Minnesota Construction Industry Assessment 2020-2021
Executive Summary
2020-2021 AGC of Minnesota Construction Industry Assessment

2020 has seen tumultuous change, bringing unprecedented social impact and corresponding economic uncertainty and strain. Early year market optimism evaporated into survival instincts and strategy shifts to save the construction market and ensure continued business survival. The global pandemic unleashed successive waves of hardship, including supply chain disruptions, project schedule delays, owner induced cancellations, workforce reconfiguration and a general economic contraction. The Minnesota Construction Industry has weathered the pandemic storm. Yet hesitancy, uncertainty, and well-placed concern cast imposing 2021 shadows.

The overarching themes that rise collectively from this year’s Survey Assessment echo many familiar concerns of recent prior years. Architects, engineers, general contractors, and specialty contractors all report lower-than-hoped 2020 market levels with guarded optimism toward the future, concern that workforce shortages and skill gaps could threaten that optimism, and confidence that technology can be a tool for positive change and competitive advantage. For both contractors and professional A&E services, strategic focus is being placed on uncovering new growth markets while business operations continue to reach for productive recruiting and retention strategies in a competitive labor market. Surprisingly, the level of project delays and decreased productivity among architects and engineers mirrored the levels reported by general and subcontractors.

Overall, our industry shares the economists' forecasts. Although a large increase in respondents predict a downturn in the 2021 market (10% last year to 42% this year), overall, more respondents still believe the economy will be the same or improve in 2021 (58%). These figures suggest the pandemic pall still shadows our expectations but is anticipated to fade in the mid-year timeframe. Market sector strength indicators reflect interesting variability among respondents. The alternative energy market leads the expansive or steady market prediction, while multi-family housing slips to mid-pack (still more see expanding than contracting), and commercial office and retail space is disproportionately negative.

To no surprise, COVID-19 dominates the negative factors and is acting as an overall drag on the industry. Looking past pandemic-related negatives, we find last year’s top concern persisting - recruiting and training skilled workers. Union trained workers continue to be a strong labor source, but respondents continue to report some trades lagging. Looking ahead, respondents predict more layoffs than last year and reduced hiring, leading to a possible workforce surplus as the rollercoaster of workforce supply and demand continues to dog the industry.

Survey consumers and respondents should come away with two strong impressions from the data. First, our industry has strong foundations, not easily jolted by even the catastrophic waves of a pandemic. The construction market sector remains steady, focused, and optimistically positioned for the demise of COVID-19. Second, many of the underlying challenges for the industry stubbornly remain unimproved. AGC of Minnesota continues to work collaboratively with our many partners across the industry to identify common goals and strategies that will yield workable solutions that benefit the full spectrum of the construction industry.

Thank you to all who participated in the Survey Assessment by sharing your valuable insights and perspectives. Your responses help us better understand the intersecting complexities of where we have been and where we might be headed. We remain Your Trusted Resource.

Tim Worke
CEO
Respondent Snapshot
Industry sectors, volume sales, and geographic areas

Industry Sectors
Primary sector: Building

<table>
<thead>
<tr>
<th>Industry Sectors</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>99 respondents</td>
</tr>
<tr>
<td>Highway</td>
<td>42 respondents</td>
</tr>
<tr>
<td>UI</td>
<td>19 respondents</td>
</tr>
<tr>
<td>Heavy</td>
<td>4 respondents</td>
</tr>
</tbody>
</table>

QUESTION
Please indicate your primary industry sector as defined below.
- Building
- Highway
- Utility Infrastructure
- Heavy Industrial
(i.e. refineries, pipelines)

Types of Firms
Top firm: Specialty Contractor

<table>
<thead>
<tr>
<th>Types of Firms</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialty Contractor</td>
<td>30%</td>
</tr>
<tr>
<td>General Contractor</td>
<td>24%</td>
</tr>
<tr>
<td>Engineer</td>
<td>20%</td>
</tr>
<tr>
<td>Affiliate</td>
<td>13%</td>
</tr>
<tr>
<td>Architect</td>
<td>13%</td>
</tr>
</tbody>
</table>

QUESTION
Which of the following best describes your firm?
- General Contractor
- Specialty Contractor
- Engineer
- Architect
- Affiliate
(material supplier/service provider)

