# 2019 Construction Outlook Survey Results

## National Results

*Total Responses: 1,312. Responses varied for some questions. Percentages are based on responses to each question and may not sum to 100 due to rounding.*

1. Compared to 2018, do you expect the available dollar volume of projects you compete for in 2019 to be (answer for all market areas in which your business operates):

<table>
<thead>
<tr>
<th>Market</th>
<th>Higher</th>
<th>Lower</th>
<th>Same</th>
<th>Net*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Building</td>
<td>28%</td>
<td>11%</td>
<td>60%</td>
<td>17%</td>
</tr>
<tr>
<td>Highway</td>
<td>30%</td>
<td>14%</td>
<td>56%</td>
<td>16%</td>
</tr>
<tr>
<td>K-12 School</td>
<td>32%</td>
<td>16%</td>
<td>53%</td>
<td>16%</td>
</tr>
<tr>
<td>Hospital</td>
<td>31%</td>
<td>15%</td>
<td>54%</td>
<td>16%</td>
</tr>
<tr>
<td>Retail, Warehouse, Lodging</td>
<td>29%</td>
<td>14%</td>
<td>57%</td>
<td>15%</td>
</tr>
<tr>
<td>Federal (e.g., VA, GSA, USACE, NAVFAC)</td>
<td>26%</td>
<td>12%</td>
<td>62%</td>
<td>15%</td>
</tr>
<tr>
<td>Transportation (e.g., transit, rail, airport)</td>
<td>29%</td>
<td>14%</td>
<td>57%</td>
<td>14%</td>
</tr>
<tr>
<td>Water/Sewer</td>
<td>27%</td>
<td>13%</td>
<td>61%</td>
<td>14%</td>
</tr>
<tr>
<td>Private Office</td>
<td>26%</td>
<td>13%</td>
<td>60%</td>
<td>13%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>29%</td>
<td>16%</td>
<td>55%</td>
<td>12%</td>
</tr>
<tr>
<td>Higher Education</td>
<td>26%</td>
<td>15%</td>
<td>59%</td>
<td>11%</td>
</tr>
<tr>
<td>Power</td>
<td>23%</td>
<td>14%</td>
<td>63%</td>
<td>10%</td>
</tr>
<tr>
<td>Multifamily Residential</td>
<td>26%</td>
<td>21%</td>
<td>52%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>32%</td>
<td>11%</td>
<td>56%</td>
<td>21%</td>
</tr>
</tbody>
</table>

*Net equals difference between number of “Higher” and “Lower” responses as percent of total.

2. What **numerical** change do you expect in your headcount in 2019?

   - **Increase**: 43%
   - **No change**: 19%
   - **Decrease**: 4%

3. What **percentage** change do you expect in your headcount in 2019?

   - **Increase**: 49%
   - **No change**: 19%
   - **Decrease**: 2%
4. How would you describe your current situation in filling salaried and hourly craft positions?

- We are having a hard time filling some or all positions: 78%
- We are having no difficulty filling any positions: 11%
- We have no openings for positions: 11%

5. Do you expect any changes in the availability of hourly craft or salaried personnel over the coming 12 months?

- It will continue to be hard to hire: 42%
- It will become harder to hire: 26%
- No change: 27%
- It will become easier to hire: 3%
- It will continue to be easy to hire: 1%

6. Did your firm increase pay or benefits for salaried or hourly craft personnel in 2018 because of difficulty filling positions? (mark all that apply)

- Yes, our firm increased base pay rates: 59%
- Yes, our firm provided incentives/bonuses: 29%
- Yes, our firm increased our portion of benefit contributions and/or improved employee benefits: 21%
- No, but we are considering increases in pay and/or benefits in the near future: 13%
- No, and we are not considering increases in pay and/or benefits: 11%
- Don't know: 6%
- We did not seek to fill any positions: 3%
7. If your firm is experiencing staffing challenges, how would you describe the impact on your projects? (mark all that apply)

- 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%
- Completion times or costs have been lower than we anticipated: 1%
- Don't know: 6%
- Other: 7%

8. Has your firm adopted or increased use of the following to replace workers or skills? (mark all that apply)

- Methods to reduce onsite worktime (e.g., lean construction, virtual construction such as BIM, offsite fabrication): 32%
- Labor-saving equipment (e.g., drones, robots, 3-D printers, laser- or GPS-guided equipment): 28%
- Added specialists (e.g., architects, BIM or lean construction personnel, drone or other equipment operators, data or IT personnel): 18%
- No changes: 50%

9. Compared to 2018, how will your firm's 2019 investment in training and development change?

- Increase: 63%
- Decrease: 1%
- Stay the same: 36%
10. Which of the following issues is the biggest concern to your firm?

