2018 Construction Outlook Survey Results
Virginia Results

Total Responses: 30. Responses varied for some questions. Percentages are based on responses to each question and may not sum to 100 due to rounding.

1. What best describes your firm:
   - Specialty or subcontractor: 57%
   - General contractor/construction manager: 23%
   - Supplier/service provider: 13%
   - Owner/developer: 3%
   - Architect/engineer/designer: 0%
   - Other: 3%

2. Does your firm employ union workers, or is your firm primarily open shop?
   - We are exclusively open shop: 73%
   - We are primarily an open shop contractor, but occasionally employ union workers: 20%
   - We employ union workers for most of our projects: 0%
   - We employ union workers for all of our projects: 7%

3. Estimate the total dollar amount of work your firm performed in 2017.
   - $10 million or less: 27%
   - $10.1 million-$50 million: 33%
   - $50.1 million-$100 million: 13%
   - $100.1 million-$500 million: 27%
   - Over $500 million: 0%

4. How many total employees does your firm employ at all of its locations?
   - 1-19: 10%
   - 20-99: 30%
   - 100-499: 43%
   - 500 or more: 17%
5. Compared to 2017, do you expect the available dollar volume of projects you compete for in 2018 to be:

<table>
<thead>
<tr>
<th>Market</th>
<th>Higher</th>
<th>Lower</th>
<th>Same</th>
<th>Net*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All projects</td>
<td>60%</td>
<td>4%</td>
<td>36%</td>
<td>56%</td>
</tr>
<tr>
<td>Multifamily Residential</td>
<td>47%</td>
<td>5%</td>
<td>47%</td>
<td>42%</td>
</tr>
<tr>
<td>Hospital</td>
<td>43%</td>
<td>13%</td>
<td>43%</td>
<td>30%</td>
</tr>
<tr>
<td>Federal (e.g., VA, GSA, USACE, NAVFAC)</td>
<td>23%</td>
<td>0%</td>
<td>77%</td>
<td>23%</td>
</tr>
<tr>
<td>Private Office</td>
<td>26%</td>
<td>4%</td>
<td>70%</td>
<td>22%</td>
</tr>
<tr>
<td>Higher Education</td>
<td>25%</td>
<td>8%</td>
<td>67%</td>
<td>17%</td>
</tr>
<tr>
<td>Power</td>
<td>23%</td>
<td>8%</td>
<td>69%</td>
<td>15%</td>
</tr>
<tr>
<td>Transportation (e.g., transit, rail, airport)</td>
<td>15%</td>
<td>0%</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>23%</td>
<td>9%</td>
<td>68%</td>
<td>14%</td>
</tr>
<tr>
<td>Retail, Warehouse, Lodging</td>
<td>20%</td>
<td>10%</td>
<td>70%</td>
<td>10%</td>
</tr>
<tr>
<td>Water/Sewer</td>
<td>20%</td>
<td>13%</td>
<td>67%</td>
<td>7%</td>
</tr>
<tr>
<td>Public Building</td>
<td>9%</td>
<td>14%</td>
<td>77%</td>
<td>-5%</td>
</tr>
<tr>
<td>K-12 School</td>
<td>14%</td>
<td>19%</td>
<td>67%</td>
<td>-5%</td>
</tr>
<tr>
<td>Highway</td>
<td>7%</td>
<td>27%</td>
<td>67%</td>
<td>-20%</td>
</tr>
</tbody>
</table>

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

6. What numerical change do you expect in your headcount in 2018?

<table>
<thead>
<tr>
<th>Change</th>
<th>More than 25</th>
<th>11-25</th>
<th>1-10</th>
<th>No change</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>27%</td>
<td>38%</td>
<td>15%</td>
<td>0%</td>
<td>19%</td>
</tr>
</tbody>
</table>

7. What percentage change do you expect in your headcount in 2018?

<table>
<thead>
<tr>
<th>Change</th>
<th>More than 25%</th>
<th>11-25%</th>
<th>1-10%</th>
<th>No change</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>0%</td>
<td>23%</td>
<td>58%</td>
<td>19%</td>
<td>0%</td>
</tr>
</tbody>
</table>

