September 27, 2021

U.S. Construction Outlook:
Pandemic Impacts, Policy Initiatives, Project Implications

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cumulative change (seasonally adjusted)

Source: BLS current employment statistics, https://www.bls.gov/ces/

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State construction employment change, Feb. 2020–August 2021

11 states and DC up, 39 states down (U.S.: -3.0%)

Top 5
South Dakota 7.1%
Idaho 6.7%
Utah 6.5%
Rhode Island 4.9%
South Carolina 3.5%

Bottom 5
Wyoming -16.6%
Louisiana -14.4%
New York -12.4%
West Virginia -10.5%
Vermont -9.8%

Note: Shading based on unrounded numbers
Source: BLS state and area employment, www.bls.gov/sae
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Metro construction employment change, Aug. 2020–Aug. 2021
256 metros up, 37 metros unchanged, 65 metros down (U.S.: 2.5%)

Metro Areas with Largest Construction Employment Changes, August 2020–August 2021

<table>
<thead>
<tr>
<th>Top 5 Areas</th>
<th>12-month gains</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 San Diego-Carlsbad, CA</td>
<td>90,300</td>
</tr>
<tr>
<td>2 Sacramento–Roseville–Arden-Arcade, CA</td>
<td>79,800</td>
</tr>
<tr>
<td>3 Pittsburgh, PA</td>
<td>67,600</td>
</tr>
<tr>
<td>4 Boston-Cambridge-Newton, MA NECTA Div.</td>
<td>78,500</td>
</tr>
<tr>
<td>5 St. Louis, MO-IL</td>
<td>73,600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bottom 5 Areas</th>
<th>12-month gains</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 New York City, NY</td>
<td>-9,600</td>
</tr>
<tr>
<td>2 Nassau County-Suffolk County, NY Div.</td>
<td>-5,100</td>
</tr>
<tr>
<td>3 Miami-Miami Beach-Kendall, FL Div.</td>
<td>-3,200</td>
</tr>
<tr>
<td>4 Calvert-Charles-Prince George's, MD</td>
<td>-2,400</td>
</tr>
<tr>
<td>5 Houston-The Woodlands-Sugar Land, TX</td>
<td>-2,300</td>
</tr>
</tbody>
</table>

Note: Shading based on unrounded numbers
Source: BLS state and regional employment report
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2021 AGC Workforce Survey Results (responses: 2,136)

Hiring expectation

Expect to hire in the next 12 months: 74%

Need to fill open positions

Salaried positions: 62%

Hourly craft positions: 90%
2021 AGC Workforce Survey Results

We are having a hard time filling some or all positions

- Salaried positions: 86%
- Hourly craft positions: 89%

Difficulty finding quality workers

- Available candidates do not meet industry requirements: 72%

Construction delays

- Delays due to shortage of workers: 61%
Year-to-date construction spending:
Jan–July 2021 vs. Jan–July 2020 (not seasonally adjusted)

- Total 6%; private residential 26% (single-family 38%; multi 19%); private nonres -8%; public -7%

Largest segments (in descending order of 2021 year-to-date spending)
- Power -5% (electric -3%; oil/gas fields & pipelines -12%)
- Education -11% (primary/secondary -8%; higher ed -17%)
- Highway and street -5%
- Commercial -3% (warehouse 9%; retail -18%)
- Office -11%
- Mfg. -2% (chemical 7%; transp. equip. 6%; food/beverage/tobacco 13%; electronic/electric -18%)
- Transportation -6% (air -12%; freight rail/trucking -5%; mass transit 6%)
- Health care -2% (hospital 2%; medical building -7%; special care -3%)
- Lodging -30%

Source: U.S. Census Bureau. www.census.gov/constructionspending
Construction input and ‘bid price’ producer price indexes (PPIs)
cumulative change in PPIs, April 2020–Aug 2021 (not seasonally adjusted)

Inputs to construction April 2020-Aug 2021: 27.8%

‘Bid price’ (new nonres building construction) April 2020-Aug 2021: 5.2%

Price changes for construction and selected materials
April 2020–August 2021

% change
Apr 2020-Aug 2021:

- Lumber and plywood: 52%
- Steel mill products: 111%
- Copper and brass mill shapes: 67%
- Aluminum mill shapes: 34%
- Plastic construction products: 30%
- Gypsum: 22%
- ‘Bid price’ (new nonres building construction): 5.2%

Source: Bureau of Labor Statistics, producer price indexes (PPIs) for new nonresidential building construction (bid prices), gypsum products, wood, metal products, and plastic products, not seasonally adjusted.
Cost squeeze on contractors can last two years or more

