distributed across the United States. Nonfarm payroll employment increased in 44 states in March compared to the previous month, while six states and the District of Columbia saw a decrease.

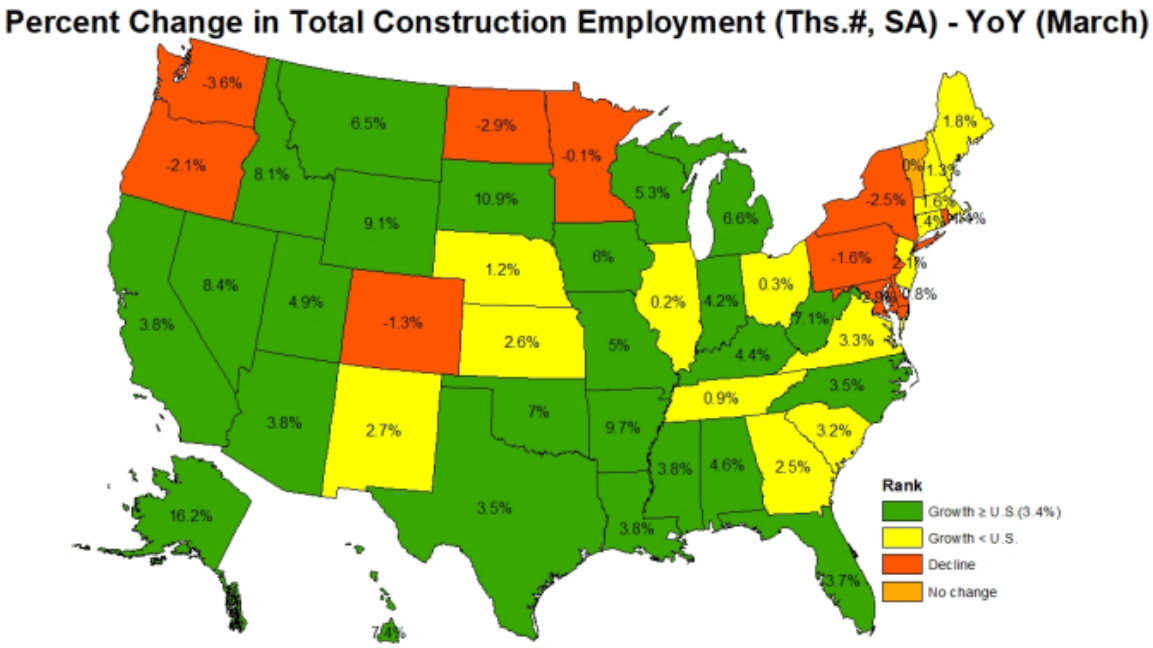
On a month-over-month basis, employment data was most favorable in California, which added 28,300 jobs, followed by New York (+23,900), and then Texas (+19,100). A total of 4,700 jobs were lost across six states and the District of Columbia, with West Virginia reporting the steepest job losses at 2,000. In percentage terms, employment in Arkansas increased the highest at 0.5%, while West Virginia saw the biggest decline at 0.3% between February and March.

Year-over-year ending in March, 2.9 million jobs have been added to the labor market. Except for Oregon, all other states and the District of Columbia added jobs compared to a year ago. The range of job gains spanned from 500 jobs in Louisiana to 270,700 jobs in Texas. Conversely, Oregon lost a total of 1,900 jobs on a year-over-year basis. In percentage terms, Idaho reported the highest increase at 3.7%, while Oregon showed the largest decrease at 0.1% compared to a year ago.



Across the nation, construction sector jobs data—which includes both residential and non-residential construction— showed that 36 states and the District of Columbia reported an increase in March compared to February, while 13 states lost construction sector jobs. For this analysis, BLS combined employment totals for mining, logging, and construction are treated as construction employment for the District of Columbia, Delaware, and Hawaii. The one remaining state, Rhode Island, reported no change on a month-over-month basis. New York, with the highest increase, added 9,500 construction jobs, while Oregon, on the other end of the spectrum, lost 2,300 jobs. Overall, the construction industry added a net 39,000 jobs in March compared to the previous month. In percentage terms, New York reported the highest increase at 2.5% and Oregon reported the largest decline at 2.0%.

Year-over-year, construction sector jobs in the U.S. increased by 270,000, which is a 3.4% increase compared to the March 2023 level. California added 33,900 jobs, which was the largest gain of any state, while New York lost 9,700 construction sector jobs. In percentage terms, Alaska had the highest annual growth rate in the construction sector at 16.2%. Over this period, Washington reported the largest decline of 3.6%.



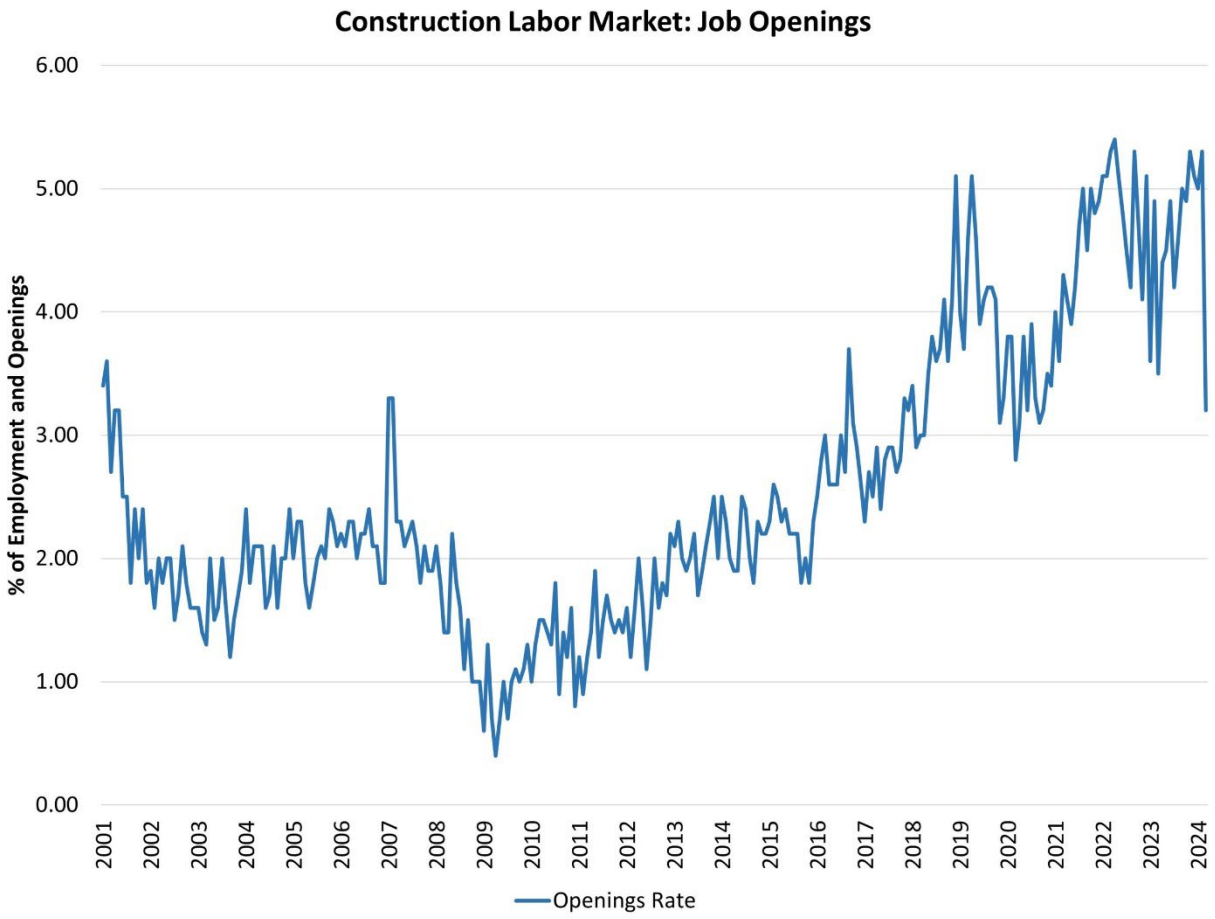
Job Openings and Labor Turnover in Construction

Due to tightened monetary policy, the count of total job openings for the entire economy has trended lower over the last year. This is consistent with a somewhat cooler economy that is a positive sign for future inflation readings. However, the number of open jobs for the aggregate economy was relatively unchanged in March per the Bureau of Labor Statistics Job Openings and Labor Turnover Survey (JOLTS).

In March, the number of open jobs for the economy ticked down to 8.49 million. This is lower than 9.62 million reported a year ago. NAHB estimates indicate that this number must fall back below 8 million for the Federal Reserve to feel more comfortable about labor market conditions and their potential impacts on inflation.

While the Fed intends for higher interest rates to have an impact on the demand-side of the economy, the ultimate solution for the labor shortage will not be found by slowing worker demand, but by recruiting, training and retaining skilled workers. This is where the risk of a monetary policy mistake can arise. Good news for the labor market does not automatically imply bad news for inflation.

The number of open construction sector jobs posted a surprising decline in March, falling from 456,000 in February to just 274,000 in March. The count was 291,000 a year ago during a period of weaker home construction. It's possible this number will be revised higher in the next report. Or the decline could be a reflection of the ongoing weakness for apartment construction. Nonetheless, the construction job openings rate decreased to 3.2% in March, the lowest reading since the Fall of 2020.

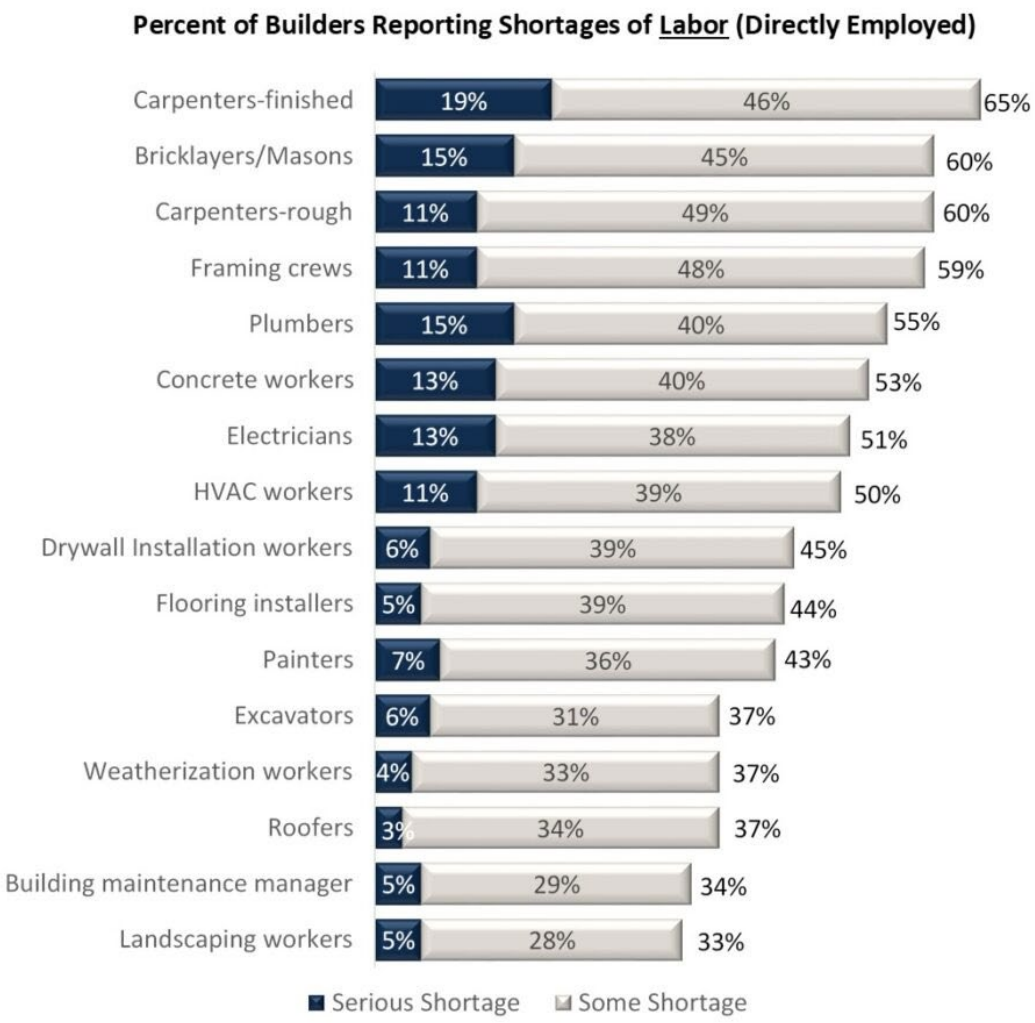


The construction sector layoff rate declined to 1.8% compared to 3.6% a year ago. The hiring rate decreased to 4.1% in March, compared to 5.2% from a year ago.

Labor Shortages

Supported by a substantial increase in immigration to the United States since 2022, labor shortages in home building have eased considerably since record levels set in 2021 but remain relatively widespread in a historic context, according to results from the latest NAHB/Well Fargo Housing Market Index (HMI) survey.

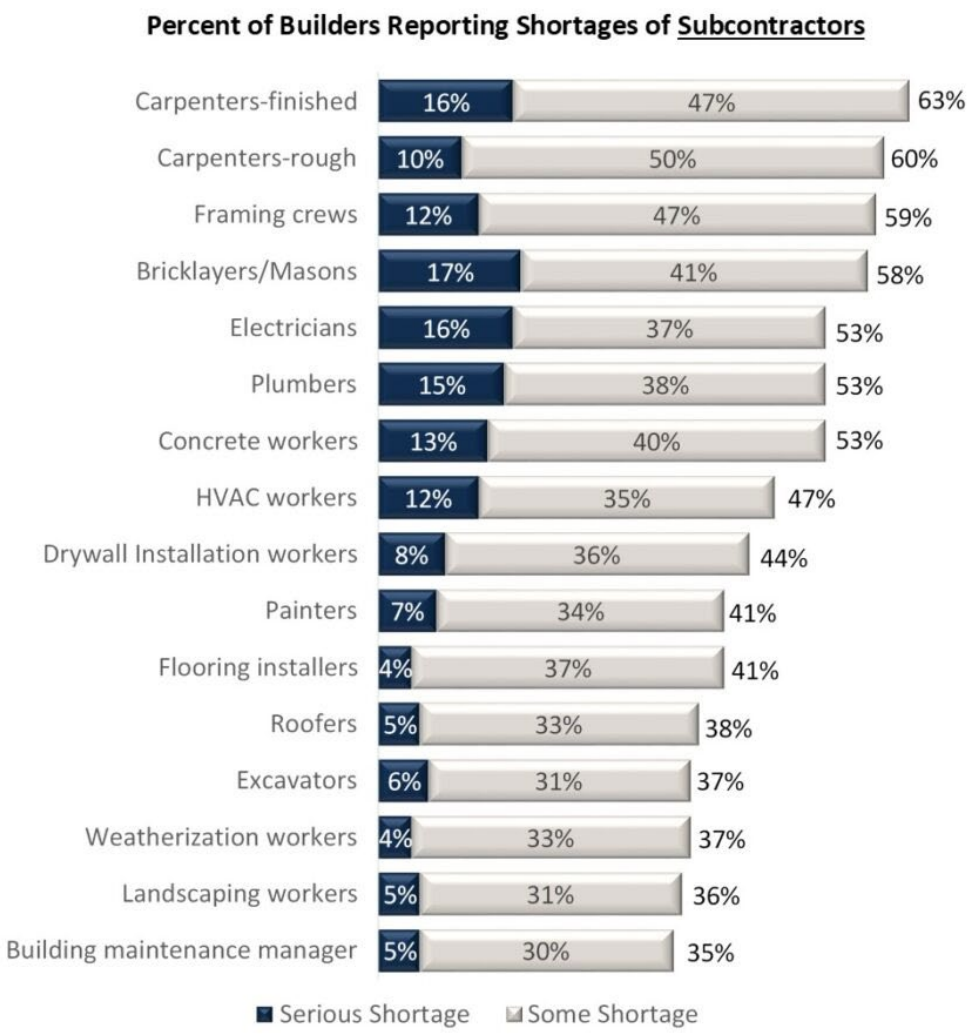
The February 2024 HMI survey asked builders about shortages in 16 specific trades. The percentage of builders reporting a shortage (either some or serious) of labor they employ directly ranged from a low of 33% for landscape workers to a high of 65% for those performing finished carpentry.



The finished carpentry shortage was down from 72% in 2023 and an all-time high of 85% in 2021 but remains higher than it was at any time during the 2004-2006 housing boom (when it reached a temporary peak of 58% in July 2005). Most of the labor shortage percentages in the above figure follow a similar historic pattern.

In the typical case, most of the physical work required to build a home is performed not by laborers employed directly by the builders, but by subcontractors. Builders on average use two dozen different subcontractors and subcontract out 84% of their total construction costs to build a single-family home.

