Headline Forecast

• The US economy is still expanding but more slowly:
  - consumer, business confidence are generally high; recession probability is low
  - but latest data are weak for jobs, retail sales, single-family housing, manufacturing
  - trade & fiscal policy concerns continue

• Contractors remain busy and confident; construction employment is growing in most states and spending is up in most project categories

• Three concerns:
  - impact of trade policies on materials costs and on demand for construction
  - widening labor shortage, worsened by hostile immigration policy
  - if interest rates rise, may cut demand for income-producing projects, new homes

Source: Author
### AGC members’ expectations for 2019

<table>
<thead>
<tr>
<th>Industry</th>
<th>Net % Expecting Higher Dollar Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public building</td>
<td>17%</td>
</tr>
<tr>
<td>Water/Sewer</td>
<td>14%</td>
</tr>
<tr>
<td>Highway</td>
<td>16%</td>
</tr>
<tr>
<td>Private Office</td>
<td>13%</td>
</tr>
<tr>
<td>K-12 school</td>
<td>16%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>12%</td>
</tr>
<tr>
<td>Hospital</td>
<td>16%</td>
</tr>
<tr>
<td>Higher Education</td>
<td>11%</td>
</tr>
<tr>
<td>Retail, Warehouse, Lodging</td>
<td>15%</td>
</tr>
<tr>
<td>Power</td>
<td>10%</td>
</tr>
<tr>
<td>Federal (e.g., VA, GSA, USACE, NAVFAC)</td>
<td>15%</td>
</tr>
<tr>
<td>Multifamily Residential</td>
<td>5%</td>
</tr>
<tr>
<td>Transportation (e.g., transit, rail, airport)</td>
<td>14%</td>
</tr>
</tbody>
</table>

Source: AGC 2019 Outlook Survey, Jan. 2019
Construction spending & employment, 2006–2019

Spending put in place, Feb. ‘06 (prior peak)–Feb. ‘19

trillion $, seasonally adjusted annual rate

2/19 Total: $1.32 trillion
(9.6% above ’06 peak)

% change:
Total: 1.1%

Private residential
(20% below ’06 peak)

Private nonresidential
(9% above ’08 peak)

Public
(0.1% above ’09 peak)

Employment, April ‘06 (peak)–Feb. ‘19

millions, seasonally adjusted

2/18–2/19
% change:
Total: 3.1%

Nonresidential
(0.4% below ’19 peak)

Residential
(16% below ’06 peak)

Nonres: 3.0%

Res: 3.2%

2/19 Total: 7.4 million
(4% below peak)

Source: spending--U.S. Census Bureau; employment--Bureau of Labor Statistics
## Nonresidential spending by segment: 2017-2018 change and 2019 forecast

<table>
<thead>
<tr>
<th>Segment</th>
<th>2017 vs. 2016</th>
<th>2018 vs. 2017</th>
<th>2019 forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonresidential total (public+private)</td>
<td>-0.5%</td>
<td>4.7%</td>
<td>2-5%</td>
</tr>
<tr>
<td>Power (incl. oil &amp; gas field structures, pipelines)</td>
<td>-5</td>
<td>4</td>
<td>2-7%</td>
</tr>
<tr>
<td>Educational</td>
<td>1</td>
<td>3</td>
<td>0-5%</td>
</tr>
<tr>
<td>Highway and street</td>
<td>-4</td>
<td>4</td>
<td>3-8%</td>
</tr>
<tr>
<td>Commercial (retail, warehouse, farm)</td>
<td>12</td>
<td>2</td>
<td>0-5%</td>
</tr>
<tr>
<td>Office</td>
<td>-1</td>
<td>9</td>
<td>0-5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-13</td>
<td>-2</td>
<td>near 0</td>
</tr>
<tr>
<td>Transportation</td>
<td>4</td>
<td>15</td>
<td>5-10%</td>
</tr>
<tr>
<td>Health care</td>
<td>4</td>
<td>0</td>
<td>near 0</td>
</tr>
<tr>
<td>Lodging</td>
<td>6</td>
<td>11</td>
<td>0-5%</td>
</tr>
<tr>
<td>Sewage &amp; waste disposal</td>
<td>-12</td>
<td>8</td>
<td>2-7%</td>
</tr>
<tr>
<td>Water</td>
<td>-9</td>
<td>17</td>
<td>2-7%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau construction spending report; Author’s forecast
Construction spending: public works
annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–2/19; billion $

Highways (99.7% public in 2018)

Transportation facilities (air, transit, rail, water)

Sewage/waste & water (sewage 98% public in 2018; water 99% public in 2018)

Conservation and development (99.8% public in 2018)

Source: U.S. Census Bureau construction spending report
Key points: roads, transportation, sewer/water