Geographic Area Where Work is Performed
Top area: Twin Cities Metro

<table>
<thead>
<tr>
<th>Geographic Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin Cities Metro</td>
<td>74%</td>
</tr>
<tr>
<td>Other States</td>
<td>16%</td>
</tr>
<tr>
<td>Northern MN</td>
<td>6%</td>
</tr>
<tr>
<td>Western MN</td>
<td>2%</td>
</tr>
<tr>
<td>Southern MN</td>
<td>1%</td>
</tr>
</tbody>
</table>

QUESTION
Please indicate the primary geographic area where you perform work.
- Twin Cities Metro
- Northern Minnesota
- Southern Minnesota
- Western Minnesota
- States other than Minnesota
Respondent Snapshot
Size of firm in sales

ALL RESPONDENTS

Size of Firm in Annual Volume Sales

Total size: $0-20M

- $0-20M
- $21-65M
- $66-125M
- $125M

51% 18% 13% 17%

QUESTION
Please indicate the size of your firm in annual volume sales

- $0-20M
- $21-65M
- $66-125M
- $125M

Responses By Firm Type

General contractors

Top size: over $125M

- $0-20M: 12.5%
- $21-65M: 27.5%
- $66-125M: 27.5%
- Over $125M: 32.5%

33% Over $125M

Specialty contractors

Top size: $0-20M

- $0-20M: 65.3%
- $21-65M: 18.4%
- $66-125M: 10.2%
- Over $125M: 6.1%

65% $0-20M

Affiliates (Material Suppliers /Service Providers)

Top size: $0-20M

- $0-20M: 42.9%
- $21-65M: 9.5%
- $66-125M: 14.3%
- Over $125M: 33.3%

43% $0-20M

Architects and Engineers

Top size: $0-20M

- $0-20M: 70.4%
- $21-65M: 14.8%
- $66-125M: 5.6%
- Over $125M: 9.3%

70% $0-20M
Looking ahead to 2021
How respondents perceive market conditions affecting their firm

All Respondents

How do you anticipate the following construction market segments performing?

<table>
<thead>
<tr>
<th>Segment</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial &amp; Retail</td>
<td>80%</td>
<td>42%</td>
</tr>
<tr>
<td>Public Facility Construction</td>
<td>34%</td>
<td>11%</td>
</tr>
<tr>
<td>Heavy Civil / Utility Infrastructure</td>
<td>18%</td>
<td>11%</td>
</tr>
<tr>
<td>Multi-family housing</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>Transportation</td>
<td>20%</td>
<td>9%</td>
</tr>
<tr>
<td>Senior Housing</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Alternative Energy</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>Declining</td>
<td>60%</td>
<td>43%</td>
</tr>
<tr>
<td>Neither improving nor declining</td>
<td>29%</td>
<td>15%</td>
</tr>
<tr>
<td>Improving</td>
<td>10%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Responses By Firm Type and Sector

Firm Type
Top by ‘declining’: General

Sector
Top by ‘declining’: Highway

How do you anticipate the following construction market segments performing?
Equipment plans for 2021
The majority of contractors will purchase new equipment

All Responses

- Will purchase new equipment: 28% | 46 respondents
- Will purchase used equipment: 9% | 15
- Will depend on tax laws: 9% | 15
- Will lease equipment: 16% | 27
- Not applicable: 37% | 61

QUESTION
Your plans for equipment additions or reductions for 2021 can best be described as:

- Will purchase new equipment
- Will purchase used equipment
- Will lease equipment
- Will depend on tax laws
- Not applicable

General Contractors

- Will purchase new equipment: 35% | 14 respondents
- Will purchase used equipment: 18% | 7
- Will lease equipment: 10% | 4
- Will depend on tax laws: 15% | 6
- Not applicable: 23% | 9

Specialty Contractors

- Will purchase new equipment: 33% | 16 respondents
- Will purchase used equipment: 12% | 6
- Will lease equipment: 14% | 7
- Will depend on tax laws: 22% | 11
- Not applicable: 18% | 9

By Sector

- Building
- Heavy
- Highway
- Utility Infrastructure
Factors expected to impact respondent business
Impacts positively, negatively, or neutrally

**Top factors**

- **TOP POSITIVE IMPACT**
  - Technology changes: 45% expect this factor will impact business positively.
  - Integrated Project Delivery: 82% expect this factor will impact business positively.

- **TOP NEUTRAL IMPACT**
  - State and Local regulations: 72% expect this factor will not really impact business.
  -技能 level of workforce: 44% expect this factor will impact business neutral.

