Economic Outlook for Architects

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What it might feel like today...
What I hope you take away...
Agenda

• The Economy
• Housing market trends
• Nonresidential market trends
• ABI and architectural trends
• The Outlook
• What’s next
The Economy
U.S. GDP has fully recovered from pandemic recession, but forecasts for growth this year have been scaled back.

Quarterly GDP growth

- 2020: -3.4%
- 2021: 5.7%
- 2022-1 (f): 1.7%
- 2022-2 (f): 1.3%
- 2022-3 (f): 1.7%
- 2022-4 (f): 2.2%

Source: Bureau of Economic Analysis; forecasts from The Conference Board
Key factors encouraging strong economic growth

• Pandemic may finally be largely controlled
• Strong jobs market
• Healthy wage growth—generating strong consumer spending
• Infrastructure spending
Key factors that may limit future economic growth

• War in Ukraine could become even more disruptive
• Price of oil and other commodities continue to spike
• Supply chain disruptions still an issue
• Inflation continues to heat up, pushing up interest rates
• Labor problems expected to worsen
While consumer confidence remains generally healthy, business confidence is falling.

Source: University of Michigan Consumer Sentiment Index; Conference Board CEO Business Confidence Index
Consumer and producer prices rose sharply in 2021

CPI and PPI percent change from the previous year

Source: Bureau of Labor Statistics
The unemployment rate, while dipping sharply since when the pandemic hit, is above where it was for most of 2019.

Unemployment rates, seasonally adjusted

Sources: Bureau of Labor Statistics
After falling by 15%, construction employment nationally almost back to pre-pandemic levels

All employees, thousands, construction, seasonally adjusted

Sources: Bureau of Labor Statistics
Construction Trades Heavily Reliant on Foreign-Born; Lower Shares of Women, College Educated, Older Workers

Notes: The construction trades labor force includes workers with construction management and trades occupations within the construction industry. Data include workers housed in non-group quarters that are either employed or unemployed but available for and seeking work.

Source: JCHS tabulations of US Census Bureau, American Community Surveys.
Construction workforce relies heavily on immigrant workers; Wyoming in one of the better positions

Foreign born share of the construction labor force, 2019
Attracting workers into the industry: Construction not a popular career path for young adults

Career plans by industry, 18-25 year-olds

- Medical: 16%
- Business: 12%
- IT: 9%
- Engineering: 7%
- Science: 6%
- Teaching: 6%
- Marketing: 4%
- Law: 4%
- Media: 4%
- Construction: 3%
- Other: 29%

Source: National Association of Home Builders (NAHB), “Young Adults and the Construction Trades,” March 2017
Are we headed for a recession?

**Recessionary Indicators**
- Spike in oil prices
- High inflation
- Entering interest rate hiking cycle
- Stock market correction
- Inverted interest rate yield curve

**Expansionary Indicators**
- Strong job growth
- Record corporate profits
- Relatively healthy levels of consumer and business confidence
- Healthy household balance sheet from aggressive government stimulus
Housing market trends
Nationally, house prices have fully recovered from the housing crash, and continue to see surprisingly strong gains.
Housing prices in Wyoming no exception—markets all rising

• 14% increase in average home prices year-over-year
• Higher in Cheyenne (19%) and Jackson (26%)
The pandemic has helped to propel housing starts to highest levels since prior to Great Recession

Annual housing starts (000’s), 2022 figures are annualized year-to-date figures through February

Source: U. S. Department of Commerce.
However, last decade saw historically low levels of homebuilding

Housing starts over the decade (millions of units)

Source: US Department of Commerce
Custom residential architect project billings, inquiries and design contracts end 2021 strong

Diffusion index: 50 = no change from previous quarter; data are seasonally adjusted; data from Q4 2016-Q4 2021

Source: The American Institute of Architects Home Design Trends Survey
Project backlogs remain healthy at residential architecture firms

Number of months of project backlogs, averages across all firms; data are not seasonally adjusted; data from Q4 2016-Q4 2021

Source: The American Institute of Architects Home Design Trends Survey
Architects’ view of housing sectors: home improvements strong, upper-end healthy, affordable sector recovering