- Worker shortages: 30%
- Increased competition for projects: 10%
- Safety: 8%
- Growth in federal regulations: 8%
- Worker quality: 7%
- Rising direct labor costs (pay, benefits, employer taxes): 7%
- Lack of infrastructure investments: 5%
- Growth in state and local regulations: 4%
- Internal company process inefficiencies: 4%
- Rising materials costs: 4%
- Relations with external process inefficiencies (such as collaboration with owners, subs and/or vendors): 3%
- Not enough private sector work: 3%
- Subcontractor defaults: 2%
- Rising subcontractor costs: 2%
- Lack of public non-infrastructure work: 2%
- Rising indirect labor costs (recruitment, training): 1%

11. What challenges, if any, do you see regarding the safety and health of your firm's workers? (mark all that apply)

- Inexperienced skilled labor/workforce shortage: 43%
- Poor subcontractor safety and health performance: 16%
- Lack of cooperation from government agencies or regulators: 14%
- Low quality of available safety and health training: 5%
- Other: 1%
12. What change do you expect in 2019 in the number of your firm's projects that involve Building Information Modeling (BIM)?

- Increase: 18% (11-50%) and 20% (more than 50%)
- Stay the same (+/-10%): 30%
- Decrease: 0%
- We don't expect to use BIM on any projects in 2019: 27%
- Don't know: 23%

13. What is your firm using BIM for? (mark all that apply)

- We do not use BIM: 38%
- Clash detection: 19%
- Constructability input into the design process: 17%
- Visually communicate project scope to clients: 14%
- Design of 3D model: 13%
- 3D model-based takeoff for cost estimating: 12%
- Scheduling and workforce planning: 11%
- Safety (identify safety issues, safety by design, safety training, etc.): 7%

14. Does your firm utilize lean construction principles on its projects and/or in its operation?

- Yes: 41%
- No: 44%
- Don't know: 15%
15. Does your firm use any of the following collaborative project delivery methods? (mark all that apply)

- Design-Build: 44%
- Design-Assist: 26%
- Public-Private Partnerships: 13%
- Integrated Project Delivery (IPD): 11%
- None: 16%
- Don't know: 4%

16. Does your firm use any of the following to collaborate with project partners? (mark all that apply)

- File-sharing sites such as Dropbox: 51%
- Online project collaboration software: 36%
- BIM: 22%
- Home-grown project web site: 12%
- Other: 8%
- None: 4%
- Don't know: 4%

17. What business or IT functions does your firm outsource or plan to outsource to a technology provider? (mark all that apply)

- Backup and disaster recovery: 26%
- Network management: 20%
- Desktop (light maintenance): 19%
- Voice over IP (phone service over the internet): 18%
- Payroll: 11%
- Subcontractor insurance processing: 5%
- Lien waiver processing: 4%
- Accounts payable automation: 3%
- Prequalification: 2%
- Accounts receivable payment automation: 2%
- Inventory: 1%
- Other business or IT functions: 14%
- Our firm doesn't currently outsource or plan to outsource: 9%
18. Approximately what percent of your firm’s gross annual revenue is spent on IT?

- Less than 1%: 39%
- 1 to 1.9%: 28%
- 2 to 2.9%: 8%
- 3% or more: 6%
- Don’t know: 18%