- **TOP NEGATIVE IMPACT**
  - Cost of materials: 61% expect this factor will impact business negatively.
  - Worker productivity: 31% expect this factor will impact business negatively.

**All factors**

- **Technology changes**
  - Positively: 45%
  - Neutral: 53%
  - Negatively: 2%

- **Project funding**
  - Positively: 20%
  - Neutral: 30%
  - Negatively: 51%

- **Credit availability**
  - Positively: 19%
  - Neutral: 75%
  - Negatively: 6%

- **Public Private Partnerships (P3)**
  - Positively: 12%
  - Neutral: 77%
  - Negatively: 11%

- **Availability of workforce**
  - Positively: 10%
  - Neutral: 45%
  - Negatively: 45%

- **Integrated Project Delivery (IPD)**
  - Positively: 10%
  - Neutral: 82%
  - Negatively: 8%

- **Worker productivity**
  - Positively: 9%
  - Neutral: 60%
  - Negatively: 31%

- **Skill level of workforce**
  - Positively: 8%
  - Neutral: 48%
  - Negatively: 44%

- **State and Local regulations**
  - Positively: 7%
  - Neutral: 56%
  - Negatively: 37%

- **Mandated subcontracting goals**
  - Positively: 7%
  - Neutral: 56%
  - Negatively: 37%

- **COVID-19 Safety precautions**
  - Positively: 6%
  - Neutral: 48%
  - Negatively: 45%

- **Mandated hiring goals**
  - Positively: 4%
  - Neutral: 51%
  - Negatively: 45%

- **COVID-19 regulations**
  - Positively: 4%
  - Neutral: 43%
  - Negatively: 53%

- **Cost of materials**
  - Positively: 2%
  - Neutral: 37%
  - Negatively: 61%

- **Availability of materials**
  - Positively: 2%
  - Neutral: 42%
  - Negatively: 57%

- **Cost of construction labor**
  - Positively: 2%
  - Neutral: 52%
  - Negatively: 46%

**QUESTION**

How do you expect the following factors to impact your business through 2021?
- Positively
- Neither
- Negatively
Factors expected to impact business in 2021
By firm type

General Contractors

Availability of materials
Availability of workforce
Cost of construction labor
Cost of materials
COVID-19 Regulations
COVID-19 Safety Precautions
Credit availability
Integrated Project Delivery (IPD)
Mandated hiring goals
Mandated subcontracting goals
Project funding
Public Private Partnerships (P3)
Skill level of workforce
State and Local regulations
Technology changes
Worker productivity

Specialty Contractors

Availability of materials
Availability of workforce
Cost of construction labor
Cost of materials
COVID-19 Regulations
COVID-19 Safety Precautions
Credit availability
Integrated Project Delivery (IPD)
Mandated hiring goals
Mandated subcontracting goals
Project funding
Public Private Partnerships (P3)
Skill level of workforce
State and Local regulations
Technology changes
Worker productivity

Affiliates

Availability of materials
Availability of workforce
Cost of construction labor
Cost of materials
COVID-19 Regulations
COVID-19 Safety Precautions
Credit availability
Integrated Project Delivery (IPD)
Mandated hiring goals
Mandated subcontracting goals
Project funding
Public Private Partnerships (P3)
Skill level of workforce
State and Local regulations
Technology changes
Worker productivity

Architects/Engineers

Availability of materials
Availability of workforce
Cost of construction labor
Cost of materials
COVID-19 Regulations
COVID-19 Safety Precautions
Credit availability
Integrated Project Delivery (IPD)
Mandated hiring goals
Mandated subcontracting goals
Project funding
Public Private Partnerships (P3)
Skill level of workforce
State and Local regulations
Technology changes
Worker productivity
The Effect of COVID-19 on Workforce
How has COVID-19 affected your firm’s workforce?

Select all that apply:

- **57% No change** to our workforce or workforce needs.
- **16% Struggled**
  - We have struggled more than usual to find available workers.
- **16% Staffing attrition**
  - We anticipate some staffing attrition once a return to normal is established.
- **12% Layoffs**
  - We have had to lay off a significant percentage of our workforce.
- **9% Office staff**
  - Our need for quantity of professional office staff has been reduced due to new-found efficiencies.
- **5% Unemployment**
  - A significant percentage of our workforce has elected to go on unemployment.
- **5% Technology**
  - Applied technology has reduced our workforce need.