% of respondents reporting sector “improving” minus % reporting “weakening”; data from Q4 2021 compared to data from Q4 2020

- Remodeling: additions/alterations
  - 2021: 64%
  - 2020: 75%
- Remodeling: kitchen/bath
  - 2021: 66%
  - 2020: 68%
- First-time buyer/affordable homes
  - 2021: 0%
  - 2020: 20%
  - Change: -3%
- Move-up homes
  - 2021: 29%
  - 2020: 35%
- Custom/luxury homes
  - 2021: 45%
  - 2020: 40%
- Townhouse/condo
  - 2021: 16%
  - 2020: 10%
  - Change: +6%
- Second/vacation homes
  - 2021: 27%
  - 2020: 26%
  - Change: +1%

Source: The American Institute of Architects Home Design Trends Survey, Q4 2021 and 2020
Overall, home sizes up, especially in upper-end homes; easing in home sizes continues in entry-level homes

% of respondents indicating that square footage of homes in category is “increasing” minus % reporting “decreasing”; data from Q1 2021

- Overall: 16%
- Custom/luxury/upper-end homes: 39%
- Entry-level/affordable homes: -14%
- Additions/remodels: 36%

Source: The American Institute of Architects Home Design Trends Survey
Nonresidential market trends
Institutional categories account for over half the spending on nonresidential buildings

Share of U.S. nonresidential building construction spending, 2012-2021

2012–2021 average = $475.1 billion

Institutional = $242.6B (51.1%)

Retail/Other Comm., 15.7%
Manufacturing, 14.7%
Lodging, 4.9%
Public Safety, 2.2%
Religious, 0.7%
Health Care, 9.1%
Education, 19.6%
Transportation, 10.1%
Amuse./Rec., 4.8%
Commun., 4.4%
Office, 13.7%

Commercial/Industrial = $232.5B (48.9%)

Source: Construction Spending Put-in-Place, U.S. Department of Commerce
After declining in 2020 and 2021, construction spending on buildings off to a strong start this year

Billions of $, Feb 2022 vs. Feb 2021 totals

<table>
<thead>
<tr>
<th>Total Nonresidential Building Construction</th>
<th>2022</th>
<th>2021</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Nonresidential Building Construction</td>
<td>$83.8</td>
<td>$78.7</td>
<td>6.5%</td>
</tr>
<tr>
<td>Commercial/ Industrial</td>
<td>$45.2</td>
<td>$39.4</td>
<td>14.7%</td>
</tr>
<tr>
<td>Lodging</td>
<td>$2.7</td>
<td>$3.7</td>
<td>-27.4%</td>
</tr>
<tr>
<td>Office</td>
<td>$12.9</td>
<td>$12.3</td>
<td>4.8%</td>
</tr>
<tr>
<td>Commercial (retail &amp; other)</td>
<td>$14.9</td>
<td>$12.5</td>
<td>18.7%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>$14.8</td>
<td>$10.9</td>
<td>35.3%</td>
</tr>
<tr>
<td>Institutional</td>
<td>$38.6</td>
<td>$39.3</td>
<td>-1.8%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>$7.9</td>
<td>$7.3</td>
<td>8.0%</td>
</tr>
<tr>
<td>Education</td>
<td>$13.8</td>
<td>$14.3</td>
<td>-3.5%</td>
</tr>
<tr>
<td>Religious</td>
<td>$0.4</td>
<td>$0.5</td>
<td>-9.6%</td>
</tr>
<tr>
<td>Public Safety</td>
<td>$1.5</td>
<td>$2.4</td>
<td>-34.8%</td>
</tr>
<tr>
<td>Amusement &amp; Recreation</td>
<td>$3.8</td>
<td>$3.7</td>
<td>3.3%</td>
</tr>
<tr>
<td>Transportation</td>
<td>$8.0</td>
<td>$8.0</td>
<td>-0.4%</td>
</tr>
<tr>
<td>Communication</td>
<td>$3.2</td>
<td>$3.2</td>
<td>-0.1%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, Value of Construction Put in Place
Construction costs for key commodities continue to be very volatile