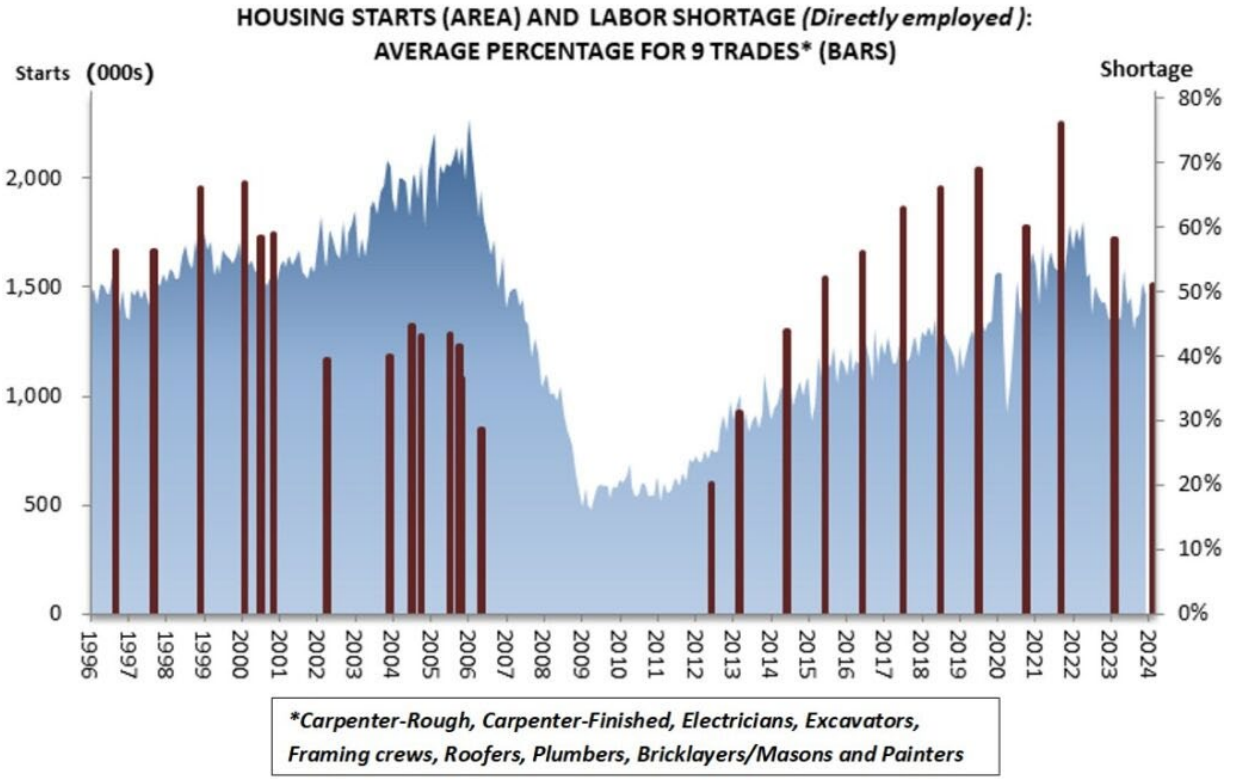
The February 2024 HMI survey also collected information about shortages of subcontractors. The percentage of builders reporting a shortage of subcontractors ranged from 35% for building maintenance managers to 63% for finished carpenters.



For all 16 trades, the shortage percentages for subcontractors and labor directly employed were fairly similar. Averaged over the nine trades that NAHB has covered in a consistent way since the 1990s (carpenter-rough, carpenter-finished, electricians, excavators, framing crews, roofers, plumbers, bricklayers/masons, and painters), the share of builders reporting shortages in February 2024 was 52% for labor directly employed and 51% for subcontractors.

The two numbers have not always been this close. After 2012, as housing markets started to recover from the Great Recession, a 5- to 7-point gap opened up between the 9-trade average shortage of subcontractors and labor directly employed by builders, with the subcontractor shortages being consistently more widespread. NAHB's analysis at the time indicated that workers who were laid off and started their own trade contracting businesses during the Great Recession started returning to work for larger companies—improving the availability of workers directly employed by builders while shrinking the pool of available subcontractors. After persisting for a decade, the subcontractor-direct labor gap finally narrowed in 2023 and disappeared entirely in 2024.

The current 9-trade average shortage of 52% for labor directly employed is down from 58% in 2023 and a record-high 77% in 2021 but remains elevated in historical perspective—especially when considered relative to housing starts.



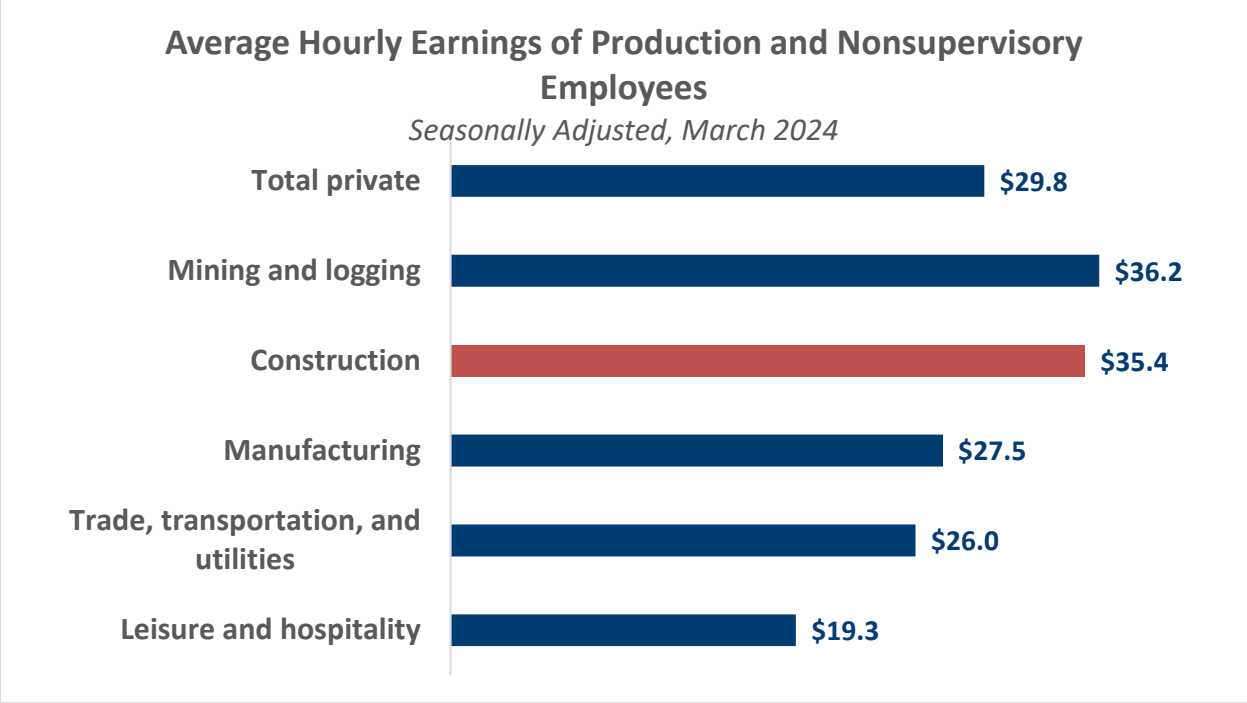
During the boom period of 2004-2006, total housing starts were consistently over 1.8 million annually—as high as 2.0 million in 2005. Despite this high rate of construction, the 9-trade shortage percentage never exceeded 45% during the boom. In comparison, the current shortage percentage of 52% occurred against a backdrop of 1.4 million starts in 2023 and an annual rate of 1.3 million recorded so far in March of 2024.

The shortages tended to be somewhat more widespread among remodelers. In the survey for the third-quarter 2023 NAHB/Royal Building Products Remodeling Market Index (RMI), 84 percent of remodelers reported a shortage of subcontractors in carpenter-finished trades and 3 out of 4 remodelers reported a shortage of subcontractors in the two remaining types of carpenters and brick masons. Overall, 63 percent of remodelers reported a shortage of subcontractors in 12 of the 16 trades, historically tracked by NAHB.

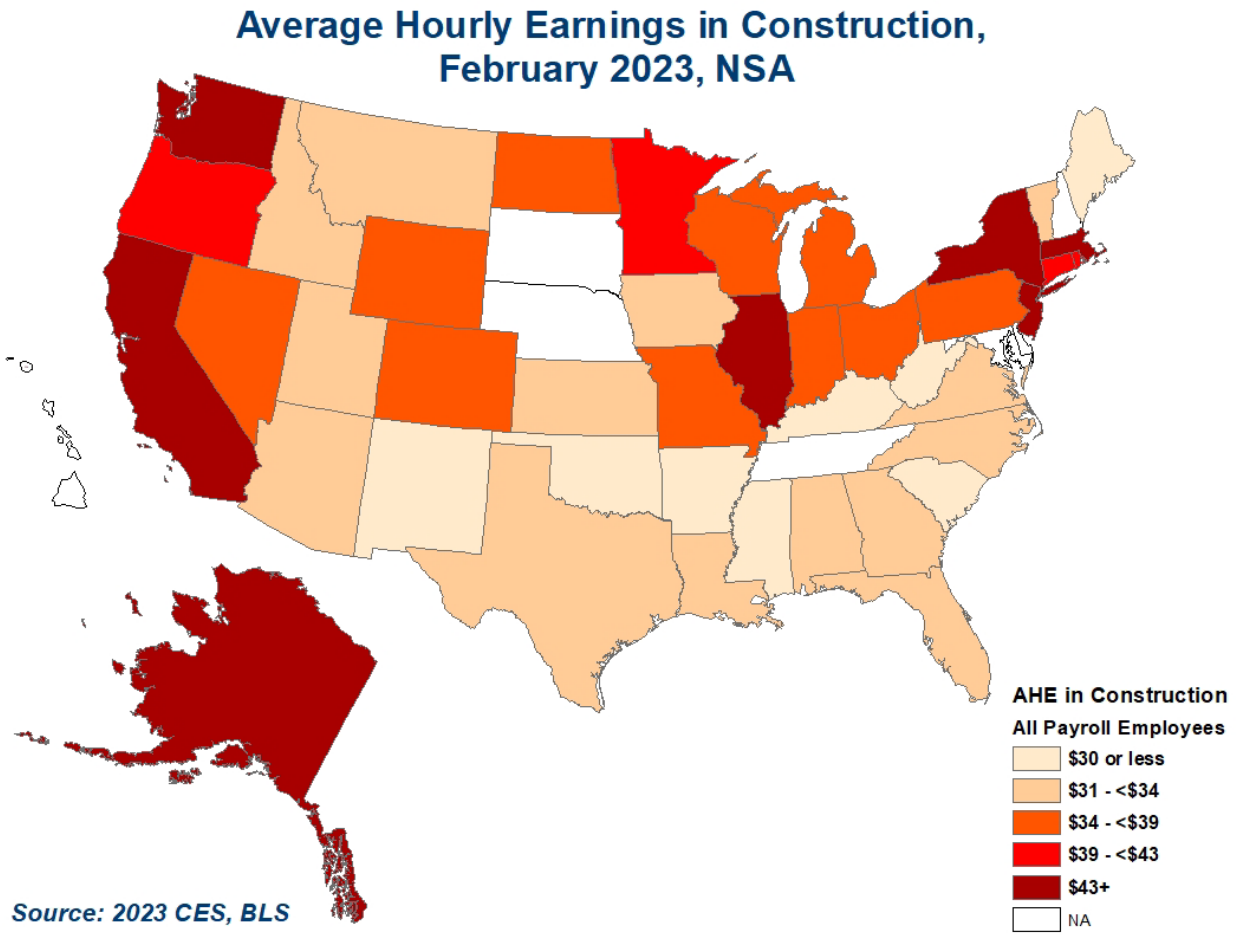
Wages in Construction

Refelcting persitent long-term labor chalenges, wages in construction continue to rise, often outpacing and exceeding typical earnings in other industries. According to the latest Current Employment Statistics (CES) report from the Bureau of Labor Statistics (BLS), average hourly earnings (AHE) in construction increased 5% since a year ago and approached the $38 mark in March 2024. At the same time, seasonally adjusted average hourly earnings in manufacturing were $33.6, and $29.9 in trade, transportation and utilities. The overall US private sector AHE were $34.7.

Looking at wages of production and non-supervisory employees, the differences across industries persist, with production workers in construction earning some of the highest AHE - $35.4 in March 2024. Nonsupervisory and production workers in mining and logging were averaging $36.2 per hour, in manufacturing - $27.5, in trade, transportation, and utilities - $26, in leisure and hospitality - $19.3. Averaging across the entire private sector, the mean hourly earnings of production and nonsupervisory workers were $29.8.

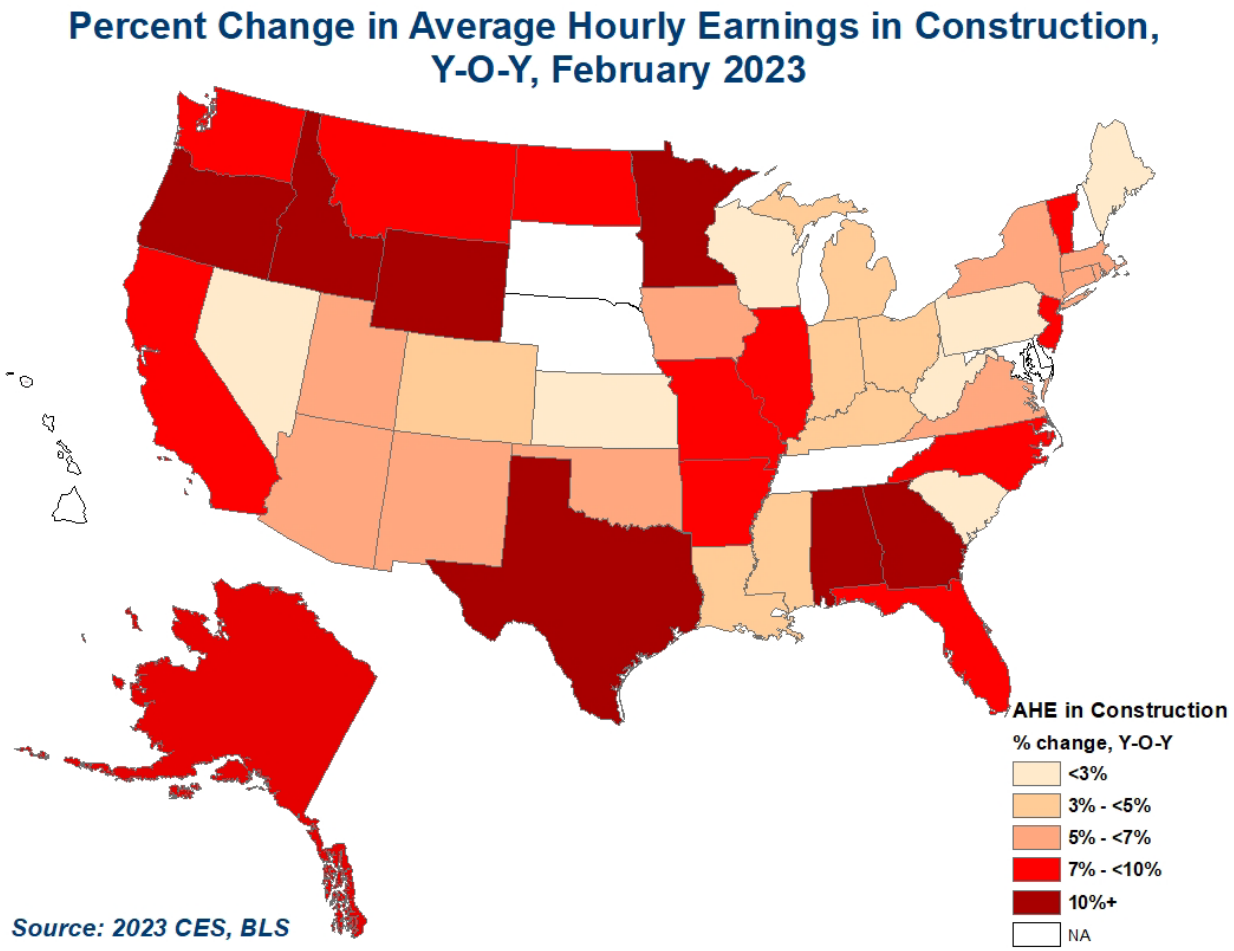


Average hourly earnings in construction vary greatly across 43 states that reported these data. Some of the highest AHE are recorded by states in Northeast and along the Pacific coast. As of February 2023, ten states reported not seasonally adjusted average earnings in excess of $40 per hour, including Massachusetts - $45.9, New Jersey - $45.4, Illinois - $44.6, Alaska - $44.4, Washington - $44.2, New York - $43.6, California - $43, Rhode Island - $42, Oregon - $41.7, and Minnesota - $41.34. At the same time, not seasonally adjusted US average hourly earnings in construction were $35.9.



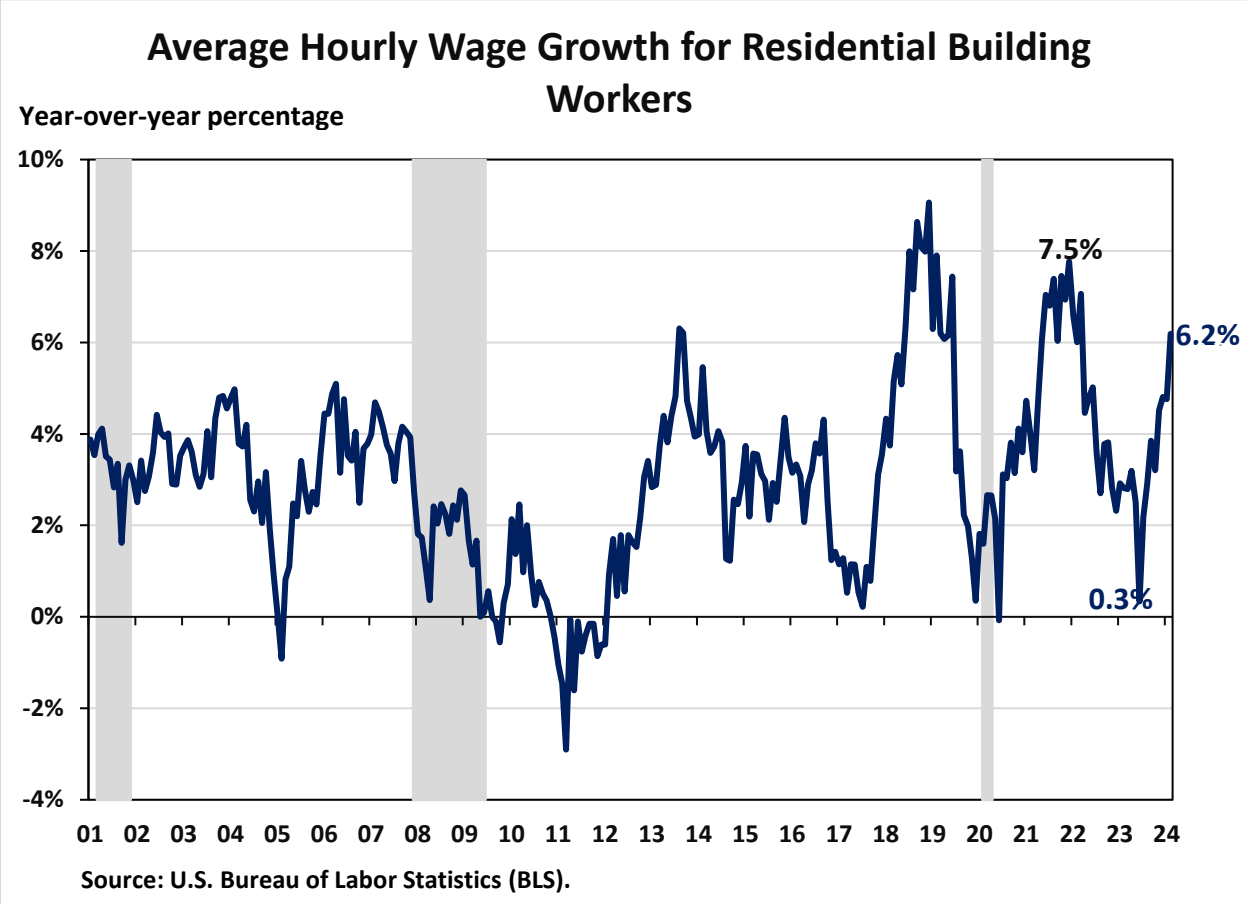
At the other end of the spectrum are mostly Southern states with their vast majority reporting not seasonally adjusted average hourly earnings in construction of $31 or less. The bottom ten states with the lowest AHE include seven states in the South. The lowest hourly wages are in neighboring Mississippi and Arkansas - $27.5, followed by South Carolina - $29.3, New Mexico - $29.4, West Virginia - $29.8, Kentucky - $30. Maine - $30.2, Oklahoma - $30.2, Idaho – $30.6, and Alabama – $30.7 conclude the bottom ten hourly wages in construction list.