Has your firm sustained significant management or operational costs due to the need to provide additional safety measures (PPE, sanitizing stations, etc.)?

- **36% Yes we have**
- **Yes**
- **No**
COVID-19 related project productivity
By firm type

Project delays and decreased productivity

<table>
<thead>
<tr>
<th>BY FIRM TYPE</th>
<th>General Contractors</th>
<th>Specialty Contractors</th>
<th>Affiliates</th>
<th>Architects</th>
<th>Engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan approvals</td>
<td>17 17 4 5 7</td>
<td>TOTAL RESPONDENTS: 50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material availability</td>
<td>18 22 6 8 4</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor</td>
<td>14 26 3 12 10</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other issues</td>
<td>22 30 8 11 18</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

QUESTION
Have you experienced project delays or decreased productivity due to any of the following? Please select all that apply.
- Plan approvals
- Material availability
- Labor
- Other issues

Projects cancelled or deferred due to COVID-19

<table>
<thead>
<tr>
<th>BY FIRM TYPE</th>
<th>General Contractors</th>
<th>Specialty Contractors</th>
<th>Affiliates</th>
<th>Architects</th>
<th>Engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, public project(s)</td>
<td>28%</td>
<td>43%</td>
<td>33%</td>
<td>29%</td>
<td>48%</td>
</tr>
<tr>
<td>Yes, private project(s)</td>
<td>60%</td>
<td>82%</td>
<td>52%</td>
<td>71%</td>
<td>39%</td>
</tr>
<tr>
<td>No, delays or deferrals</td>
<td>33%</td>
<td>12%</td>
<td>38%</td>
<td>24%</td>
<td>33%</td>
</tr>
</tbody>
</table>
COVID-19 work adjustments

Permanent changes for the future

Remote working for professional staff 67%
Adoption of technology changes 61%
Safety procedures on the job 54%
Office Design 36%
Employee schedules 34%
Other 3%

QUESTION
Which COVID-19 adjustments to the way your firm works do you think will become permanent or change how work is done in the future?
Contractor Signatory Status
Overall, by firm, and by sector

Are you signatory with any union?
Yes: 85.4%
No: 14.6%

By Firm Type

General Contractors

Top answer: Yes 90%
Yes: 90% | 36 respondents
No: 10% | 4 respondents

Specialty Contractors

Top answer: Yes 82%
Yes: 82% | 40 respondents
No: 18% | 9 respondents

By Sector

Heavy
- Yes: 100%
- No: 0%

Highway
- Yes: 85%
- No: 15%

Building
- Yes: 85%
- No: 15%

UI
- Yes: 87%
- No: 13%
Hiring Sources
Non-Union Contractors

What percentage of hiring have you done through the following workforce pools?

<table>
<thead>
<tr>
<th>Workforce pools</th>
<th>None</th>
<th>Not much (Less than 25%)</th>
<th>Some</th>
<th>Most (over 75%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Colleges</td>
<td>85%</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Training Program</td>
<td>92%</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>50%</td>
<td>20%</td>
<td>10%</td>
<td>20%</td>
</tr>
</tbody>
</table>

*Largest hiring sources in "Other": Referral and 4-year colleges

Please rate the performance of the workforce you have hired.

<table>
<thead>
<tr>
<th>Workforce pools</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Colleges</td>
<td>83%</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Community Training Program</td>
<td>92%</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>63%</td>
<td>13%</td>
<td>25%</td>
</tr>
</tbody>
</table>

How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Do not use</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pool of workers through technical colleges is empty/exhausted</td>
<td>0%</td>
<td>42%</td>
<td>8%</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td>The pool of workers through technical colleges does not perform at a skill level necessary to do the work</td>
<td>0%</td>
<td>25%</td>
<td>25%</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td>The pool of workers through community training programs is empty/exhausted</td>
<td>0%</td>
<td>42%</td>
<td>8%</td>
<td>0%</td>
<td>75%</td>
</tr>
<tr>
<td>The pool of workers through community training programs does not perform at a skill level necessary to do the work</td>
<td>0%</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
<td>67%</td>
</tr>
</tbody>
</table>
Hiring Sources
Union Contractors

What percentage of hiring have you done through the following workforce pools?