8. How would you describe your firm’s current conditions for filling key salaried positions (project manager/supervisor, estimator, etc.) and hourly craft positions (carpenter, laborer, equipment operator, etc.)? My firm is:

- having a hard time filling both salaried and craft worker positions (38%)
- having a hard time filling some salaried positions, but no trouble filling craft worker positions (4%)
- having a hard time filling some craft worker positions, but no trouble filling salaried positions (38%)
- having no trouble filling any positions (4%)
- not doing any hiring (8%)
9. Do you expect any changes in the availability of salaried/hourly craft construction professionals over the coming 12 months? Finding and hiring qualified construction professionals will:

- Continue to be easy: 0%
- Become easier: 0%
- Become harder: 42%
- Continue to be hard: 46%
- Unsure: 12%

10. Did your firm increase pay or benefits in 2017 to retain or recruit salaried/hourly craft professionals?

- Increased base pay: 54%
- Paid more overtime: 8%
- Provided incentives/bonuses: 31%
- Increased contributions and/or improve employee benefits: 27%
- No, but we are considering increases in pay and/or benefits in the near future: 15%
- No, and we are not considering increases in pay and/or benefits: 4%
- Unsure: 8%
- We did not seek to hire any salaried/hourly craft professionals in 2017: 4%

11. Compared to 2017, how will your firm’s 2018 investment in training and development change?

- Increase: 58%
- Decrease: 4%
- Stay the same: 31%
- Unsure: 8%
12. Which of the following issues is the biggest concern to your firm out of the following list?

- Increased competition for projects: 50%
- Lack of public non-infrastructure work: 50%
- Growth in federal regulations: 43%
- Internal company process inefficiencies: 33%
- Safety: 33%
- Worker shortages: 29%
- Rising direct labor costs (pay, benefits, employer taxes): 27%
- Not enough private sector work: 17%
- Growth in state and local regulations: 14%
- Worker quality: 11%
- Lack of infrastructure investments: 0%
- Relations with external process inefficiencies (such as collaboration with owners, subs and/or vendors): 0%
- Rising indirect labor costs (recruitment, training): 0%
- Rising materials costs: 0%
- Rising subcontractor costs: 0%
- Subcontractor defaults: 0%

13. What challenges, if any, do you see regarding the safety and health of your firm’s workers?

- Inexperienced skilled labor/workforce shortage: 57%
- Lack of cooperation from federal agencies or regulators: 45%
- Low quality of available safety and health training: 55%
- Poor subcontractor safety and health performance: 32%

- Major
- Minor
- No challenge
14. What change do you expect in 2018 in the number of your firm’s projects that involve Building Information Modeling (BIM)?

- Increase: 18%
- Stay the same (+/-10%): 55%
- Decrease: 0%
- We do not expect to use BIM on any projects in 2018: 27%
- Unsure: 0%

15. What is your firm using BIM for?

- Design of 3D model: 56%
- Visually communicate project scope to clients: 56%
- 3D model-based takeoff for cost estimating: 50%
- Constructability input into the design process: 50%
- Clash detection: 44%
- Scheduling and workforce planning: 31%
- Safety (identify safety issues, safety by design, safety training, etc.): 13%

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

- Yes: 45%
- No: 50%
- Unsure: 5%

17. Does your firm use any of the following collaborative project delivery methods?

- Design-build: 59%
- Design-assist: 55%
- Integrated project delivery (IPD): 23%
- Public-private partnerships: 9%
- None: 18%
- Unsure: 9%
18. Does your firm use any of the following to collaborate with project partners?