19. Compared to 2018, how will your firm’s 2019 investment in IT change?

- Increase: 42%
- Decrease: 3%
- Stay the same: 45%
- Don’t know: 10%

20. Compared to 2018, how will your firm’s 2019 investment in the following technologies change? (mark all that apply)

<table>
<thead>
<tr>
<th>Technologies</th>
<th>Increase</th>
<th>Stay the same</th>
<th>Decrease</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project management software</td>
<td>30%</td>
<td>57%</td>
<td>1%</td>
<td>12%</td>
</tr>
<tr>
<td>Document management software</td>
<td>30%</td>
<td>57%</td>
<td>1%</td>
<td>12%</td>
</tr>
<tr>
<td>Estimating software</td>
<td>26%</td>
<td>64%</td>
<td>1%</td>
<td>9%</td>
</tr>
<tr>
<td>Scheduling software</td>
<td>24%</td>
<td>63%</td>
<td>1%</td>
<td>12%</td>
</tr>
<tr>
<td>Building Information Modeling (BIM)</td>
<td>23%</td>
<td>44%</td>
<td>1%</td>
<td>32%</td>
</tr>
<tr>
<td>Accounting software</td>
<td>23%</td>
<td>69%</td>
<td>2%</td>
<td>7%</td>
</tr>
<tr>
<td>Fleet tracking/management software</td>
<td>21%</td>
<td>60%</td>
<td>1%</td>
<td>18%</td>
</tr>
<tr>
<td>Project collaboration software</td>
<td>21%</td>
<td>58%</td>
<td>0%</td>
<td>21%</td>
</tr>
<tr>
<td>Human resources (HR) software</td>
<td>21%</td>
<td>63%</td>
<td>1%</td>
<td>16%</td>
</tr>
<tr>
<td>Client relationship management (CRM) software</td>
<td>19%</td>
<td>55%</td>
<td>1%</td>
<td>25%</td>
</tr>
<tr>
<td>Payroll software</td>
<td>16%</td>
<td>74%</td>
<td>1%</td>
<td>9%</td>
</tr>
<tr>
<td>Service management software</td>
<td>10%</td>
<td>64%</td>
<td>1%</td>
<td>25%</td>
</tr>
<tr>
<td>Subcontractor bid management/ITB software</td>
<td>9%</td>
<td>68%</td>
<td>1%</td>
<td>22%</td>
</tr>
<tr>
<td>Prequalification software</td>
<td>5%</td>
<td>69%</td>
<td>1%</td>
<td>26%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>46%</td>
<td>0%</td>
<td>46%</td>
</tr>
</tbody>
</table>

21. How comfortable is your firm with moving its data to the cloud?

- Very comfortable: 31%
- Moderately comfortable: 44%
- Not comfortable: 18%
- No opinion: 7%
22. How does your firm plan to use mobile software technology? (mark all that apply)

- Daily field reports: 44%
- Access to customer and job information from the field: 40%
- Employee time tracking and approval: 40%
- Sharing of drawings, photos and documents: 38%
- Access to job cost and project reports from the field: 34%
- Punch lists: 29%
- RFI/Issue tracking: 26%
- Submittals and commitments: 26%
- Equipment tracking: 25%
- Scheduling: 25%
- GPS tracking (e.g. fleet tracking): 20%
- Change management: 19%
- Building Information Modeling (BIM): 14%
- Estimating: 13%
- Processing service work orders in the field: 10%
- Material acceptance at the job site: 10%
- Inventory tracking: 8%
- Processing payments in the field: 5%
- Don't know/Unsure: 6%
- No plan to use mobile technology software: 3%

23. Which of the following cloud service models does your firm currently use or plan to use? (mark all that apply)

- Cloud hosting: we outsource our servers and networking components to a cloud service provider's data center
- Hybrid cloud: our software and data is on a private network but can be securely accessed with a web browser
- SaaS: we use software-as-a-service (SaaS) applications that are fully cloud-based

Currently use: 20% 23% 10%
Plan to use: 5% 3% 2%
24. Does your firm currently have a mobile security plan in place?

- Yes: 39%
- No: 42%
- Unsure: 19%

25. Does your firm currently have a formal IT plan that support your business objectives?

- Yes: 53%
- No: 28%
- No, but plan to do so in 2019: 9%
- Don't know: 9%

26. What are your firm’s biggest IT challenges? (mark all that apply)

- Time needed to implement and train on new technology: 26%
- Employee resistance to technology: 24%
- Communication between field and office: 24%
- Connectivity to remote job sites: 23%
- Keeping company data secure from hackers: 21%
- Keeping software current: 18%
- Integration between software used inside of our company: 17%
- Keeping hardware current: 15%
- Integration with software used by project partners outside our company: 13%
- Outdated company software and systems: 10%
- Management resistance to technology: 7%
- Don't know: 4%
- None: 4%
27. What best describes your firm:

- General contractor/construction manager: 53%
- Specialty or sub-contractor: 32%
- Supplier/service provider: 8%
- Architect/engineer/designer: 2%
- Other: 5%

28. When you self-perform construction work, do you operate as a union contractor or an open-shop contractor?

- We always operate as a union contractor: 26%
- We primarily operate as a union contractor but not always: 7%
- We primarily operate as an open-shop contractor but not always: 7%
- We always operate as an open-shop contractor: 49%
- We do not self-perform or directly hire craft personnel: 11%

29. Estimate the total dollar amount of work your firm performed in 2018.

- $50 million or less: 58%
- $50.1 million-$500 million: 33%
- Over $500 million: 9%

30. How many total employees does your firm employ at all of its locations?

- 1-19: 17%
- 20-99: 37%
- 100-499: 31%
- 500 or more: 16%