- **Water & sewer/wastewater** spending returning to 2011-15 levels after large drop in 2016-17; little long-term new funding likely
- Federal infrastructure bill is unlikely in 2019; spending wouldn’t occur until later, but state highway funding and P3s are increasing
- Many new and ongoing public & private airport projects; revival of freight rail construction; but no net increase likely in public funding for port, passenger rail or transit construction
- Conservation will grow if Corps of Engineers can award enough $
Construction spending: industrial, heavy
annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–2/19; billion $

**Power** (94% private in 2018)

Feb. ‘18–Feb. ‘19: 2% (oil & gas 11%; electric 0%)

**Manufacturing** (99.4% private in 2018)

Feb. ‘18–Feb. ‘19: 3% (chemical 2%; other 3%)

**Amusement & recreation** (55% private in 2018)

Feb. ‘18–Feb. ‘19: 9% (private 1%; public 20%)

**Communication** (99.3% private in 2018)

Feb. ‘18–Feb. ‘19: -11%

Source: U.S. Census Bureau construction spending report
Key points: power & energy, mfg, amusement, communication

• Solar, wind power are growing again; expect more oil & natural gas pipelines in ’19 but timing is subject to court & regulatory delays
• Manufacturing construction should recover further in ‘19 based on energy projects, U.S. economic growth; but tariffs, foreign retaliation, rising construction costs are major concerns
• Amusement & recreation spending is very “lumpy”—a few big stadiums at irregular intervals; but funding for local, state, federal parks keeps eroding
• Communication may revive as wireless firms build out 5G networks

Source: Author
Construction spending: education, health care
annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–2/19; billion $

**Education:** (state/local K-12, S/L higher; private)

- Feb. ‘18–Feb. ‘19: 4% (state/local preK-12 10%; state/local higher ed -4%; private -3%)

**Health care:** (private hospital, S/L hospital, other)

- Feb. ‘18–Feb. ‘19: -3% [private hospital -3%; S/L hospital -16%; other (special care, medical office, federal) 1%]

Source: U.S. Census Bureau construction spending report
Key points: education & health care

• Rising house & commercial property values are supporting school district tax receipts & bond issues for preK-12 projects

• Higher-ed enrollment is shrinking and some small colleges are closing; decrease in full-tuition foreign students will hurt budgets

• Rising stock prices help private school & college capital campaigns

• Health care spending is shifting from hospitals to standalone special-care facilities (urgent care, surgery, rehab, hospices)

Source: Author
Construction spending: developer-financed
annual total, 2008–16; monthly (seasonally adjusted annual rate), 1/17–2/19; billion $

**Retail (private)**
Feb. ‘18–Feb. ‘19: -17%

**Office (87% private in 2018)**
Feb. ‘18–Feb. ‘19: 5% (private 5%; public 8%)

**Warehouse (private)**
Feb. ‘18–Feb. ‘19: 6%

**Lodging (private)**
Feb. ‘18–Feb. ‘19: 7%

Source: U.S. Census Bureau construction spending report
Key points: retail, warehouse, office, hotel, data centers

- Retail now tied to mixed-use buildings & renovations, not standalone structures; ongoing store closings imply downturn continuing in ‘19
- Warehouse growth is still benefiting from e-commerce; more local than huge regional distribution centers likely in future; self-storage is booming
- Office employment still rising but space per worker is shrinking; more urban & renovation work than suburban office parks
- Hotel pipeline is still growing but sector is very interest-rate sensitive
- Data centers remain a strong niche but no data available on how strong

Source: Author
Private residential spending: slower single-family growth, pickup in multifamily annual total, 2006–16; monthly (seasonally adjusted annual rate), 1/17–2/19; billion $

Spending put in place (billion $)

12-month % change

Source: U.S. Census Bureau construction spending report
Residential spending forecast--2019: 5-9% (3% in 2018; 12% in 2017)

• SF--2019: 6-10% (5% in 2018; 11% in 2017); rising interest rates, building costs, student debt will limit number of potential buyers

• MF--2019: 2-5% (1% in 2018; -2% in 2017)
  – occupancy rates, rents have leveled off; but permits are rising, implying rebound in 2019
  – millennials are staying longer in cities and denser suburbs where MF construction is bigger share of market than in outer suburbs
  – nearly all MF construction is rental, not condo; more high-rises

• Improvements--2019: 5-10% (0% in 2018; 19% in 2017); rising number of seniors prefer remodeling to moving but interest cost, labor scarcity may be barriers

Source: Author
Population change by state, July 2017–July 2018 (U.S.: 0.62%)

Source: U.S. Census Bureau
State construction employment change (U.S.: 3.1%)
2/18 to 2/19: 44 states up, 6 states and DC down