While differences in regional hourly rates might reflect variation in the cost of living across states, the faster growing wages are more likely to point out to specific labor markets that are particularly tight. Year-over-year, all but four states reported rising not seasonally adjusted hourly wages in February 2023. Seven states reported the increase in hourly rates of over 10% - Georgia (12.1%), Texas (11.5%), Idaho (11.4%), Wyoming (11.1%), Oregon (10.5%), Minnesota (10.4%), Alabama (10.3%). Remarkably, the list Includes three southern states with AHE below the national average but rising rapidly and outpacing the national average growth of construction wages of 5.7%.



Wages in Residential Building Construction

Reflecting the ongoing skilled labor shortage, the year-over-year (YOY) growth rate for residential building production and non-supervisory worker wages have been trending up since June 2023. In recent months, due to strong demand for construction labor, wage growth accelerated. Average seasonally adjusted hourly earnings of production and non-supervisory employees in home building grew 6.2% in February, the fastest growth rate in more than two years.

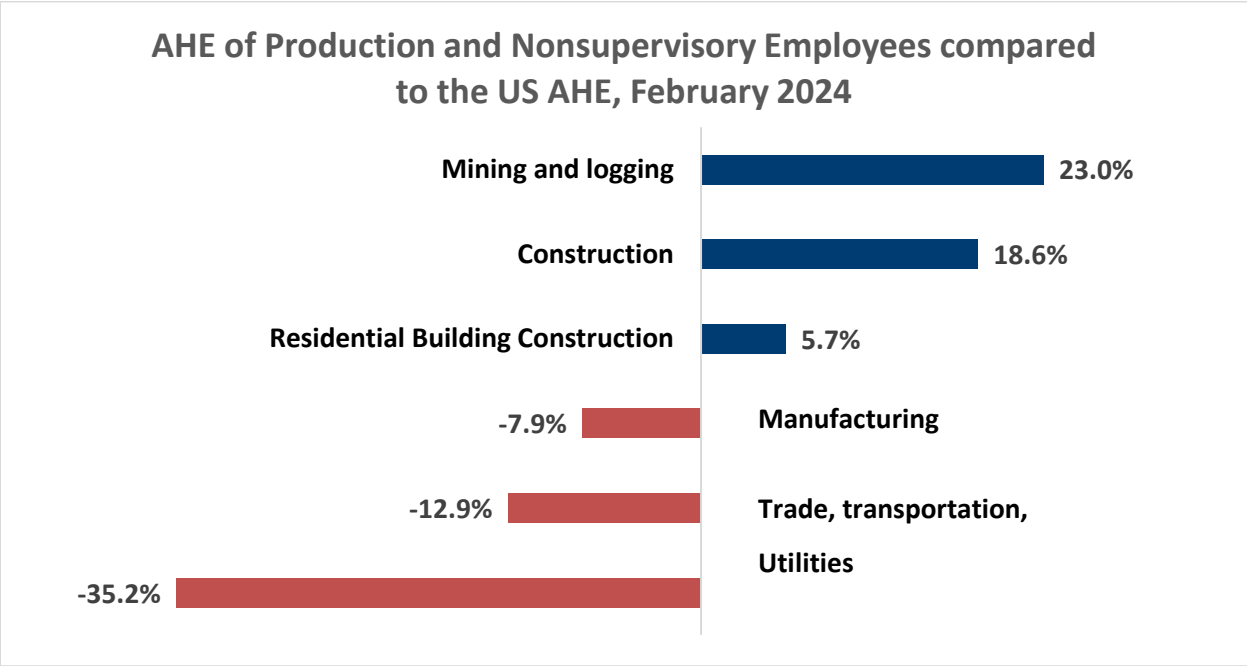


According to the Bureau of Labor Statistics (BLS) report, average seasonally adjusted hourly earnings of production and non-supervisory employees in home building exceeded $31 at the start of 2024. Average hourly earnings were $31.05 in January, rising further to $31.40 in February 2024.

As the wage growth accelerated in home building, production and non-supervisory workers in residential construction continued to earn a premium, as the US average hourly earnings across all industries were $29.72, as of February 2024.

At the same time production and nonsupervisory employees in manufacturing were averaging $27.36, in trade, transportation and utilities - $25.88, mining and logging - $36.55, in leisure and hospitality - $19.27 per hour.

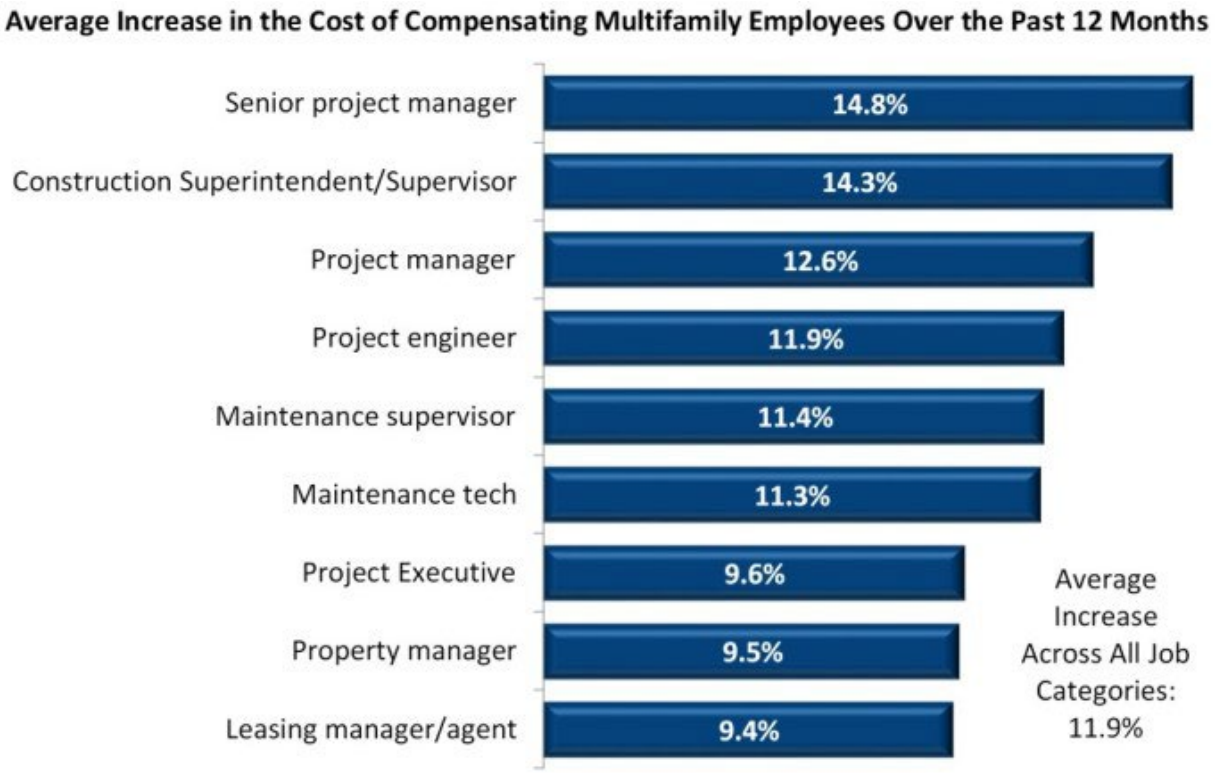
This translates into a 5.7% premium for AHE of production workers in residential building construction compared to the US average for production and nonsupervisory employees. At the same time, production workers in manufacturing, trade, transportation, utilities and leisure and hospitality industries earn less than the national average (-7.9%, -12.9% and -35.2%, respectively).



Multifamily Employee Compensation Costs

Separately, NAHB's Multifamily Market Survey (MMS) showed that the cost of compensating employees of multifamily developers rose substantially faster than compensation costs for all civilian workers. Over the course of the year, the cost to multifamily developers of compensating their employees increased by an average of nearly 12%, according to the results of the first quarter 2022 MMS.

The survey sent electronically to a panel of multifamily developers on April 12 included a special question on how much compensation costs have increased for nine specific job categories. At the top of the list, the cost of compensating senior project managers increased by an average of 14.8% over the past 12 months, followed by the costs of compensating construction superintendents or supervisors (14.3%) project managers (12.6%), and project engineers (11.9%). Even costs for the job least affected by wage inflation among the nine listed, leasing managers or agents, increased by 9.4%.



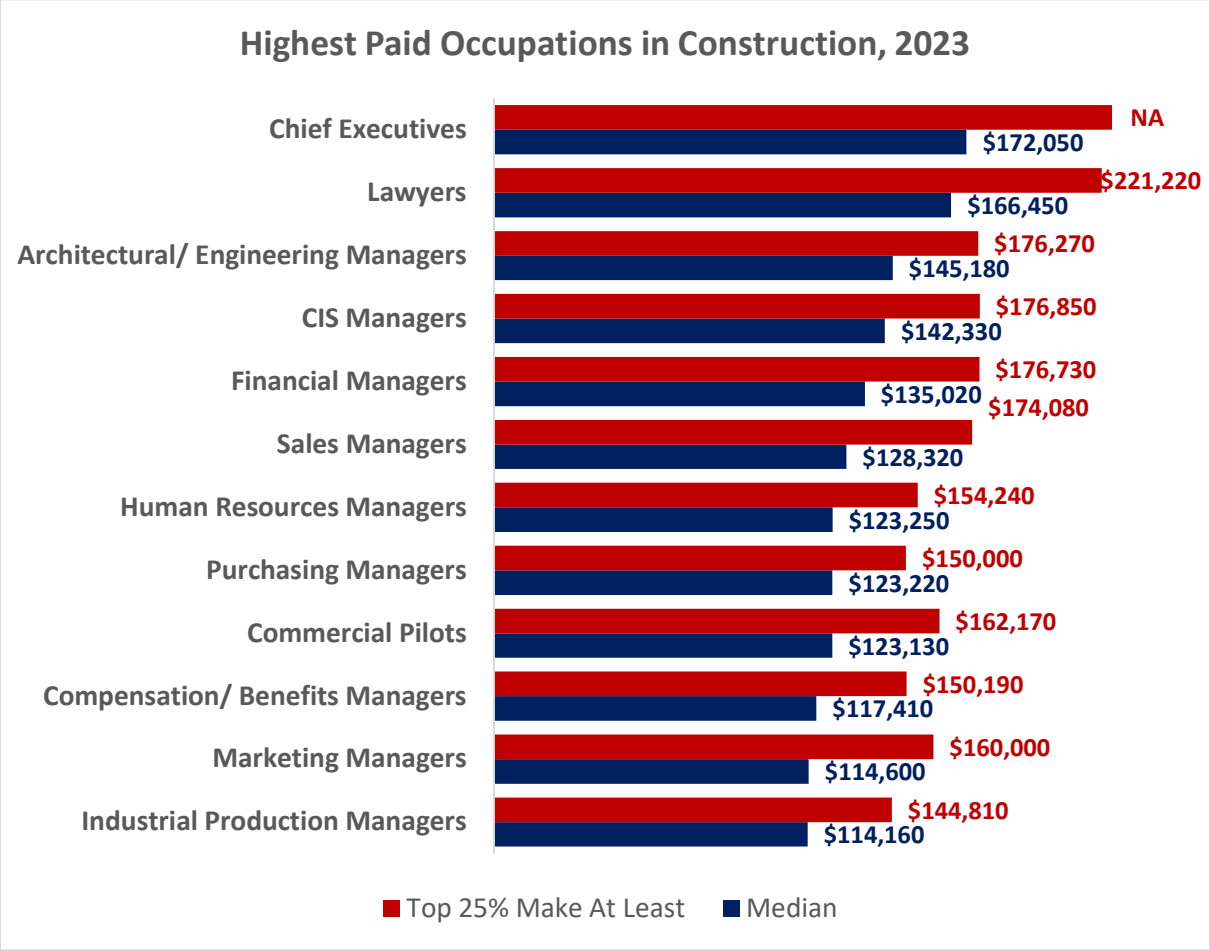
Averaged across all nine job categories listed in the survey, costs of compensating the employees of multifamily developers increased by 11.9% over the past 12 months. This is considerably higher than the 4.5% year-over-year increase in compensation costs for all civilian workers reported by the U.S. Bureau of Labor Statistics at that time. These data provide additional evidence Illustrating how persistent labor shortages in construction translate into fast rising labor costs.

Occupational Wages in Construction

The Occupational Employment and Wage Statistics (OEWS) program, a different survey from the Bureau of Labor Statistics, provides comprehensive occupational wages. These statistics are detailed but less timely. The latest May 2023 estimates were released in April 2024. According to NAHB's analysis of these data, half of payroll workers in construction earn more than $58,500 and the top 25% make at least $79,450. In comparison, the U.S. median wage is $48,060, while the top quartile (top 25%) makes at least $76,980.

The OES publishes wages for almost 400 occupations in construction. Out of these, only 46 are construction trades. The other industry workers are in finance, sales, administration and other off-site activities.

The highest paid occupation in construction is Chief Executive Officer (CEO) with half of CEOs making over $172,000 per year. Lawyers working in construction are next on the list with the median wages of $166,450, and the top 25 percent highest paid lawyers making over $221,220. Out of the next ten highest paid trades in construction, eight are various managers. The highest paid managers in construction are architectural and engineering managers, with half of them making over $145,180 and the top 25 percent on the pay scale earning over $176,270 annually.



Among construction trades, elevator installers and repairers top the median wages list with half of them earning over $103,340 a year, and the top 25% making at least $129,090. First-line supervisors of construction trades are next on the list; their median wages are $76,960, with the top 25% highest paid supervisors earning more than $97,500.

In general, construction trades that require more years of formal education, specialized training or licensing tend to offer higher annual wages. Median wages of construction and building inspectors are $65,790 and the wages in the top quartile of the pay scale exceed $88,800. Half of plumbers in construction earn over $61,380, with the top quartile making over $80,300. Electricians' wages are similarly high.

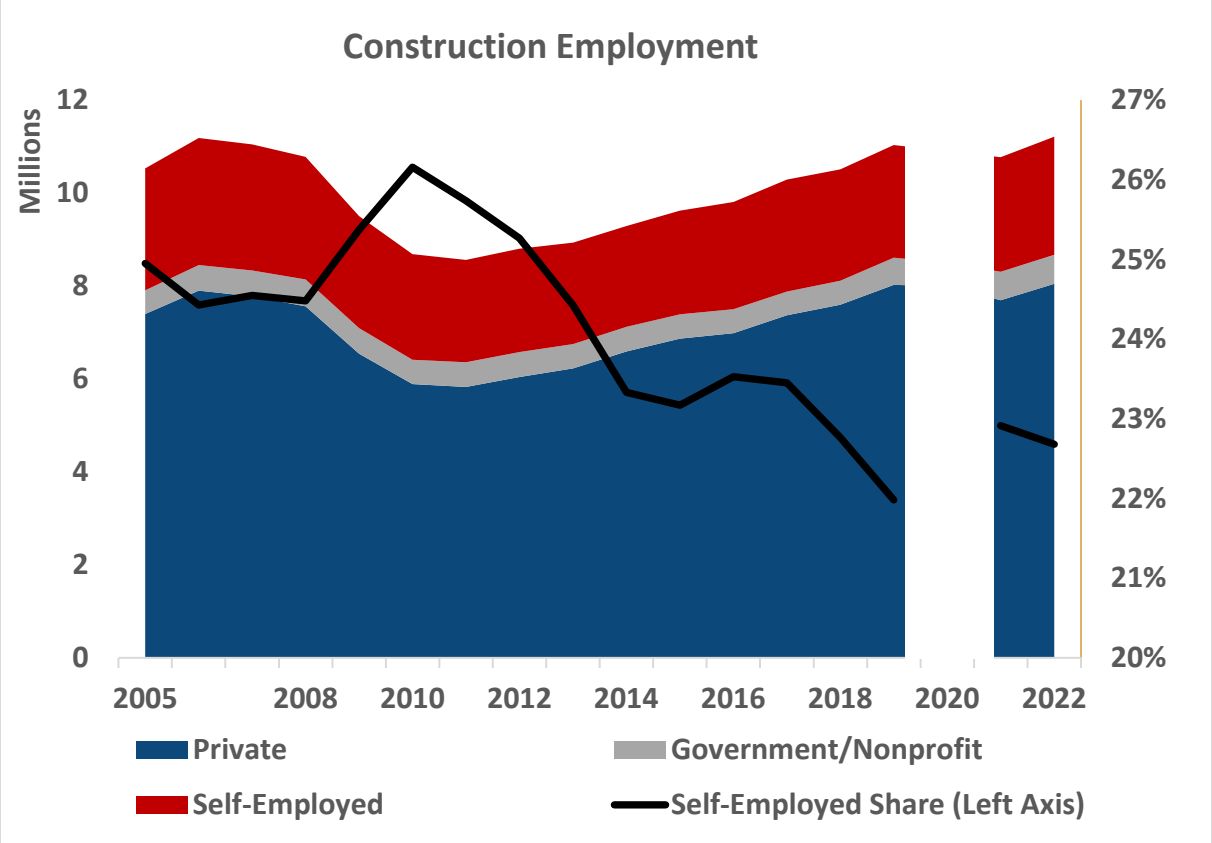
Carpenters are one of the most prevalent construction crafts in the industry. The trade requires less formal education. Nevertheless, the median wages of carpenters working in construction exceed the national median. Half of these craftsmen earn over $57,300 and the highest paid 25% bring in at least $73,800.