- File-sharing sites such as Dropbox: 90%
- Online project collaboration software: 80%
- BIM: 55%
- Home-grown project website: 30%
- None: 0%
- Unsure: 0%

19. What business of IT functions does your firm outsource or plan to outsource to a technology provider?

- Accounts payable automation: 0%
- Accounts receivable payment automation: 0%
- Inventory: 0%
- Lien waiver processing: 0%
- Payroll: 14%
- Prequalification: 0%
- Subcontractor insurance processing: 0%
- Backup and disaster recovery: 21%
- Desktop (light maintenance): 21%
- Network management: 29%
- Voice over IP (phone service over the internet): 36%
- Our firm doesn't currently outsource or plan to outsource: 36%
20. Approximately what percent of your firm’s gross annual revenue is spent on IT?

- Less than 1%: 35%
- 1 to 1.9%: 30%
- 2 to 2.9%: 10%
- 3% or more: 0%

21. Compared to 2017, how will your firm’s 2018 investment in IT change?

- Increase: 55%
- Decrease: 0%
- Stay the same: 35%
- Unsure: 10%

22. Compared to 2017, how will your firm’s 2018 investment in the following technologies change?

<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>Accounting software</td>
<td>15%</td>
<td>70%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Building Information Modeling</td>
<td>42%</td>
<td>47%</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Client relationship management software</td>
<td>18%</td>
<td>65%</td>
<td>0%</td>
<td>18%</td>
</tr>
<tr>
<td>Document management software</td>
<td>30%</td>
<td>70%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Estimating software</td>
<td>26%</td>
<td>68%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Fleet tracking/management software</td>
<td>28%</td>
<td>61%</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Human resources software</td>
<td>17%</td>
<td>78%</td>
<td>0%</td>
<td>6%</td>
</tr>
<tr>
<td>Payroll software</td>
<td>11%</td>
<td>84%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Prequalification software</td>
<td>6%</td>
<td>82%</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>Project collaboration software</td>
<td>42%</td>
<td>53%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Project management software</td>
<td>30%</td>
<td>60%</td>
<td>0%</td>
<td>10%</td>
</tr>
<tr>
<td>Scheduling software</td>
<td>5%</td>
<td>84%</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Service management software</td>
<td>6%</td>
<td>83%</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Subcontractor bid management/ITB software</td>
<td>0%</td>
<td>89%</td>
<td>0%</td>
<td>11%</td>
</tr>
</tbody>
</table>

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

- Very comfortable: 30%
- Moderately comfortable: 45%
- Not comfortable: 20%
- No opinion: 5%
24. How does your firm plan to use mobile software technology?

- Access to customer and job information from the field: 95%
- Employee time tracking and approval: 85%
- Sharing of drawings, photos, and documents: 80%
- Access to job cost and project reports from the field: 70%
- Daily field reports: 70%
- Punch lists: 60%
- Scheduling: 60%
- GPS tracking (e.g., fleet tracking): 55%
- RFI/issue tracking: 55%
- Submittals and commitments: 50%
- Building Information Modeling: 40%
- Change management: 40%
- Processing service work orders in the field: 30%
- Equipment tracking: 25%
- Estimating: 20%
- Material acceptance at the job site: 20%
- Inventory tracking: 15%
- Processing payments in the field: 10%
- No plan to use mobile technology software: 0%

25. Which of the following cloud service models does your firm plan to use?

- Cloud hosting: we outsource our servers and networking components to a cloud service provider’s data center: 14%
- Hybrid cloud: our software and data is on a private network but can be securely accessed with a web browser: 86%
- SaaS: we use software-as-a-service (SaaS) applications that are fully cloud-based: 43%

Currently use □ Plan to use □
26. Does your firm currently have a mobile security plan in place?

- Yes: 45%
- No: 30%
- Unsure: 25%

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

- Yes: 60%
- No: 25%
- No, but plan to do so in 2018: 5%
- Unsure: 10%

28. What are your firm’s biggest IT challenges?

- Communication between field and office: 45%
- Connectivity to remote job sites: 40%
- Time needed to implement and train on new technology: 40%
- Integration between software used inside of our company: 35%
- Employee resistance to technology: 25%
- Keeping company data secure from hackers: 25%
- Integration with software used by project partners outside our company: 20%
- Keeping hardware current: 20%
- Keeping software current: 20%
- Outdated company software and systems: 10%
- Management resistance to technology: 5%
- None: 10%