**Top 5**
- **WV**: 46.4%
- **NV**: 11.7%
- **AK**: 11.0%
- **AZ**: 10.7%
- **WY**: 10.1%

**Bottom 5**
- **ME**: -6.8%
- **VT**: -5.8%
- **LA**: -3.7%
- **SC**: -3.6%
- **DC**: -2.5%

Shading based on unrounded numbers

Source: BLS state and regional employment report
Metro construction employment change (U.S.: 3.1%)

2/18 to 2/19: 275 (77%) of 358 metros up, 44 unchanged, 39 (12%) down

Top 5
- Monroe, MI 28%
- St. Cloud, MN 19%
- Chico, TX 18%
- South Bend-Mishawaka, IN-MI 17%
- Yuba City, CA 17%

Bottom 5
- Danville, IL -20%
- Niles-Benton Harbor, MI -17%
- Bloomington, IL -12%
- Atlantic City-Hammonton, NJ -11%
- Altoona, PA -10%

Source: BLS state and regional employment report
Construction workforce indicators (not seasonally adjusted)

Construction openings: all-time high; hires steady
(Jan. data, 2009-19)

Construction job openings rate has been growing as pay accelerates
(Jan. data, 2009-19)

Job openings rate in construction
4.1%

12-mo % change in construction average hourly earnings
2.9%

Source: Bureau of Labor Statistics
Outlook 2019: Firms plan to add workers but expect continued difficulty finding them

% of firms planning to add workers: 79%

% reporting difficulty hiring: 78%

% who expect as much or more difficulty in 2019: 68%

Source: AGC 2019 Outlook Survey, Jan. 2019
Outlook 2019: Firms with staffing challenges face higher costs and delays

- Costs have been higher than we anticipated: 33%
- Projects have taken longer than we anticipated: 34%
- We have put higher prices into our bids or contracts: 37%
- We have put longer completion times into our bids or contracts: 18%
- No impact/Stay the same: 24%

Source: AGC 2019 Outlook Survey, Jan. 2019
12-month change in producer price index for key inputs

- Steel mill products: 13% (February 2018–February 2019), 5% (February 2017–February 2018)
- Aluminum mill shapes: 4% (February 2018–February 2019), 11% (February 2017–February 2018)
- Diesel fuel: -4% (February 2018–February 2019), 39% (February 2017–February 2018)
- Copper & brass mill shapes: -8% (February 2018–February 2019), 10% (February 2017–February 2018)
- Paving mixtures: 5% (February 2018–February 2019), 4% (February 2017–February 2018)
- Ready-mixed concrete: 2% (February 2018–February 2019), 4% (February 2017–February 2018)
- Gypsum products: -7% (February 2018–February 2019), 8% (February 2017–February 2018)
- Lumber & plywood: -9% (February 2018–February 2019), 14% (February 2017–February 2018)

Source: Bureau of Labor Statistics
Cumulative changes in materials & labor costs vs. bid prices

Cumulative % change, not seasonally adjusted

1/16–2/19

-2% 0% 2% 4% 6% 8% 10% 12% 14%

12 month % change

PPI for inputs to construction
11.3%
10.3%
9.9%

Average hourly earnings for all construction employees

PPI for nonresidential building

Source: Bureau of Labor Statistics
## 2017-2018 summary and 2019 forecast

<table>
<thead>
<tr>
<th></th>
<th>2017 actual</th>
<th>2018 actual</th>
<th>2019 forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total spending</td>
<td>4%</td>
<td>4%</td>
<td>4-7%</td>
</tr>
<tr>
<td>Private – residential</td>
<td>12%</td>
<td>3%</td>
<td>5-9%</td>
</tr>
<tr>
<td>– nonresidential</td>
<td>1%</td>
<td>3%</td>
<td>3-6%</td>
</tr>
<tr>
<td>Public</td>
<td>-3%</td>
<td>7%</td>
<td>2-5%</td>
</tr>
<tr>
<td>Goods &amp; services inputs PPI</td>
<td>4.4%</td>
<td>3.8%</td>
<td>4-6%</td>
</tr>
<tr>
<td>Wages &amp; salaries (avg. hourly earnings)</td>
<td>3.1%</td>
<td>3.6%</td>
<td>3.5-4.5%</td>
</tr>
</tbody>
</table>
AGC economic resources
(email simonsonk@agc.org)

- *The Data DIGest*: weekly 1-page email (subscribe at http://store.agc.org)
- monthly press releases: spending; producer price indexes; national, state, metro employment with rankings
- yearly employment & outlook surveys, state and metro data, fact sheets: www.agc.org/learn/construction-data
- webinar May 16 with Kermit Baker, AIA chief economist; Alex Carrick, ConstructConnect chief economist