The OEWS program adopted a new estimation methodology in 2021. As a result, the previously published estimates are not directly comparable to the post-pandemic editions. Nevertheless, comparing the median wages in construction over the last two years reveals that, on average, lower-paid occupations experienced a somewhat faster wage growth. Median wages of drywall installers, for example, grew 11% while the overall construction median increased 7.3%, one of the largest increases among all industries.

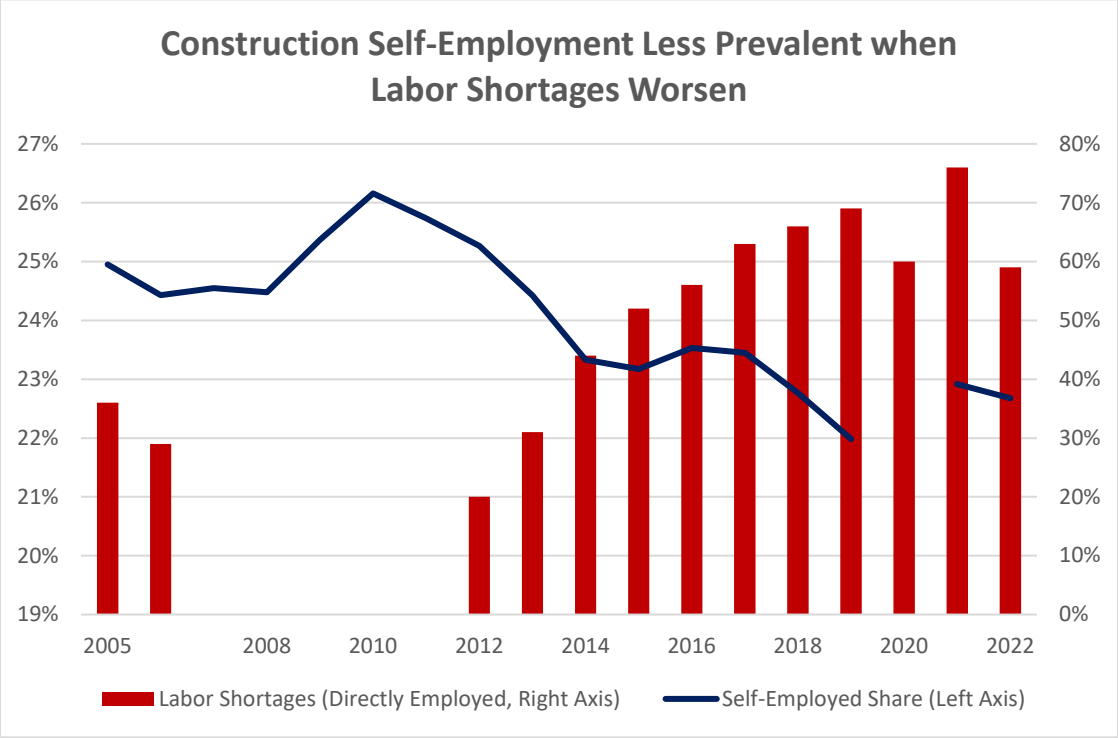
Self-Employment in Residential Construction

The timely payroll employment and unemployment statistics from the Bureau of Labor Statistics (BLS) do not include self-employed workers. Counting self-employed is particularly important in the home building industry since they traditionally make up a larger share of the labor force. Close to 23% (or over 2.5 million) of workers employed in construction are self-employed, according to the 2022 American Community Survey (ACS). As industry payrolls expanded in 2022, the share of self-employed inched down. However, the share remained higher than it was in 2019, before the pandemic rattled the labor market. Even though the COVID-19 pandemic boosted self-employment across all industries, construction self-employment rates remain significantly higher than an economy-wide average of 10% of the employed labor force.

Compared to the elevated readings of the Great Recession, when over a quarter of the construction labor force was self-employed, the current construction self-employment rates are lower. This is consistent with the counter-cyclical nature of construction self-employment. Under normal circumstances, self-employment rates rise during an economic downturn and fall during an expansion. This presumably reflects a common practice among builders to downsize payrolls when construction activity is declining. In contrast, builders and trade contractors offer better terms for employment and attract a larger pool of laborers to be employees rather than self-employed when workflow is steady and rising.



Stacking construction self-employment rates against NAHB's measure of labor shortage - the share of builders reporting shortages averaged over the nine trades (carpenter-rough, carpenter-finished, electricians, excavators, framing crews, roofers, plumbers, bricklayers/masons, and painters) - reveals that self-employment becomes less prevalent when construction labor shortages worsen. This points to another contributing factor and helps explain why self-employment rates have been trending lower during the last decade, which has been marked by persistent labor shortages in construction.

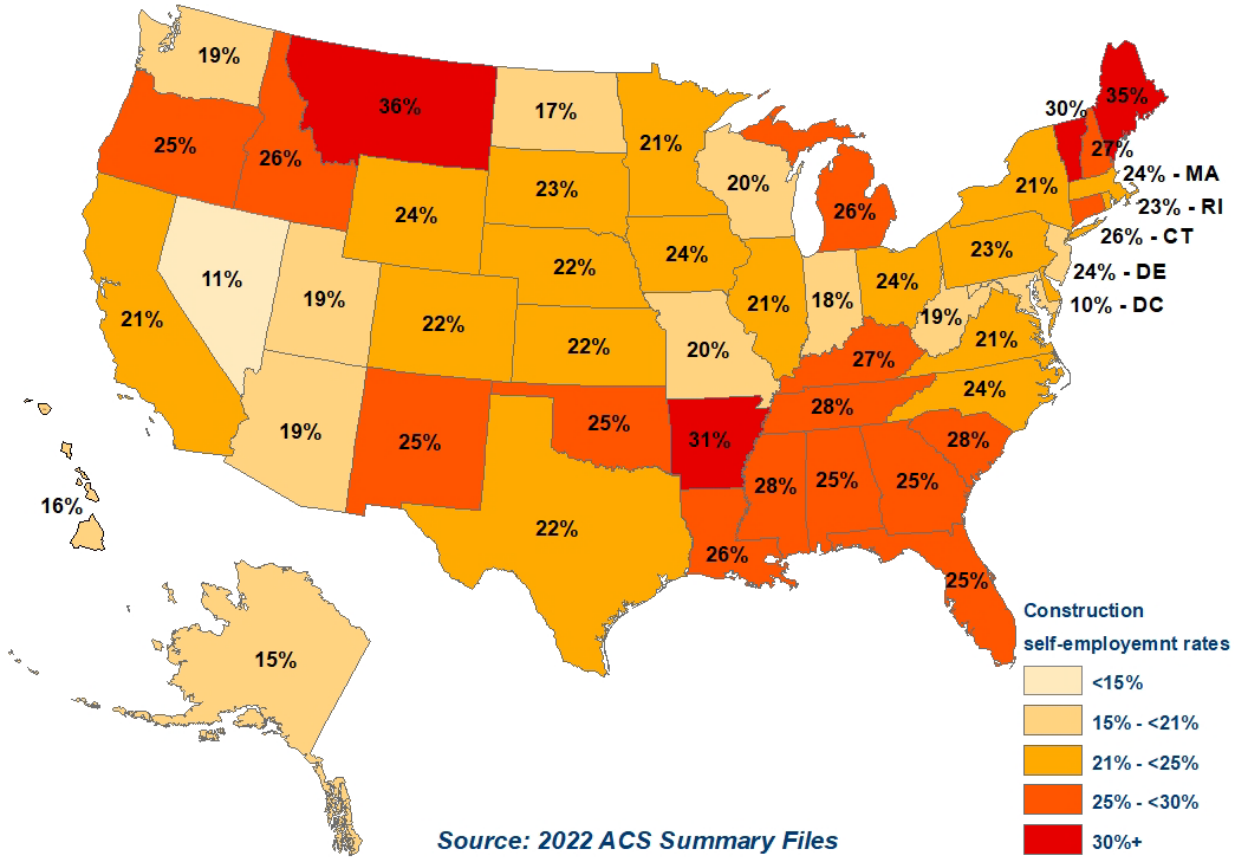


The COVID-19 pandemic disrupted this natural cycle with self-employment rates rising during the post-pandemic housing boom, when the labor shortages became particularly acute. It is likely that higher self-employment in construction post-pandemic reflects divergent trends within the industry - a faster V-shape recovery for home building and remodeling and a slower delayed improvement for commercial construction that is less dependent on self-employed. It is also possible that some construction employees laid off during the COVID-19 recession of early 2020 were pushed into self-employment. Similarly, and consistent with economy-wide "Great Resignation" trends, some workers might have chosen self-employment because it offers more independence and flexibility in hours, pay, type and location of work. Given the widespread labor shortages in construction, securing a steady workflow was less of a concern for construction self-employed in post-pandemic times.

Since the 2020 ACS data are not reliable due to the data collection issues experienced during the early lockdown stages of the pandemic, we can only compare the pre-pandemic 2019 and post-pandemic 2021-2022 data (hence the omitted 2020 data in the charts above). As a result, it is not clear whether self-employed in construction managed to remain employed during the short COIVD-19 recession or were able to recover jobs faster afterwards, compared to private payroll workers. It is also unclear whether the booming residential construction sector attracted self-employed workers from other more vulnerable or slow recovering industries, including commercial construction.

Additional insights into construction self-employment rates can be gained by examining cross-state variation. Montana and Nevada constitute two opposites, with Montana registering the highest (36%) and Nevada showing lowest (11%) self-employment rates in construction. The substantial differences likely reflect a predominance of home building in Montana and a higher prevalence of commercial construction in Nevada.

Construction Self-Employment Rates, 2022



The New England states are where it takes longer to build a house. Because of the short construction season and longer times to complete a project, specialty trade contractors in these states have fewer workers on their payrolls. The 2012 Economic Census data showed that specialty trade contractors in Montana, Maine, Rhode Island, Vermont, Idaho, and New Hampshire have the smallest payrolls in the nation with five to six workers on average. The national average is close to nine workers. As a result, a greater share of work is done by independent entrepreneurs, which helps explain the high self-employment shares in these states.

Residential Construction Employment across States and Congressional Districts

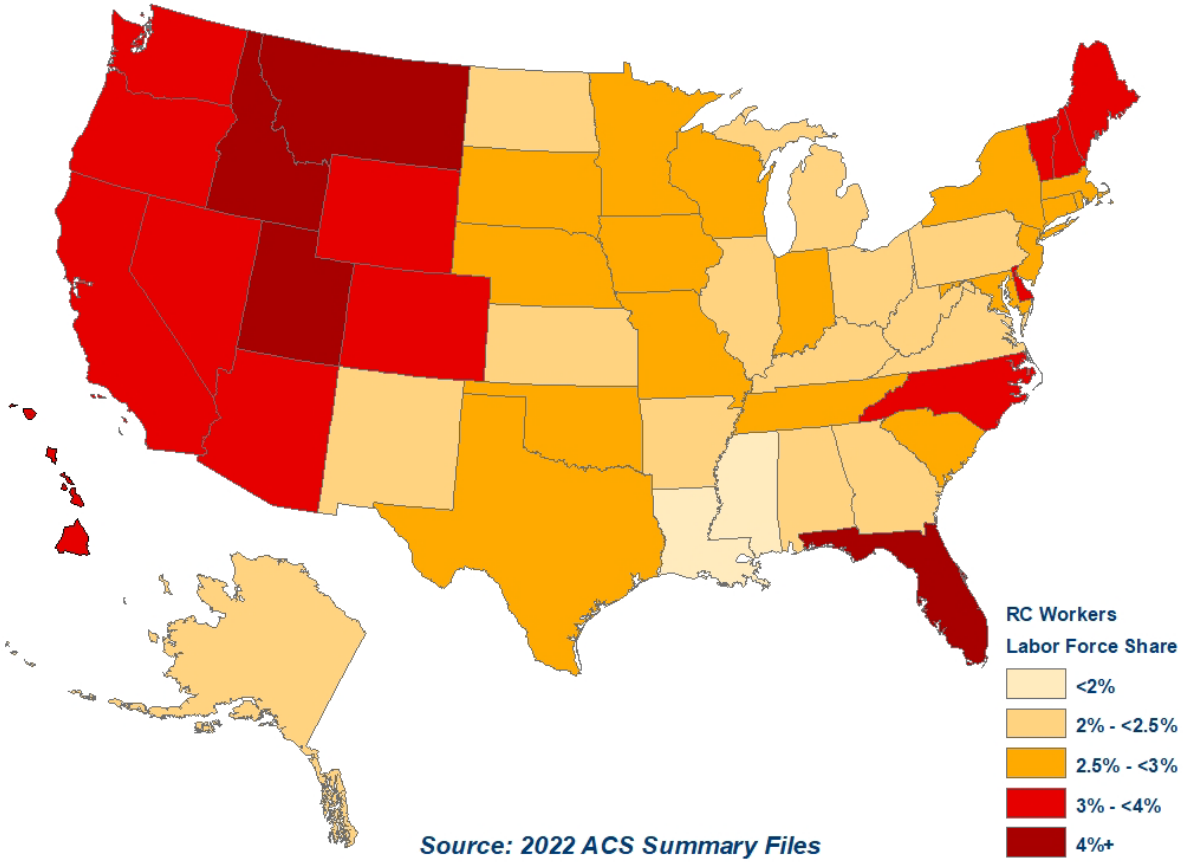
According to the latest 2022 ACS, 11.2 million people, including self-employed workers, worked in construction in 2022. NAHB estimates that out of this total, 4.7 million people worked in residential construction, accounting for 2.9% of the US employed civilian labor force. Home building in the Mountain Division, as well as in Florida, stand out as generating a significantly higher share of local jobs, with residential construction generating close to 6% of all jobs in Idaho. NAHB's analysis also identifies congressional districts where home building accounts for particularly high employment levels and share of local jobs.

Not surprisingly, the most populous state—California—also has the most residential construction workers. Over 650,000 California residents worked in home building in 2022, accounting for 3.4% of the state employed labor force.

Fast-growing Florida comes in second with 466,000 residential construction workers. The state stands out for registering one of the fastest growing populations since the start of the pandemic, which undoubtedly boosted housing and construction workforce demand. Florida's large stock of vacation and seasonal housing further boosts demand for residential construction workers. As a result, in Florida, residential construction workers account for a relatively high 4.4% of the employed labor. Even though this share is well above the national average (2.9%), it is significantly lower than in 2006, when Florida registered the highest share among all 50 states and the District of Columbia, at 6.5%.

Similar to Florida, fast-growing states with a high prevalence of seasonal, vacation homes top the list of states with the highest share of residential construction workers in 2022. Three states in the Mountain Division - Idaho, Utah, and Montana - take the top spots on the list with 5.9%, 5.4% and 4.8% of the employed labor force working in home building. Florida is next on the list with a share of 4.4%. In addition, ten other states register shares of residential construction workers that approach 4%: Maine (3.9%), Wyoming (3.8%), Vermont (3.8%), Washington, Colorado, New Hampshire, Nevada with 3.7%, and Arizona, North Carolina, and Oregon with 3.5%.

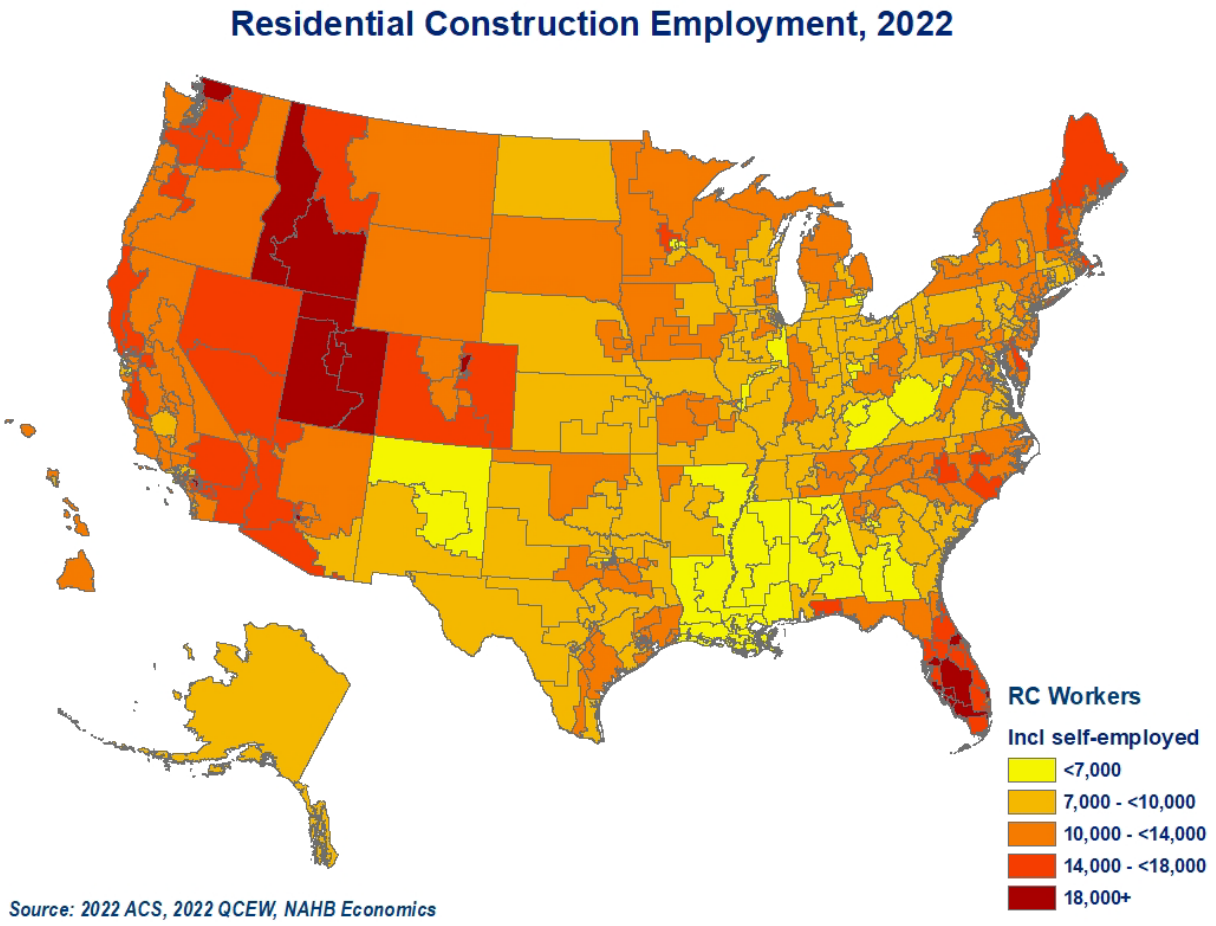
Share of Home Building Workers in the Labor Force, 2022



Source: 2022 ACS Summary Files

As of 2022, the average congressional district has about 10,800 residents working in residential construction, but that number is often significantly higher. In Idaho's 1st Congressional District, over 29,000 residents are in home building and Idaho's 2nd Congressional District has close to 25,000 residents working in home building.