Change in construction costs, February 2021 to February 2022

Source: Bureau of Labor Statistics
Overwhelming share of architecture firms rate supply chain disruptions more serious than a year ago

% of firms reporting impact of supply chain disruptions on projects at their firm compared to a year ago

- Much more serious: 41%
- Somewhat more serious: 39%
- About the same: 16%
- Somewhat less serious: 4%
- Much less serious: 0.3%

Source: AIA Architecture Billings Index
Keeping clients informed, substitutions, anticipating higher design costs most significant firm interactions with clients

Most significant response on the part of their firm regarding interactions with clients, % of firms

- 31.4%: Keeping clients informed on supply chain disruptions
- 21.9%: Using different materials/product options
- 20.3%: Increasing estimated cost of project design
- 9.2%: Developing more design options
- 9.4%: Monitoring cost and availability of materials/products
- 3.3%: Extending the design phase
- 0.8%: Avoiding challenging projects

Source: AIA Work-on-the-Boards survey, March 2022
Significant contractor interactions: encouraging earlier ordering and engagement, more freedom in substitution

Most significant response on the part of their firm regarding interactions with contractors, % of firms

- Encouraging contractors to order materials earlier: 30.2%
- Allowing contractors more freedom in substitution: 22.4%
- Increased engagement with contractors prior to bid submission: 22.1%
- Increasing estimated costs for construction administration: 17.5%
- Starting construction administration earlier than usual: 5.5%

Source: AIA Work-on-the-Boards survey, March 2022
Work on existing facilities has been a growing share of design activity

Renovations, rehabilitations, additions, and historic preservation as percent of firm building design billings

Source: AIA Firm Survey Report, various years
Almost two-thirds of US architecture firms currently get half of more of their billings from work on existing facilities

Share of firms reporting the estimated share of billings at their firm for projects dealing with renovations, rehabilitation, retrofits, additions, and historic preservation to existing facilities

- 75% or higher: 28%
- Above half, but under 75%: 17%
- About half: 19%
- Below half, but over 25%: 14%
- 25% or lower: 21%

Source: AIA Architecture Billings Index, June 2021
Institutional firms generally rely more on work on existing buildings

Average estimated share of billings at firms for projects dealing with renovations, rehabilitation, retrofits, additions, and historic preservation to existing facilities by firm specialization

Source: AIA Architecture Billings Index, June 2021
The Northeast and Midwest, with their older building stock and slower growth, see more retrofit work

Average estimated share of billings at firms for projects dealing with renovations, rehabilitation, retrofits, additions, and historic preservation to existing facilities by region

Source: AIA Architecture Billings Index, June 2021
ABI and architectural trends
Architecture firm billings now positive for eleven straight months, but pace of growth is moderating

Source: AIA Architecture Billings Index
New design contracts continue to indicate a significant amount of new work in the pipeline

Diffusion index: 50 = no change from previous month, seasonally adjusted

Source: AIA Architecture Billings Index
As architecture firm backlogs have exceeded pre-pandemic levels

Average backlog at architecture firms (months)

Source: AIA Architecture Billings Index
Architecture firm employment has gained back most of recessionary losses after pandemic hit

All employees, thousands, architectural services, seasonally adjusted

Source: Bureau of Labor Statistics
Firm leadership transition expected to be a major issue in coming years

Share of firms reporting the share of current firm leadership expected to retire/significantly scale back involvement over the next 3-5 years

Source: AIA Work-on-the Boards survey, November, 2021
Future staff satisfaction: firm leaders put firm culture, compensation at top of list as most important factor

Share of firms reporting which will be the most important factor for staff satisfaction in the future

- Firm culture and workplace comfort: 20.7%
- Compensation: 19.7%
- Advancement potential: 12.5%
- Types of projects worked on: 10.6%
- Firm benefits offered: 9.6%
- Social/economic/environmental impact of projects: 7.3%
- Firm reputation/prestige: 5.9%
- Technical skills developed by staff: 4.4%

Source: AIA Work-on-the-Boards Survey, November 2021
Nearly six in 10 firms report that they are having problems filling open architectural staff positions