- JATC
- Technical Colleges
- Community Training Program
- Other

<table>
<thead>
<tr>
<th>Workforce Pool</th>
<th>Did not use</th>
<th>Some (Not much)</th>
<th>Most (over 75%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JATC</td>
<td>30%</td>
<td>36%</td>
<td>26%</td>
</tr>
<tr>
<td>Technical Colleges</td>
<td>69%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Community Training Program</td>
<td>68%</td>
<td>23%</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>33%</td>
<td>8%</td>
<td>38%</td>
</tr>
</tbody>
</table>

36% of respondents hired less than 25% of their workforce through Joint Apprenticeship Training Centers.

Please rate the performance of the workforce you have hired?

- Low
- Moderate
- High

<table>
<thead>
<tr>
<th>Workforce Pool</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>JATC</td>
<td>28%</td>
<td>44%</td>
<td>13%</td>
</tr>
<tr>
<td>Technical Colleges</td>
<td>64%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Community Training Program</td>
<td>64%</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>34%</td>
<td>16%</td>
<td>19%</td>
</tr>
</tbody>
</table>

44% of respondents rated their hires from Joint Apprenticeship Training Centers: MODERATE.
Hiring Sources
Union Contractors

Do the Taft Hartley Joint Apprenticeship Training Committees address the priorities of an industry-driven workforce by delivering industry-relevant training?

**YES** 56%  **NO** 44%

How much do you agree or disagree with the following statements?

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pool of union workers is empty/exhausted</td>
<td>13%</td>
<td>57%</td>
<td>23%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>The pool of union workers does not perform at a skill level necessary to do the work</td>
<td>16%</td>
<td>40%</td>
<td>36%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>The pool of workers through technical colleges is empty/exhausted</td>
<td>1%</td>
<td>28%</td>
<td>22%</td>
<td>1%</td>
<td>47%</td>
</tr>
<tr>
<td>The pool of workers through technical colleges does not perform at a skill level necessary to do the work</td>
<td>3%</td>
<td>22%</td>
<td>22%</td>
<td>3%</td>
<td>47%</td>
</tr>
<tr>
<td>The pool of workers through community training programs is empty/exhausted</td>
<td>5%</td>
<td>24%</td>
<td>17%</td>
<td>1%</td>
<td>53%</td>
</tr>
<tr>
<td>The pool of workers through community training programs does not perform at a skill level necessary to do the work</td>
<td>13%</td>
<td>28%</td>
<td>12%</td>
<td>1%</td>
<td>45%</td>
</tr>
</tbody>
</table>
Workforce plans for 2021
Hiring, steady workforce, or layoffs

2020-2021
HIRING TOTAL: 42.2%

2019-2020
HIRING TOTAL: 64.1%

Workforce hiring strategies for contractors
Which strategies have you found to be most effective in attracting/retaining workforce?

Providing career development & training opportunities
Mentoring
Increasing compensation
Offering enhanced employee benefits
Providing hiring bonuses

Which of the following is your company doing to attract and retain workforce?
Increasing compensation
Providing hiring bonuses
Providing career development and training opportunities
Mentoring
Offering enhanced employee benefits
Retirement rate
With regard to your recent hires,* what is the retention rate of these employees?

Overall

<table>
<thead>
<tr>
<th>Retention Rate</th>
<th>0-25%</th>
<th>26-50%</th>
<th>51-75%</th>
<th>76-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of respondents</td>
<td>7%</td>
<td>13%</td>
<td>26%</td>
<td>53%</td>
</tr>
</tbody>
</table>

53% of respondents’ recent hires had a 76-100% retention rate

*Recent hires = last 1-3 years

Contractors

Architects & Engineers

List the #1 factor impacting the engagement or retention of your new hires

**TOP POSITIVE FACTORS LISTED:**
- Providing career development and training opportunities/Mentoring
- Competitive or slightly over scale compensation/ Increased subsistence pay to attract travelers / Bonuses
- Company culture / Respect for employees / Inclusive and respectful place to work / Being a good place to work
- Enhanced/Competitive benefits
- Flexible work hours / Schedules that fit employee needs / Flexible working arrangements
- Good facilities / Well-maintained tools and equipment
- Ownership of projects / Growth opportunities / Promoting from within / Hiring those who may not be hired by other companies

**TOP NEGATIVE FACTORS LISTED:**
- Availability of work / Economy
- Lack of skill/training
- Travel requirements / Remote work site locations / Driving distance / Relocation / Schedule demands in the Metro from MnDot making quality of life tough for many workers with families
- Lack of commitment / Motivation / Work ethic / Unrealistic expectations
- Other companies are able to offer higher compensation/ better benefits
- Work from home environment has negatively impacted mentoring relationships
Efforts to increase workforce diversity
Measures taken to attract and retain people of color and women

Taking deliberate measures?
Yes: 69%
No: 31%

Are deliberate measures making a difference?
Yes: 54%
No: 46%

If yes, indicate which measures have been most successful in attracting and retaining people of color and/or women.