Eight other congressional districts have over 20,000 residents working in residential construction – Florida's 26th (24,700), Utah's 4th (24,500), Utah's 2nd (24,300), Florida's 17th (21,400), Utah's 1st (20,600), Florida's 7th (20,500), California's 29th (20,400), and Colorado 8th (20,100).



By design, Congressional districts are drawn to represent roughly the same number of people. So generally, large numbers of residential construction (RC) workers translate into high shares of RC workers in their district employed labor forces. Idaho's 1st registers the highest share of residential construction workers in the employed labor force, 6.4%. Two districts in Florida (Florida's 17th and 26th) are next on the list with shares of 6.2%. Utah's 2nd (5.7%) and California's 29th (5.5%) also register shares far exceeding the national average of 2.9%.

At the other end of the spectrum there are several districts that contain parts of large urban areas: the District of Columbia, the 12th of New York, located in New York City, Pennsylvania's 3rd that includes areas of the city of Philadelphia, Illinois's 7th and 5th, Georgia's 5th that includes most of Atlanta, and among others, Louisiana's 2nd that contains New Orleans. Most residents in these urban districts tend to work in professional, scientific, and technical services. The District of Columbia stands out for having the lowest number of RC workers, with less than 1,000 residing in the district. At the same time, it has a disproportionally large share of public administration workers. The 12th District of New York and the 7th District of Illinois are home to a very large group of finance and insurance workers. Meanwhile, in Pennsylvania's 2nd, more than a third of residents work in health care and educational services.

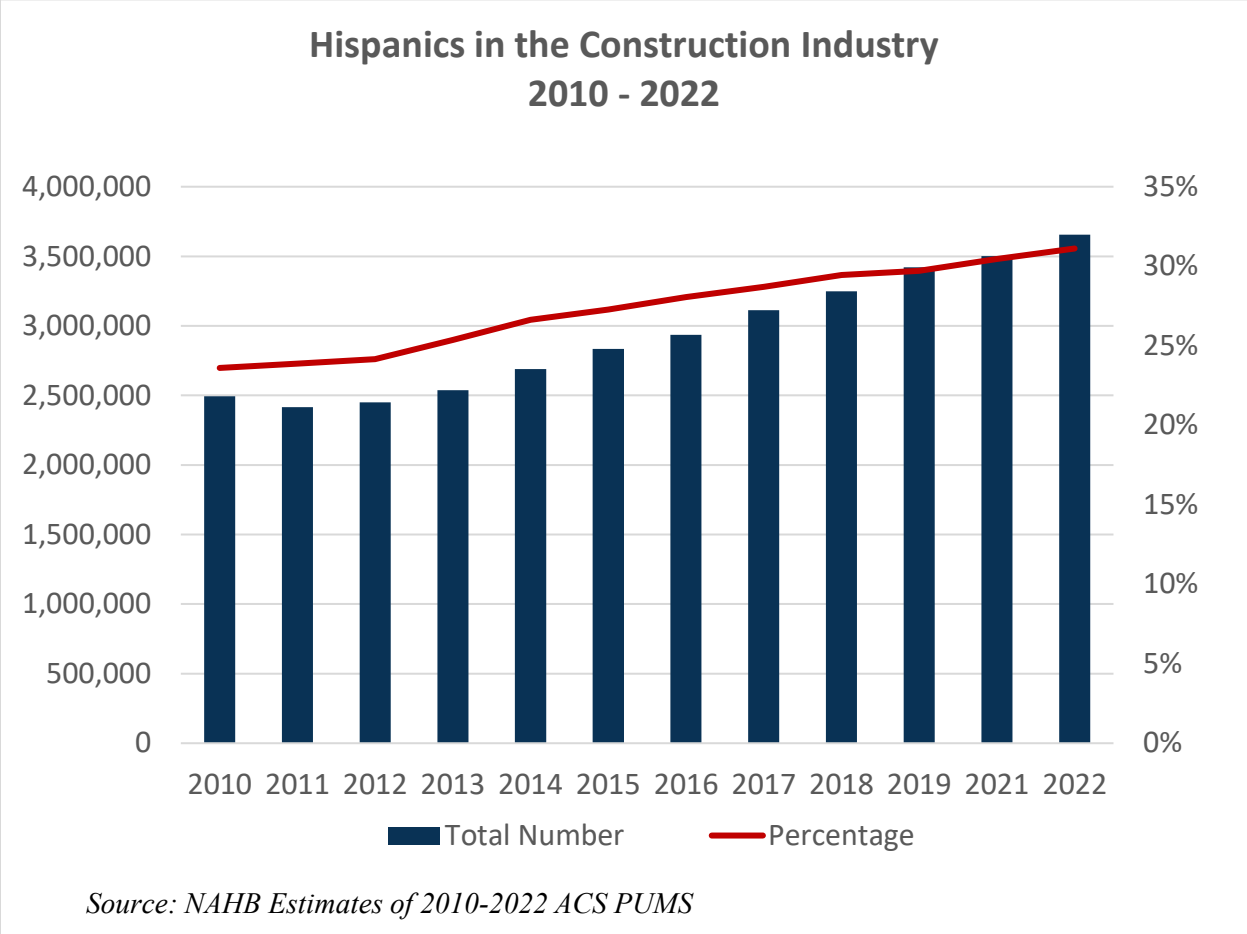
The NAHB residential construction employment estimates include self-employed workers. Counting self-employed is particularly important in the home building industry since they traditionally make up a larger share of the labor force than in the US total workforce.

The new NAHB home building employment estimates only include workers directly employed by the industry and do not count jobs created in related industries– such as design and architecture, furniture making, building materials, landscaping, etc. As a result, the estimates underestimate the overall impact of home building on local employment.

Racial and Ethnical Composition of the Construction Labor Force

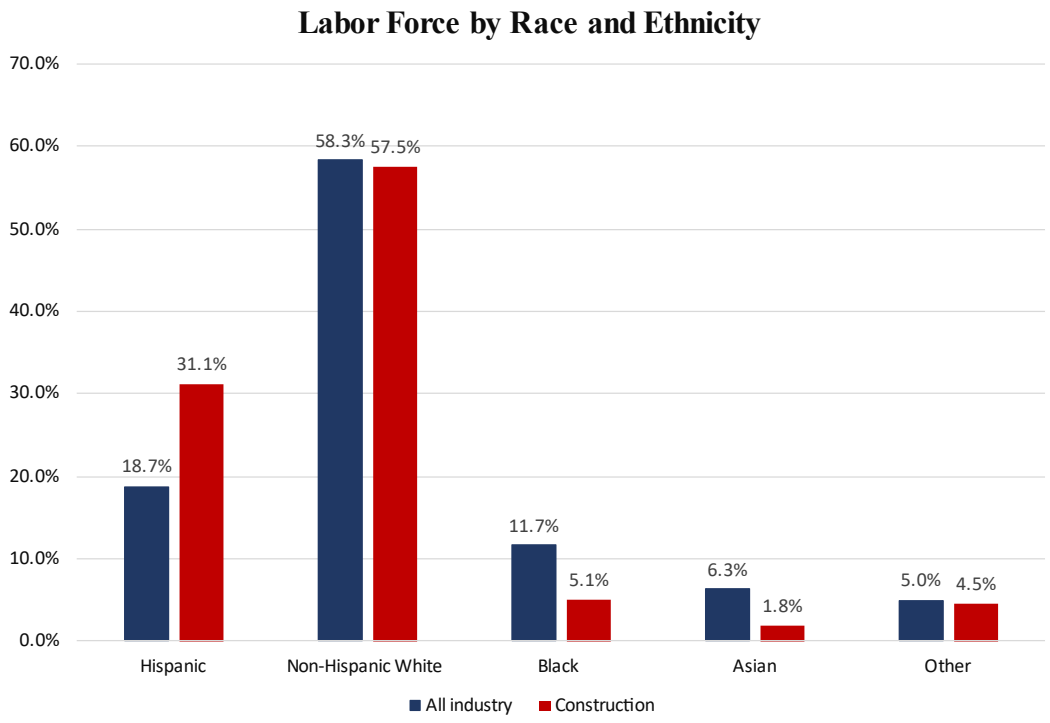
Diversifying the construction labor force is a key strategic goal given the ongoing skilled labor shortage. Non-Hispanic Whites account for the majority of workers in the construction industry (57.5%), according to the 2022 American Community Survey. However, Hispanics make up close to one-third of the construction labor force (31.1%). The share of African Americans and Asians in construction are substantially smaller 5.1% and 1.8%, respectively.

The most noticeable recent trend in construction employment is the increase in the number and share of Hispanic workers. From 2010 to 2022, the number of Hispanics working in the construction industry rose from 2.5 million to almost 3.7 million. Similarly, the share of Hispanics employed in the construction industry grew rapidly over the past decade, from 23.6% in 2010 to 31.1% in 2022.



Source: NAHB Estimates of 2010-2022 ACS PUMS

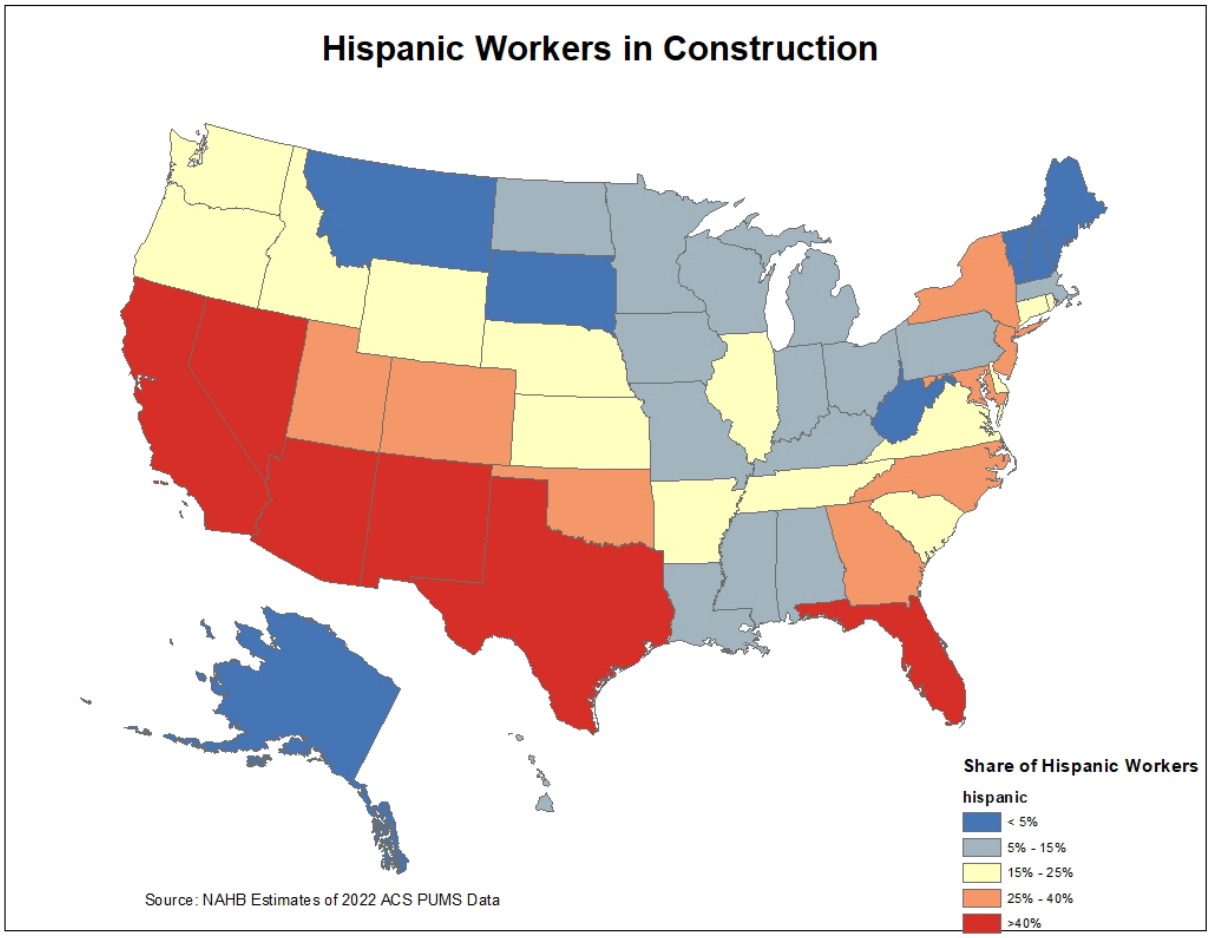
Hispanics are overrepresented in the construction industry, as they make up 31.1% of construction employment compared to 18.7% across all industries in 2022. Non-Hispanic Whites account for 57.5%, about the same as across all industries (58.3%). Blacks and Asians are underrepresented in the construction industry.



Source: NAHB Estimates of 2022 American Community Survey, PUMS Data

The share of Hispanics employed in construction varies considerably by state, ranging from 2% in West Virginia, Vermont, and Maine to more than 50% in New Mexico, Texas, California and Nevada. Hispanics in the construction industry are concentrated in the Southern and Western states, where most Hispanics reside. In fact, 54% of the nation's Hispanic construction workforce reside in three states - Texas (827,000), California (775,000), and Florida (373,000).

New Mexico stands out for registering the highest share of Hispanics in the construction labor force (64%). Texas is next on the list, with Hispanics accounting for 63% of its construction workforce, followed by California where 58% of construction workforce are Hispanics.



In contrast, the construction industry in the Northeast region relies heavily on non-Hispanic White Americans. Non-Hispanic Whites make up more than 95% of the construction workforce in New Hampshire, West Virginia, Vermont, Maine.

African Americans and Asian Americans are underrepresented in the construction industry in most states. African Americans comprise only 5.1% of the construction workforce, while their share in the US labor force is almost 12%. States with the largest share of African Americans working in construction are Mississippi (19%), followed by Alabama (13%), and Maryland (34%). Asian Americans account for less than 2% of the US construction workforce. However, their share is significant in Hawaii, where 28% of construction workers are Asian Americans.

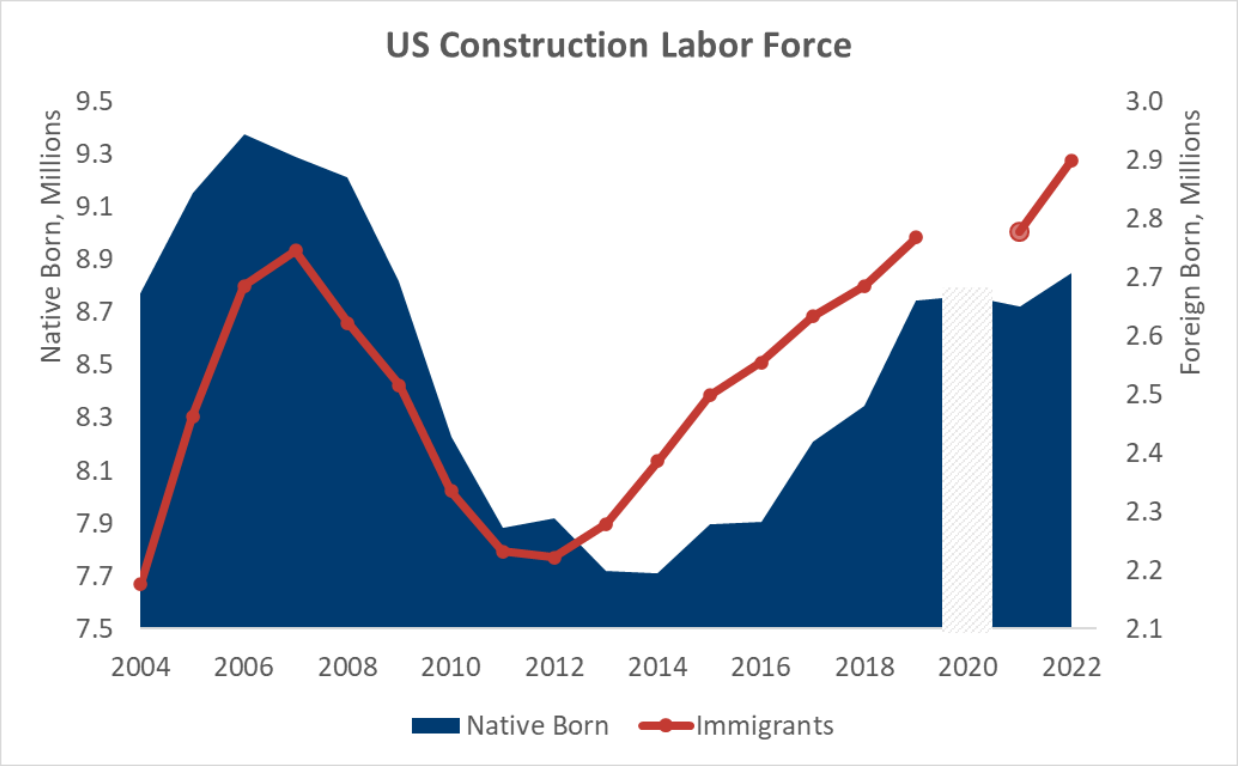
Immigrants in Construction

After years of being unable to ratchet up the number of new workers coming from outside the U.S. to help with persistent labor shortages, the construction industry reversed this trend and managed to attract over 90,000 new immigrant workers, levels unseen since the housing boom of 2005-2006. Native-born workers remain reluctant and continue joining the industry at a slower rate, with their total count remaining over half a million below the record levels of the housing boom of the mid-2000s. As a result, the share of immigrants in construction reached a new historic high of 24.7%, according to the

most recent 2022 American Community Survey (ACS). In construction trades, the share of immigrants is even higher, exceeding 31%.