% of firms, degree of problem firm is having at present filling open architectural staff positions

- No problem filling open positions, 11.5%
- Problems filling some positions, but not others, 24.2%
- Problems filling most or all positions, 34.9%
- We don’t have any open positions, 27.1%
- Other, 2.3%

Any problem filling architectural staff positions: 59%

Source: AIA Architecture Billings Index, July 2021
Most firm leaders at least somewhat concerned about being able to retain and recruit architectural staff

How concerned are you about being able to recruit and retain architecture staff over coming months, % of firms

- Extremely concerned, 10%
- Somewhat concerned, 44%
- Quite concerned, 27%
- Not very concerned, 11%
- Not at all concerned, 9%

Source: AIA Work-on-the-Boards survey, January 2022
Most effective actions for addressing staffing issues at firms

• Compensation strategies
• Employee benefit/perks
• Staffing/workforce strategies
• Firm/project management strategies
Higher compensation, career advancement are most important reasons for expected increase in staff turnover

% of firms expecting higher turnover in next six months, importance of given reason for the expected increase in voluntary turnover of architectural staff

Source: AIA Architecture Billings Index, July 2021
Firms averaged over 5% growth in revenue last year, and even better numbers are projected for this year.

Projected change in revenue in 2022 compared to 2021, percent of firms

Average projected growth: 6.7%

- Significant increase (15% or more), 20%
- Significant decline (15% or more), 3%
- Modest decline (5%-14%), 9%
- About flat (+/-4%), 26%
- Modest increase (5%-14%), 42%

Source: AIA Work-on-the-Boards Survey, November 2021
The Outlook
Construction spending expected to recover in 2022 and 2023 across all major building sectors

Billions $ / % change - construction spending on nonresidential buildings

Source: AIA Consensus Construction Forecast Panel, December 2021; 2021 figures are estimates.
Retail expected to see healthy growth this year; all commercial sectors projected to see robust growth in 2023

Billions $ / % change - construction spending on nonresidential buildings

Source: AIA Consensus Construction Forecast Panel, December 2021; 2021 figures are estimates.
Institutional sector recovery underway this year; spending projected to strengthen in 2022

Billions $ / % change - construction spending on nonresidential buildings

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<tr>
<th>Total Institutional</th>
<th>Health</th>
<th>Education</th>
<th>Amusement and Recreation</th>
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<tr>
<td>2021 spending level</td>
<td>$190</td>
<td>$49</td>
<td>$98</td>
</tr>
<tr>
<td>2022 % change</td>
<td>6.0%</td>
<td>6.2%</td>
<td>6.1%</td>
</tr>
<tr>
<td>2022 % change</td>
<td>4.4%</td>
<td>3.5%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

Source: AIA Consensus Construction Forecast Panel, December 2021; 2021 figures are estimates.
What’s next?
The opportunities of the future remain unchanged

- **Resilient and sustainable design** that mitigates and adapts to climate impact while improving occupant health and well-being
- **More diverse workforce**—with firm culture that supports equity
- **Technologically savvy**
- **Existing building focused**

**Just be mindful of potential challenges**
- Changes in economic indicators
- Filling architecture positions
- Sector variation

Image credit: Ngoc Doan / STIMSON; view of roof garden at John W. Olver Design Building, University of Massachusetts Amherst
Economic resources from the AIA

- AIAU quarterly economic series: register at aiau.aia.org/economic-updates-series
- AIA Architectural Billings Index (ABI): aia.org/abi
- AIA Consensus Construction Forecast: aia.org/ccf
- AIA Home Design Trend Survey (HDTs): aia.org/hdts
- Economic indicators to track leading economic Key Performance Indicators (KPIs): aia.org/indicators
- 2021 AIA Compensation Survey: www.aia.org/compensation
- 2020 AIA Business of Architecture firm survey report: aia.org/firmsurvey
- AIA Guides to Equitable Practice: www.aia.org/equityguides
- AIA Best Practices: www.aia.org/bestpractices
- Practice/firm resources: aia.org/practice
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