- Diversity attracts diversity – sending women and people of color to career fairs to do recruitment
- Seeing that other people of color or women are being retained and promoted in the company
- Working with the JATC
- EEO practices in the workplace / Internal HR awareness / Increasing interview levels
- Word of mouth / Networking with existing employees / Looking for employees from within the communities where projects are being built
- Having workload in the metro area
### Workforce hiring challenges

#### Professional and craft workforce

**Professional workforce**

With 1 being least difficult and 4 being most difficult, indicate your degree of difficulty in hiring for these professional positions.

<table>
<thead>
<tr>
<th>Position</th>
<th>Least difficult</th>
<th>Most</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Contractors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimating Professionals</td>
<td>5%</td>
<td>19%</td>
<td>32%</td>
</tr>
<tr>
<td>Project Managers/Supervisors</td>
<td>11%</td>
<td>26%</td>
<td>37%</td>
</tr>
<tr>
<td>Engineers</td>
<td>5%</td>
<td>5%</td>
<td>24%</td>
</tr>
<tr>
<td>Business Development</td>
<td>3%</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>Safety Professionals</td>
<td>8%</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>Design Professionals</td>
<td>5%</td>
<td>5%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Specialty Contractors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimating Professionals</td>
<td>5%</td>
<td>23%</td>
<td>32%</td>
</tr>
<tr>
<td>Project Managers/Supervisors</td>
<td>5%</td>
<td>25%</td>
<td>32%</td>
</tr>
<tr>
<td>Engineers</td>
<td>0%</td>
<td>14%</td>
<td>19%</td>
</tr>
<tr>
<td>Business Development</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Safety Professionals</td>
<td>9%</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>Design Professionals</td>
<td>0%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Architects/Engineers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimating Professionals</td>
<td>0%</td>
<td>11%</td>
<td>0%</td>
</tr>
<tr>
<td>Project Managers/Supervisors</td>
<td>0%</td>
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<td>18%</td>
</tr>
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<td>5%</td>
<td>9%</td>
</tr>
<tr>
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<td>24%</td>
</tr>
<tr>
<td>Safety Professionals</td>
<td>8%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>Design Professionals</td>
<td>5%</td>
<td>15%</td>
<td>35%</td>
</tr>
</tbody>
</table>
| **FOR GENERAL & SPECIALTY CONTRACTORS**

The most difficult positions to fill are:
- Project Managers/Supervisors
- Estimating Professionals

**FOR ARCHITECTS AND ENGINEERS**

The most difficult positions to fill are:
- #1. Project Managers
- #2. Engineers
- #3. Designers