The latest ACS data show that 11.8 million workers, including self-employed and temporarily unemployed, comprised the construction workforce in 2022. Out of these, 8.9 million were native-born, and 2.9 million were foreign-born, the highest number of immigrant workers in construction ever recorded by the ACS.

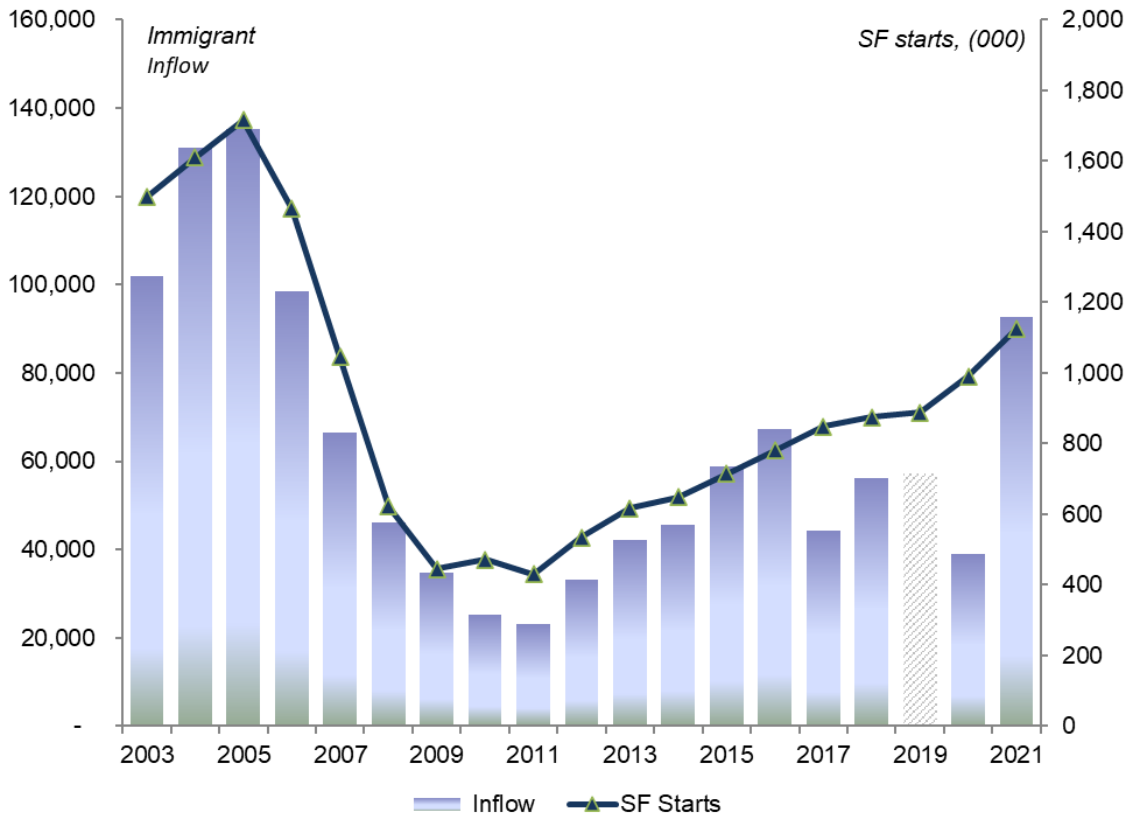
The construction labor force, including both native- and foreign-born workers, now exceeds the pre-pandemic levels but remains smaller than during the housing boom of the mid-2000s. As the chart below illustrates, it is the native-born workers that remain missing. Compared to the peak employment levels of 2006, construction is short 525,000 native-born workers and new immigrants only partially close the gap. Due to the data collection issues during the early pandemic lockdown stages, we do not have reliable estimates for 2020 and omit these in the chart below.



Source: 2004-2022 ACS PUMS, NAHB estimates

Typically, the annual flow of new immigrant workers into construction is highly responsive to the changing labor demand. The number of newly arrived immigrants in construction rises rapidly when housing starts are rising and declines precipitously when the housing industry is contracting. The response of immigration is normally quite rapid, occurring in the same year as a change in the single-family construction activity. Statistically, the link is captured by high correlation between the annual flow of new immigrants into construction and measures of new home construction, especially new single-family starts.

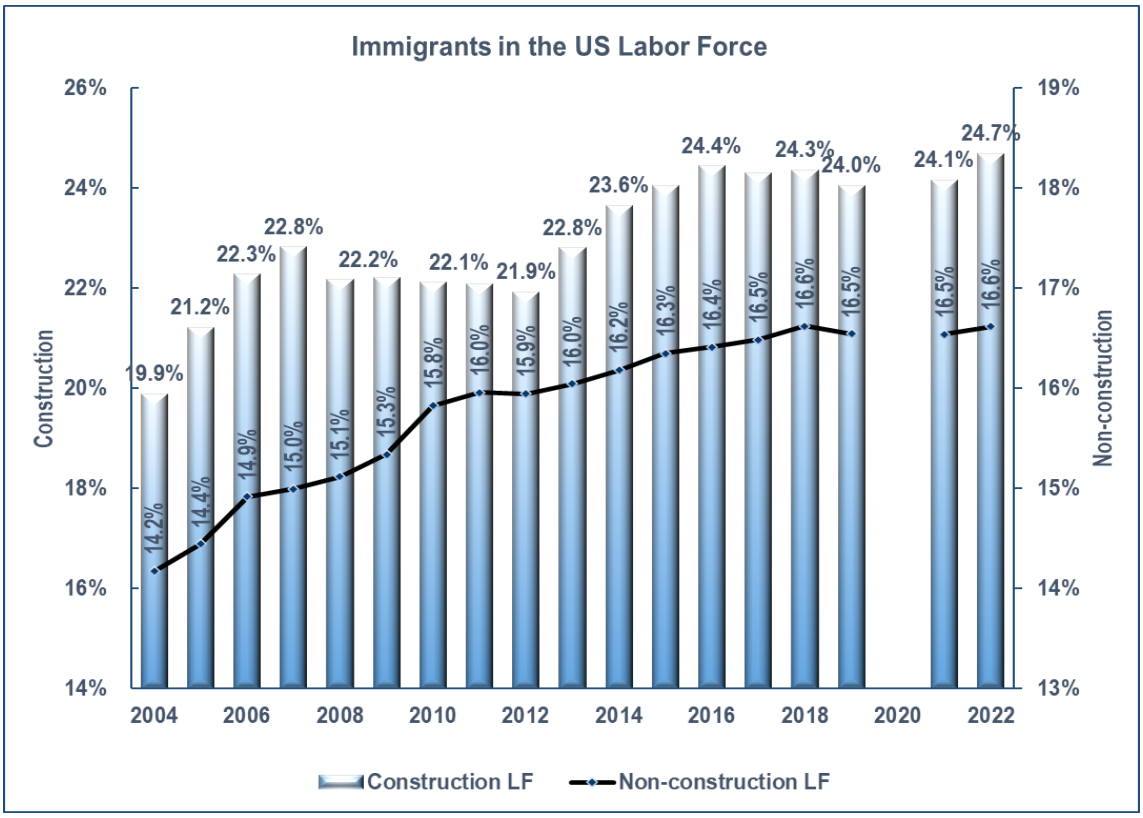
Annual Flow of New Immigrants into Construction and Single-Family Starts



Source: 2004-2022 ACS PUMS, NAHB estimates

This connection broke in 2017 when NAHB's estimates showed a surprising drop in the number of new immigrants in construction despite steady gains in housing starts. This link was severed further by pandemic-triggered lockdowns and restrictions on travel and border crossings, drastically interrupting the flow of new immigrant workers. The most recent data show that 2021 marked a new milestone with the flow of immigrants into construction returning to typical levels driven by home building activity.

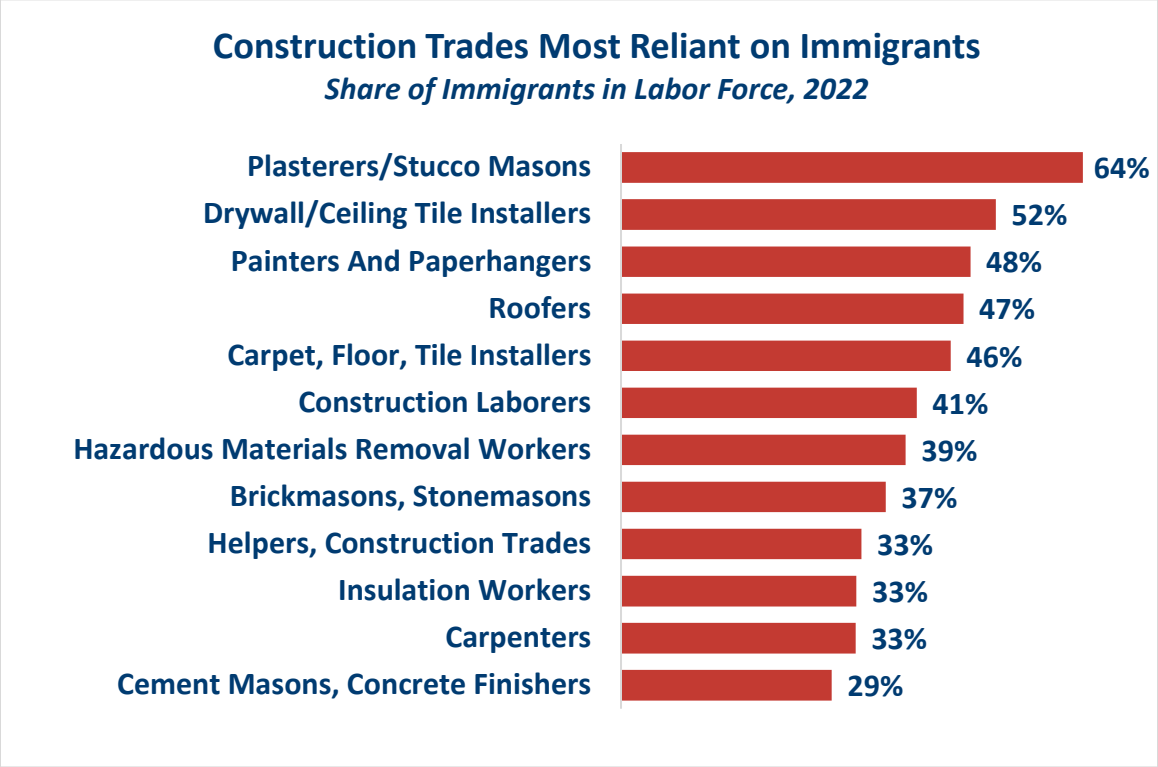
The overall rising trend as well as the noticeable uptick in the share of immigrants since 2021, are consistent with but slightly greater in construction compared to the changes observed in the rest of the US economy. Excluding construction, where the reliance on foreign-born workers is greater, the share of immigrants in the US labor force increased from just over 14% in 2004 to 16.6% in 2018, the highest level recorded by the ACS. The share of immigrants stabilized at these record high levels with no further increases in the post-pandemic market, returning to 16.6% in 2022.



Source: 2004-2022 ACS PUMS, NAHB estimates

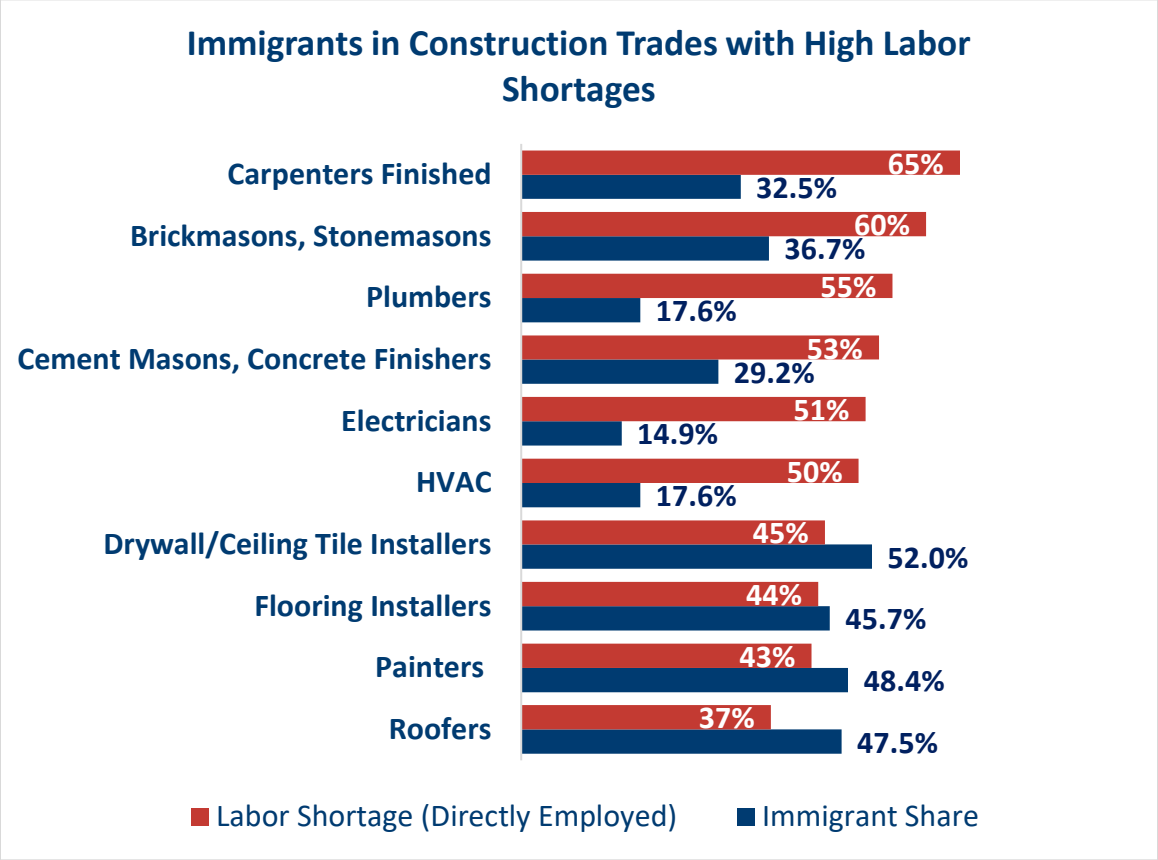
While immigrants make one in four construction workers, the share is significantly higher among construction tradesmen. According to the government's system for classifying occupations, the construction industry employs workers in over 380 occupations. Out of these, only 33 are construction trades, but they account for almost two thirds of the construction labor force. The other one-third of workers are in finance, sales, administration and other off-site activities. Immigrants account for 30% of all workers in construction trades.

Concentration of immigrants Is even higher in some of the trades needed to build a home, as plasterers and stucco masons (64%), drywall/ceiling tile installers (52%), painters (48%), roofers (47%), carpet/floor/tile installers (46%). The two most prevalent construction occupations, laborers and carpenters, account for over a quarter of the construction labor force. A third of all carpenters and 41% of construction laborers are of foreign-born origin. These trades require less formal education but consistently register some of the highest labor shortages in the NAHB/Wells Fargo Housing Market Index (HMI) surveys and NAHB Remodeling Market Index (RMI).



In the latest February 2024 HMI Survey, 65% of builders reported some or serious shortage of workers performing finished carpentry. Looking at other tradesmen directly employed by builders, the shortages of bricklayers and masons are similarly acute, despite a high presence of immigrant workers in these trades.

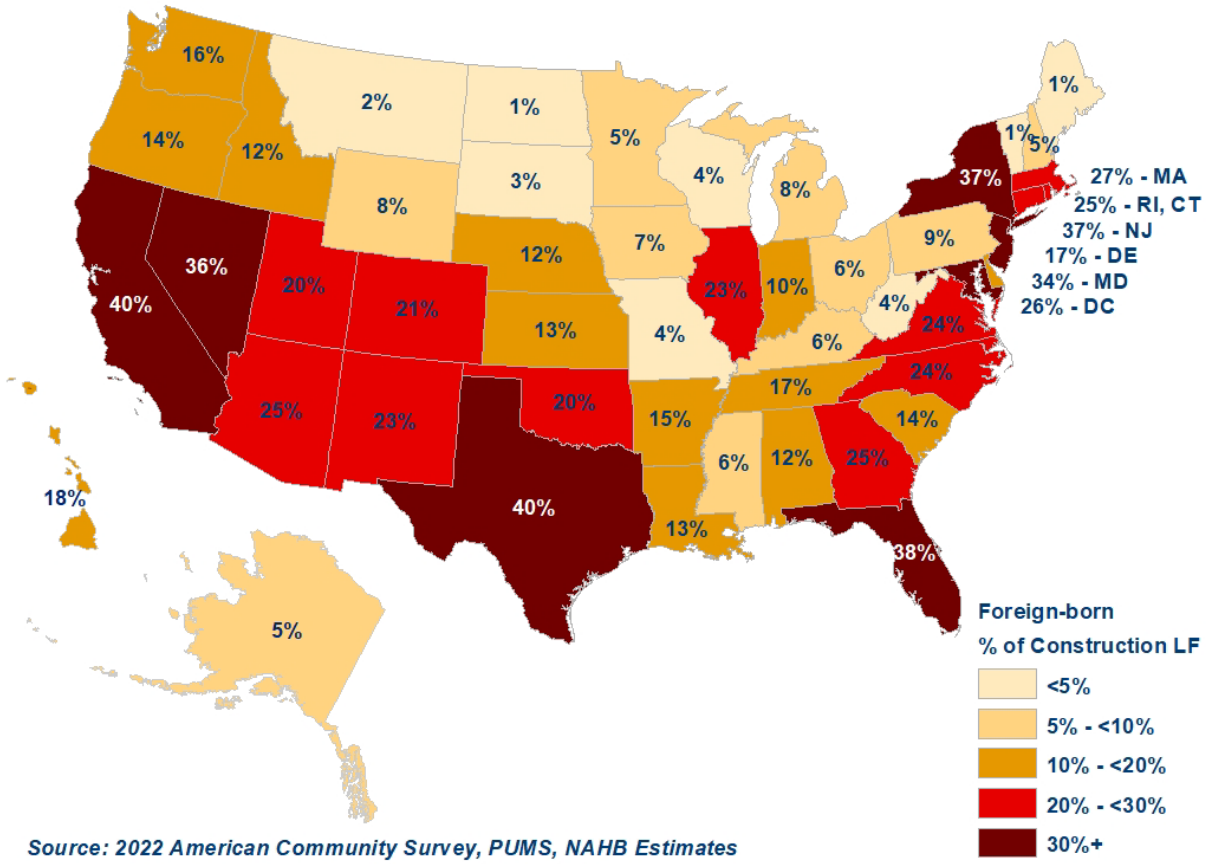
Labor shortages are also high among electricians, plumbers and HVAC technicians, with over half of surveyed builders reporting shortages of these craftsmen. In contrast, these trades demand longer formal training, often require professional licenses and attract fewer immigrants.