Difference between year-over-year change in materials costs vs. bid prices, Jan 2006-August 2021

Source: Bureau of Labor Statistics, [www.bls.gov/ppi](http://www.bls.gov/ppi), producer price indexes for goods inputs to nonresidential construction (material costs) and new warehouse construction (bid prices)
AGC’s responses to material cost and supply-chain issues

• Construction Inflation Alert: https://www.agc.org/learn/construction-data/agc-construction-inflation-alert
• ConsensusDocs Price Escalation Resource Center: https://www.consensusdocs.org/price-escalation-clause/
• Recording of webinar on “Soaring Material and Supply-Chain Costs and Delays”: https://store.agc.org/Store/CSI/Store/Product_List_WebEds.aspx
• Presentations to government contracting officials and owner groups
• Lobbying for tariff relief on lumber, steel, aluminum, and products
  - Presentation to National Economic Council, VP’s chief economist, Commerce chief economist
  - Presentations in coalitions to counselor to Commerce secretary, Senate & House trade staff

Source: Author
## Forward-looking indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Latest date</th>
<th>Current value</th>
<th>Year-ago value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architecture Billings Index (ABI)</td>
<td>August</td>
<td>55.6</td>
<td>41.4</td>
</tr>
<tr>
<td>Dodge Momentum Index (DMI)</td>
<td>August</td>
<td>149</td>
<td>125</td>
</tr>
<tr>
<td>Multifamily permits not yet started</td>
<td>August</td>
<td>101,000</td>
<td>70,000</td>
</tr>
</tbody>
</table>

Source: American Institute of Architects (ABI), Dodge Data & Analytics (DMI), Census (New Residential Construction)

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Medium-term impacts as recovery begins

• Economic recovery looks more certain but virus risks remain, especially for construction: vaccination rate = 57% for construction workers, 81% for other occupations
• Slower rebound than for other sectors as owners, investors/lenders, institutions, and public agencies face uncertainty about future demand, project costs, and completion times
• Continuing cost and supply challenges may lead to more project deferrals
• Less demand than pre-crisis for retail, offices, higher ed, lodging & travel-related
• Unclear how states and localities will spend added tax revenue and federal dollars
• Senate infrastructure bill won’t become law before October, if at all
• Best private prospects: remodeling, local distribution centers, data centers, restaurants
New + baseline construction-related funding included in the Senate infrastructure bill

Total: $1.2 trillion, incl. $304B (billion) to reauthorize FAST Act ($69B increase over 5 years)
• $351B (billion): roads, bridges (including FAST Act reauthorization)
• $107B: transit
• $102B: passenger and freight rail
• $102B: passenger and freight rail
• $60B: water infrastructure
• $45B: broadband
• $20B: airports
• $39B: public transit
• $25B: airports
• $17B: ports and waterways
• $17B: power and grid
• $7.5B: electric vehicle infrastructure

Source: AGC analysis of Senate bill
Long-run construction outlook (post–pandemic)

• Slower population growth means slower demand growth for most construction
• Permanent shift from retail to e-commerce/distribution structures
• More specialized and online healthcare facilities; fewer hospitals, nursing homes
• More wind, solar, battery storage and charging facilities, and related manufacturing
• Less oil drilling and pipeline construction
• Continuing demand for K-12 but much less for higher ed construction
• Not clear if offices will decentralize or remain in less demand
• Not clear yet if urban/rural or state-to-state trends will change

Source: Author
Population change by state, July 2019–July 2020 (U.S.: 0.35%)

Top 5
- ID: 2.1%
- AZ: 1.8%
- NV: 1.5%
- UT: 1.5%
- TX: 1.3%

Bottom 5
- NY: -0.6%
- IL: -0.6%
- HI: -0.6%
- WV: -0.6%
- MS: -0.4%

Source: U.S. Census Bureau, Dec. 2020 estimates, [www.census.gov/popest](http://www.census.gov/popest)
AGC economic resources
(email ken_simonson@agc.org)

- *The Data DIGest*: weekly 1-page email (subscribe at http://store.agc.org)
- *Construction Inflation Alert*:
  https://www.agc.org/learn/construction-data/agc-construction-inflation-alert
- ConsensusDocs Price Escalation Resource [Center](https://www.consensusdocs.org/price-escalation-clause/)
- Autodesk-AGC of America Workforce [Survey results](https://www.agc.org/learn/construction-data)
- State and metro data, fact sheets: [www.agc.org/learn/construction-data](https://www.agc.org/learn/construction-data)
- Monthly press releases: construction spending; producer price indexes; national, state, metro employment with rankings