Reliance on foreign-born labor is quite uneven across the US states. Immigrants comprise close to 40% of the construction workforce in California and Texas. In Florida, 38% of the construction labor force is foreign-born. In New York and New Jersey, 37% of construction industry workers come from abroad.

Construction immigrants are concentrated in a few populous states, with more than half of all immigrant construction workers (56%) residing in California, Texas, Florida, and New York. These are not only the most populous states in the U.S., but also particularly reliant on foreign-born construction labor.

Immigrant Workers in the Construction Labor Force, 2022



Source: 2022 American Community Survey, PUMS, NAHB Estimates

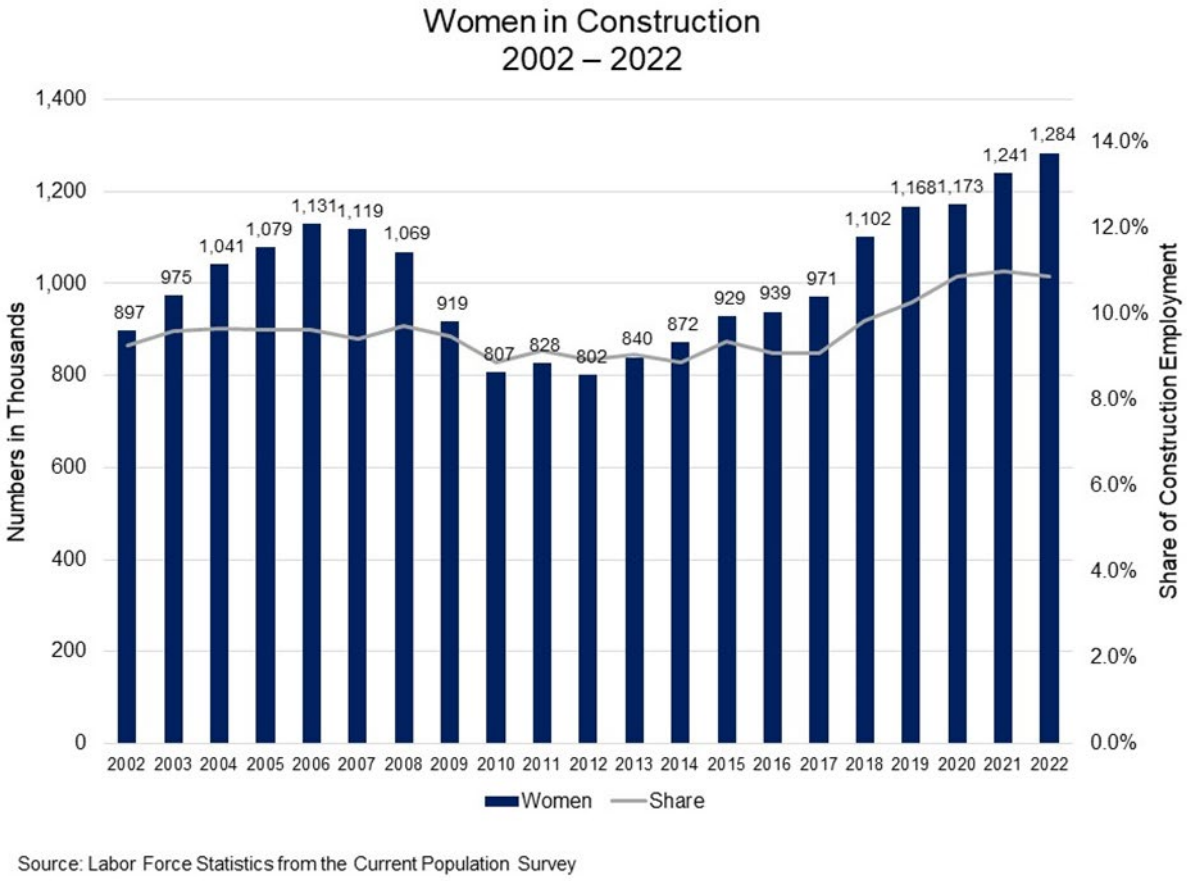
However, the reliance on foreign-born labor continues to spread outside of these traditional immigrant magnets. This is evident in states like New Jersey, Nevada, and Maryland where immigrants, as of 2022, account for over a third of the construction labor force. In Massachusetts, Connecticut, Georgia, Rhode Island, and Arizona, one out of four construction workers are foreign-born. At the other end of the spectrum, nine northern states have the share of immigrant workers below 5%.

While most states draw the majority of immigrant foreign-born workers from the Americas, Hawaii relies more heavily on Asian immigrants. European immigrants are a significant source of construction labor in New York, New Jersey and Illinois.

Women in Construction

The number of women employed in the construction industry increased to over 1.28 million in 2022, as the construction industry recovered all jobs lost during the pandemic induced recession. According to the 2022 Current Population Survey (CPS), women currently make up 10.9% of the construction workforce. This is a noticeable increase from 9.1% in 2017 and just a nudge below the record high share of 11% recorded a year earlier. As the construction skilled labor shortage remains a key challenge for housing, adding new workers is an important goal of the industry. Bringing additional women into the construction labor force represents a potential opportunity for the future.

During the Great Recession, the number of female workers in construction declined sharply by almost 30% to 807,000 by 2010. From 2010 to 2017, the total slowly expanded to around 970,000 but remained below the peak of pre-recession levels. The number of women working in construction grew rapidly in recent years, reaching a new high of 1.28 million in 2022.



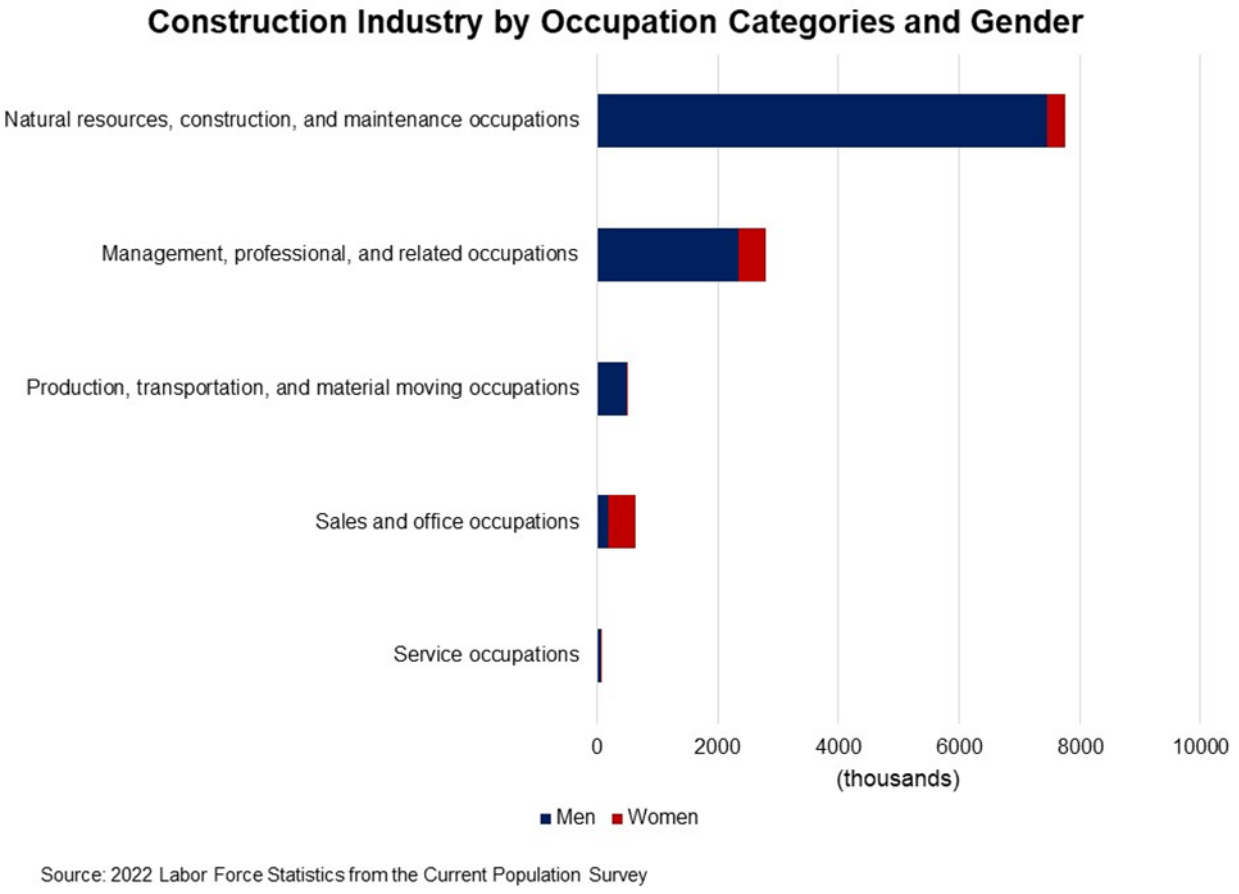
Source: Labor Force Statistics from the Current Population Survey

Job gains by women have been outpacing overall job gains in construction in recent years. As a result, the share of women in construction increased 1.9 percentage points since 2017 to reach a record high level of 11% in 2021.

According to the CPS, women in construction are mostly involved in such occupations as office and administrative support, management, business and financial operations. Sales and office occupations employed the largest number of women within the construction industry. For example, women accounted for 72% of workers in sales and office occupations, including 440,000 women in office and administrative support, and 24,000 in sales and related occupations in 2022. Around 460,000 women were engaged in management, professional, and related occupations, taking up only 17% of all management positions

While construction and maintenance occupations account for the largest number of employees in construction and is where additional workers are most needed, women comprised only 4% of such occupations. Additional steps should be taken to attract female workers into these high demand

occupations. Other groups such as production, transportation, and material moving occupations, and service occupations employed only around 26,000 female workers.



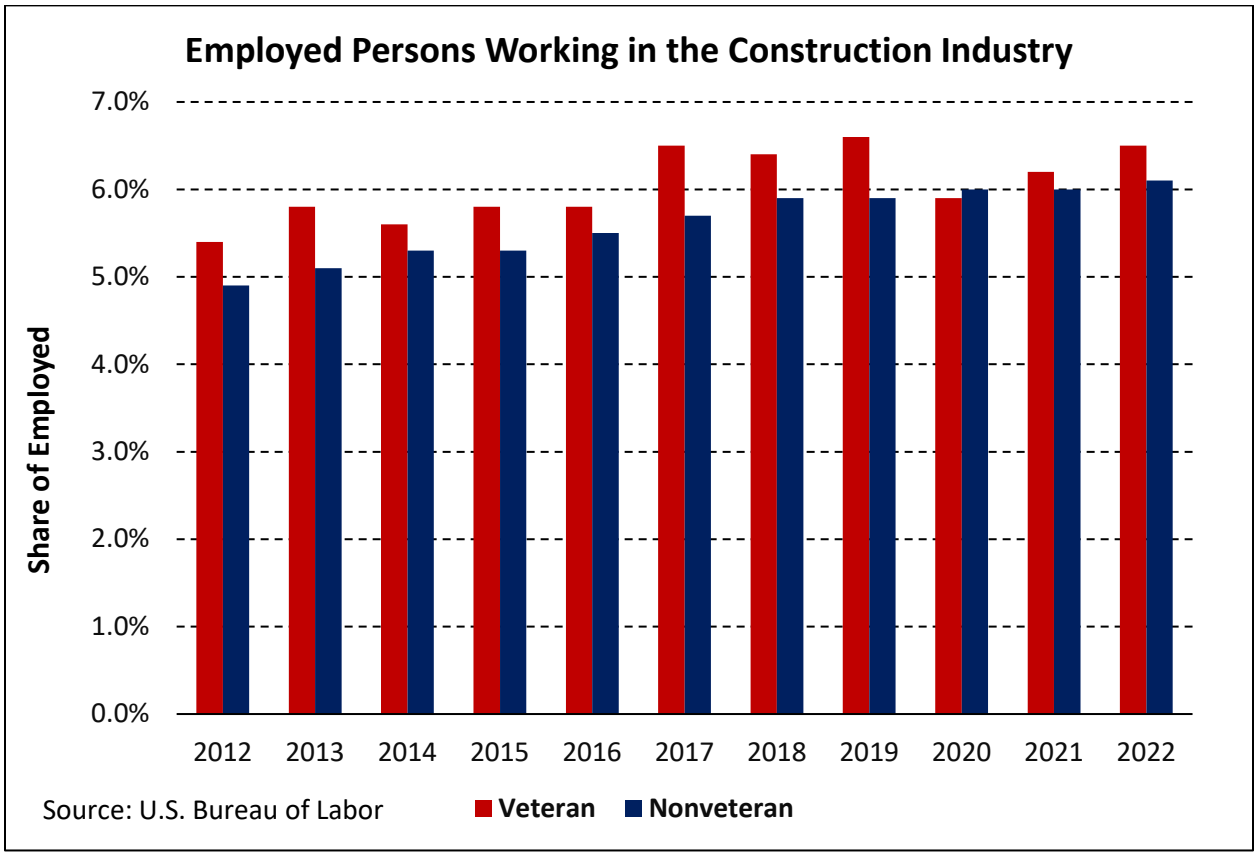
Source: 2022 Labor Force Statistics from the Current Population Survey

Veterans

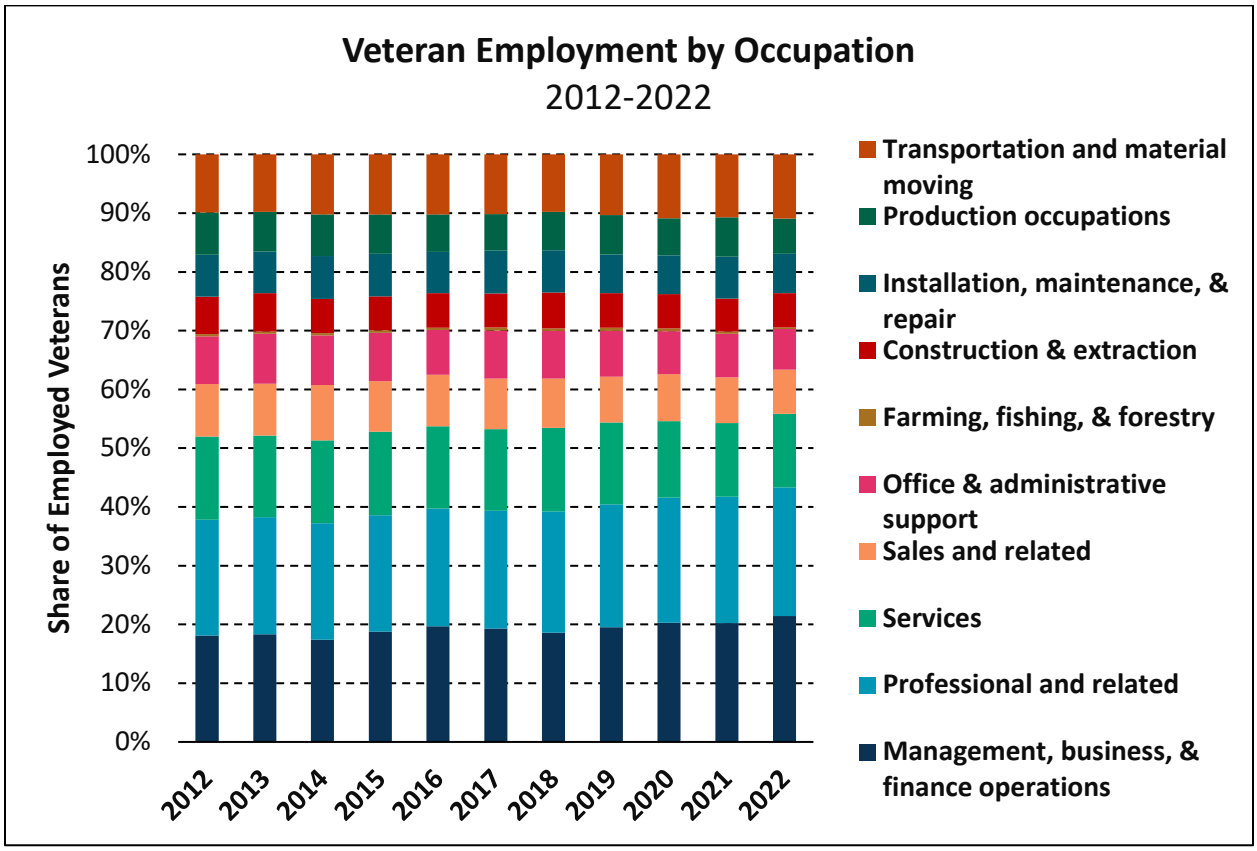
Military veterans are another group of potential workers that builders turned to in search of labor to fill job openings in the construction sector. According to the latest Employment Situation of Veterans report released by the U.S. Bureau of Labor Statistics, close to 560,000 veterans were employed in the construction industry in 2022. This total includes employed workers in residential construction and remodeling, as well as commercial and civil construction.

The 2022 total makes up 6.5% of all employed veterans. This stands in contrast to the 6.1% of non-veterans employed in construction.

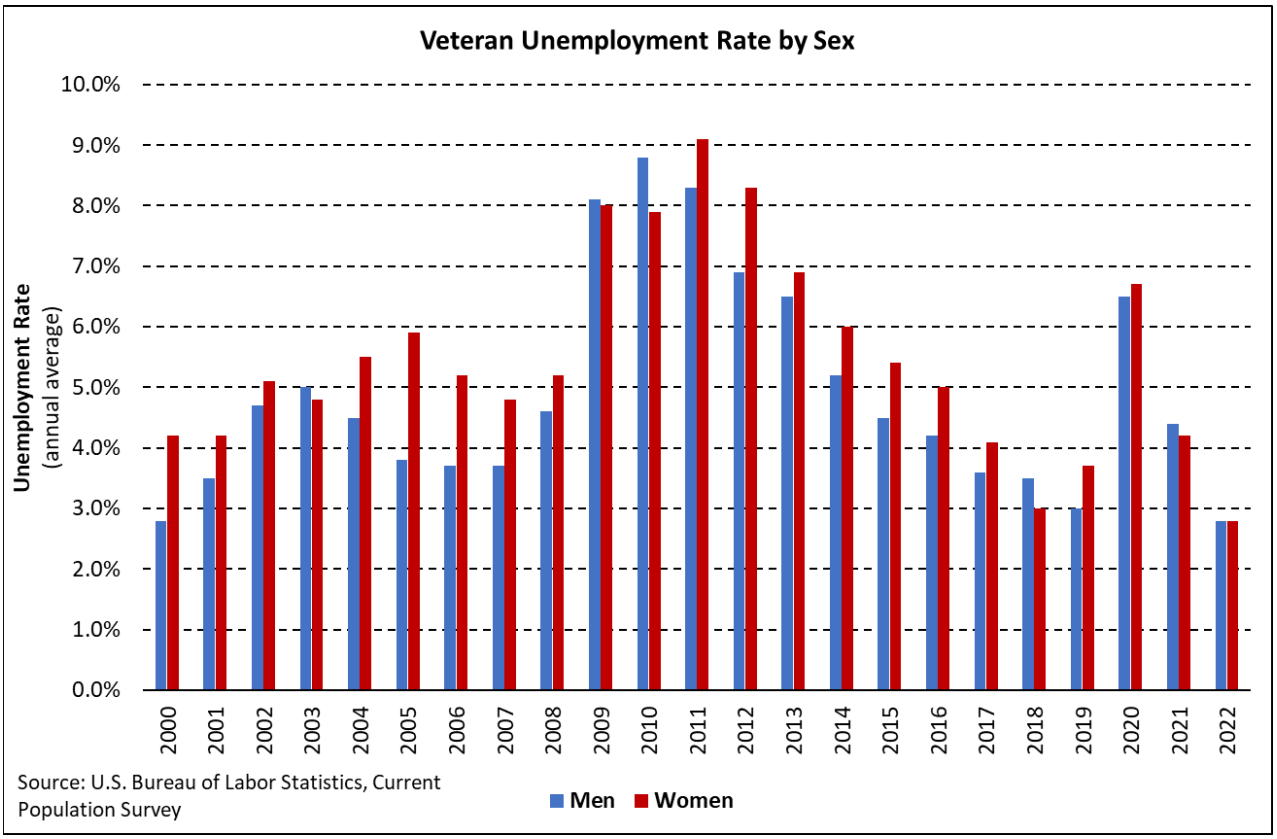
The share of employed veterans working in the construction industry increased in 2022 - the second consecutive annual increase. The share has climbed 0.6 percentage point since 2020 and is just one-tenth lower than the most recent peak reached in 2019.



Looking across all industries, management, business, and financial operations, as well as professional and related occupations made up the largest share of veterans' occupations, accounting for 43.3% of employment. The only other occupations that made up more than 10 percent were transportation and material moving and services occupations. Construction and extraction jobs made up 5.8% of the total.

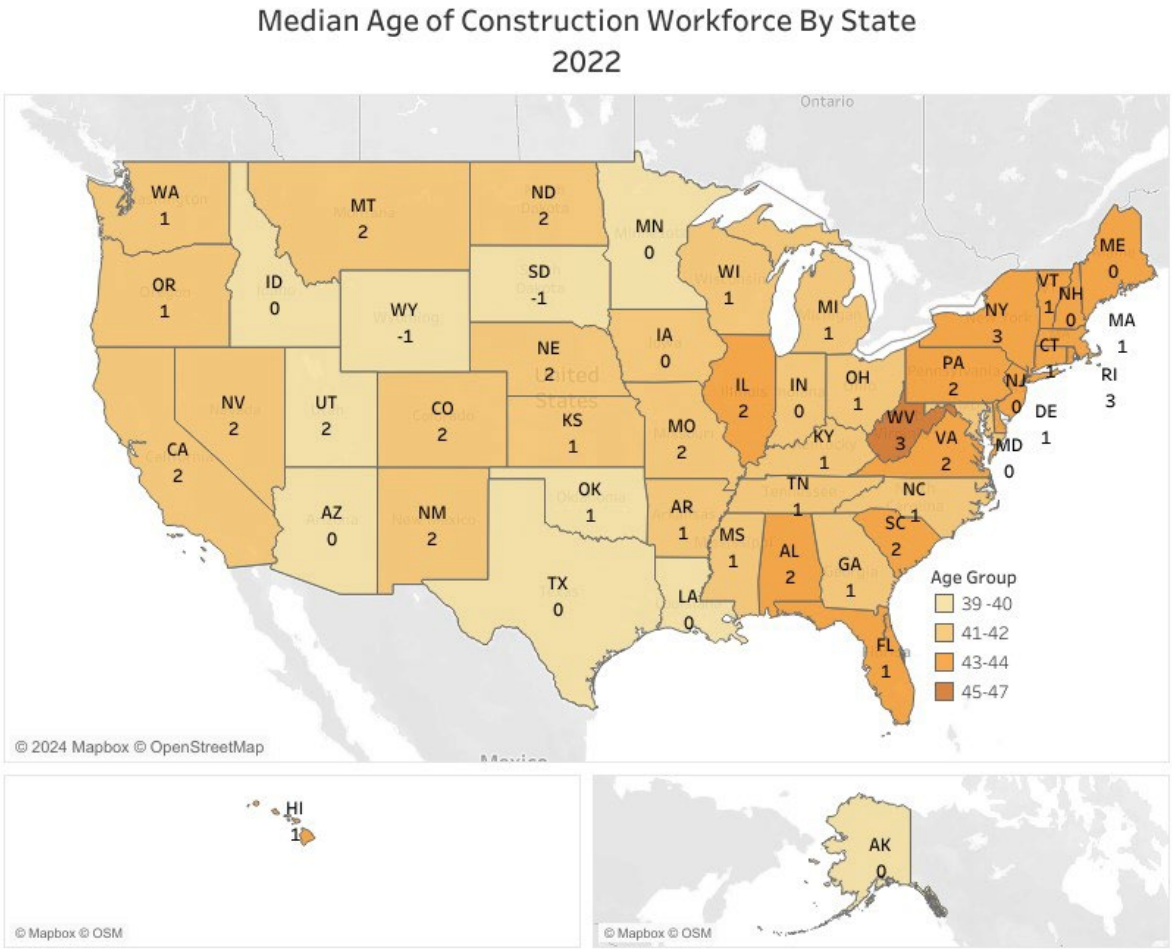


The unemployment rate for all veterans declined from 4.4% in 2021 to 2.8% in 2022. The average unemployment rate among veterans was the same for men and women, in contrast to 2021 when the rate for women was 0.2% less than that of males. Since 2000, the annual unemployment rate among veterans has averaged 0.6% higher for women than men.



Age of Construction Labor Force

Even as a slowing housing market has eased some pressure off the tight labor market, attracting skilled labor, especially younger generations, remains the primary long-term goal for the construction industry. The median age of construction workers is 42, one year older than a typical worker in the national labor force, according to NAHB analysis of the most recent 2022 American Community Survey (ACS) data. As a new encouraging development, the share of younger people in the construction industry is rising.



Number under state name = median age of construction workforce-median age of total labor force
Source: 2022 American Community Survey, NAHB Estimates

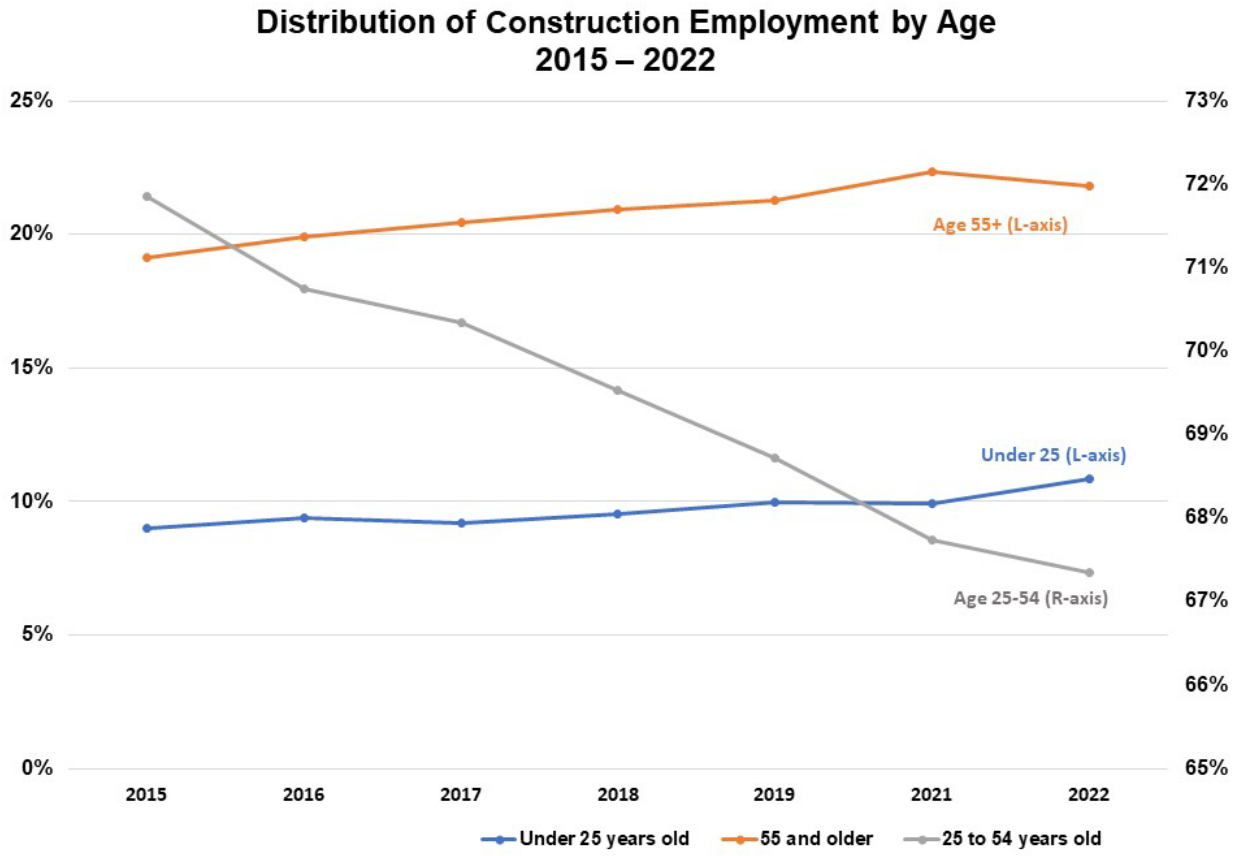
The median age of construction industry workers varies across states. The color coding in the map above tracks the median age of people working in the construction industry. The state with the oldest median age (45 years old) is West Virginia, followed by Connecticut, New York, Rhode Island and Vermont, where the median age of construction workers is 44. Construction workers are younger on average in the central part of the nation. For example, half of all construction workers in Utah are under 39.

The second data series mapped above is the difference between the median age of construction workers in each state and the median age of all industries. These estimates are reported as the numbers printed on each state. A positive number indicates that on average, construction workers are older than a typical worker in the state labor force. West Virginia, New York and Rhode Island are the states where the median age of construction workers is 3 years higher than the overall median. On the other hand, a negative number indicates construction workers are, in general, younger than the state labor force. In South Dakota and Wyoming, the median age of construction workers is 1 year younger than the overall median.

Analysis of the age distribution of construction workers over time reveals that Gen Z, those born between mid-1990s and early 2010s, are more likely to enter the construction industry than Millennials, when they were the youngest generation in the labor force. They are drawn to careers in the construction industry

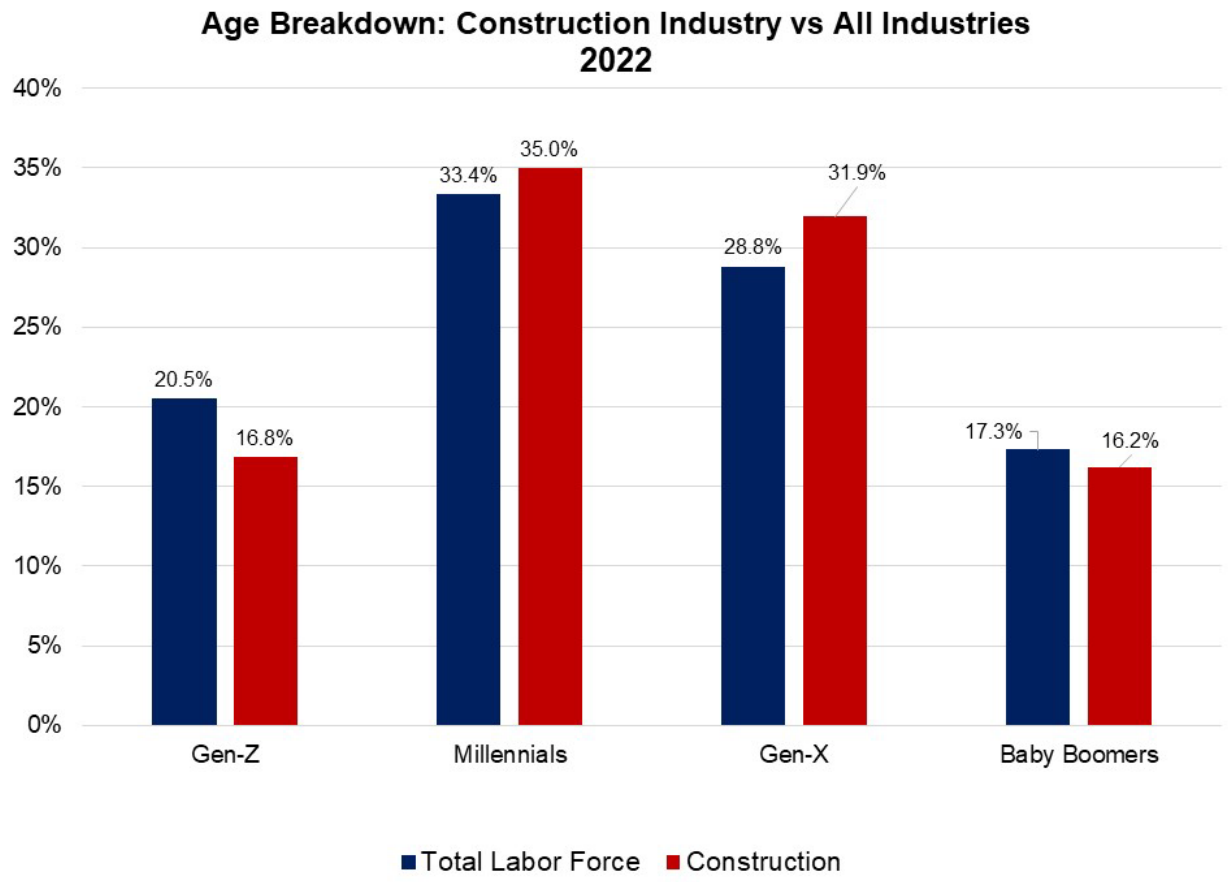
due to factors, like the innovative aspects of modern construction technologies, high cost of college education, competitive wages in construction, job security and potential for growth.

Proving this point, the share of younger construction workers ages 25 under increased to 10.8% in 2022 from 9% in 2015. At the same time, the proportion of workers aged 35 to 54 declined from 71.8% to 67.3% in 2022. The share of older workers aged 55+ rose from 19.1% to 21.8%, as the youngest Baby Boomers entered this age cohort.



Source: 2015-2022 American Community Survey, PUMS data

The chart below shows that, as of 2022, only about 16.8% of construction workers were Gen Zers. Around 66.9% of the construction workforce were Millennials and Gen-Xers, who are in the prime working years, compared to 62.2% in overall workforce. The relative greater share of Gen X construction workforce reveals the current challenge. Gen X is a smaller generational group than the Baby Boomers. The share of Baby Boomer Construction workforce is 16.2%, implying that a substantial portion of workforce would retire in near future.



Source: 2022 American Community Survey, PUMS data

Work from Home Trends

Findings from a March 2023 national poll conducted for NAHB by Morning Consult reveal that 30% of American adults typically work from home at least two days a week. Income, age and educational level seem to play a bigger role in explaining differences when it comes to working from home. At the same time, employment sector, housing tenure and gender appear to play a lesser role.

The survey result show, for example, that 45% of government workers report being able to work from home at least twice a week, not significantly different from the 41% in the private sector. Similarly, tenure makes little difference: 33% of home owners can work from home this frequently, compared to 28% of renters. And though gender is somewhat more significant, the gap is still below 10 percentage points, as 35% of men report being able to work from home at least two days a week, compared to 26% of women.

% of Adults who Typically Work from Home at Least Twice a Week
March 2023

All Adults	**30%**
Employment	
Private Sector	41%
Government	45%
Tenure	
Own	33%
Rent	28%
Gender	
Male	35%
Female	26%
Generation	
Gen Zers: 1997-2005	35%
Millennials: 1981-1996	45%
Gen Xers: 1965-1980	31%
Boomers: 1946-1964	15%
Income Level	
Under 50k	22%
50k-100k	33%
100k+	46%
Education Level	
< College	25%
Bachelors degree	39%
Post-grad	44%

Source: Morning Consult Poll, March 16-21, 2023. n=17,623.

In contrast, the three demographic characteristics that make the biggest difference are generation, income and education level. While 45% of millennials, 35% of Gen Zers, and 31% of Gen Xers can work from home at least twice a week, the share is only 15% among boomers. And not surprisingly, the ability to spend less time commuting to work is positively correlated with income and education level. Among adults with annual incomes below $50,000, only 22% can work from home at least twice a week, compared to 33% for those earning $50,000 to $100,000, and 46% for those whose incomes exceed $100,000. Education has a similar effect: 25% of adults with less than a college education reported typically working from home at least two days a week, compared to 39% among those with a bachelor's degree, and 44% among those with a graduate degree.

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