**Craft workforce**

<table>
<thead>
<tr>
<th>Position</th>
<th>Least difficult</th>
<th>Most</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Contractors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bricklayers</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Carpenters</td>
<td>3%</td>
<td>16%</td>
<td>38%</td>
</tr>
<tr>
<td>Cement Masons</td>
<td>0%</td>
<td>11%</td>
<td>22%</td>
</tr>
<tr>
<td>Drywall Installers</td>
<td>3%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Electricians</td>
<td>3%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td>Equipment Operators</td>
<td>3%</td>
<td>14%</td>
<td>49%</td>
</tr>
<tr>
<td>Ironworkers</td>
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<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Laborers</strong></td>
<td>22%</td>
<td>35%</td>
<td>16%</td>
</tr>
<tr>
<td>Millwrights</td>
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<td>14%</td>
<td>3%</td>
</tr>
<tr>
<td>Painters</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Pipefitters/Welders</td>
<td>3%</td>
<td>6%</td>
<td>3%</td>
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<tr>
<td>Plumbers</td>
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<tr>
<td>Roofers</td>
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</tr>
<tr>
<td>Sheet Metal Workers</td>
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<tr>
<td>Tile Setters</td>
<td>3%</td>
<td>3%</td>
<td>0%</td>
</tr>
<tr>
<td>Truck Drivers</td>
<td>3%</td>
<td>14%</td>
<td>31%</td>
</tr>
<tr>
<td><strong>Specialty Contractors</strong></td>
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<td></td>
</tr>
<tr>
<td>Bricklayers</td>
<td>0%</td>
<td>2%</td>
<td>12%</td>
</tr>
<tr>
<td>Carpenters</td>
<td>0%</td>
<td>0%</td>
<td>13%</td>
</tr>
<tr>
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<td>3%</td>
<td>3%</td>
</tr>
<tr>
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<td>3%</td>
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<td>8%</td>
<td>15%</td>
</tr>
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<td>0%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
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<td>8%</td>
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<td>20%</td>
</tr>
<tr>
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<td>3%</td>
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<tr>
<td>Roofers</td>
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<td>3%</td>
</tr>
<tr>
<td>Sheet Metal Workers</td>
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<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Tile Setters</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Truck Drivers</td>
<td>3%</td>
<td>10%</td>
<td>13%</td>
</tr>
</tbody>
</table>

**FOR GENERAL & SPECIALTY CONTRACTORS**

The most difficult positions to fill are:
- Bricklayers
- Carpenters
- Cement Masons

**FOR ARCHITECTS AND ENGINEERS**

The most difficult positions to fill are:
- #1. Bricklayers
- #2. Carpenters
- #3. Cement Masons
## Overall Business Challenges for 2021

### TOP 5 CHALLENGES

1. **Lack of work due to COVID-19**
2. **Finding skilled and trained workers**
3. **Discovering new markets**
4. **Increasing productivity**
5. **Developing new leadership**

### Business Challenges for 2021 and Beyond

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Overall</th>
<th>General</th>
<th>Specialty</th>
<th>Affiliate</th>
<th>Architect/Engineer</th>
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</thead>
<tbody>
<tr>
<td>Lack of work due to COVID-19</td>
<td>39%</td>
<td>33%</td>
<td>46%</td>
<td>41%</td>
<td>36%</td>
</tr>
<tr>
<td>Finding skilled and trained workers</td>
<td>30%</td>
<td>44%</td>
<td>30%</td>
<td>24%</td>
<td>20%</td>
</tr>
<tr>
<td>Discovering new markets</td>
<td>21%</td>
<td>18%</td>
<td>24%</td>
<td>24%</td>
<td>20%</td>
</tr>
<tr>
<td>Increasing productivity</td>
<td>18%</td>
<td>13%</td>
<td>26%</td>
<td>12%</td>
<td>18%</td>
</tr>
<tr>
<td>Developing new leadership</td>
<td>15%</td>
<td>21%</td>
<td>9%</td>
<td>18%</td>
<td>16%</td>
</tr>
<tr>
<td>Finding available workers</td>
<td>13%</td>
<td>13%</td>
<td>4%</td>
<td>41%</td>
<td>11%</td>
</tr>
<tr>
<td>Reducing costs</td>
<td>12%</td>
<td>8%</td>
<td>11%</td>
<td>6%</td>
<td>18%</td>
</tr>
<tr>
<td>Managing cash flow</td>
<td>10%</td>
<td>3%</td>
<td>11%</td>
<td>12%</td>
<td>13%</td>
</tr>
<tr>
<td>Workforce hiring goals</td>
<td>8%</td>
<td>13%</td>
<td>11%</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Managing client expectations</td>
<td>7%</td>
<td>3%</td>
<td>2%</td>
<td>12%</td>
<td>16%</td>
</tr>
<tr>
<td>COVID-19 business and project-related costs</td>
<td>6%</td>
<td>5%</td>
<td>7%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Responding to COVID-19 work and safety issues</td>
<td>4%</td>
<td>8%</td>
<td>4%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Navigating the regulatory environment</td>
<td>2%</td>
<td>3%</td>
<td>2%</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Implementing Integrated Project Delivery (IPD)</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>
Below are unedited comments from respondents

Maintaining a adequate sales and revenue goal with the decreased project opportunities.

We expect a gap in available projects next year based on the reduction in architect billings during the first half of 2020. We think the results of this election will have very differing consequences on business activity and don't have a prediction for how that will sort out.

Infrastructure funding at all levels of government

How to manage more work with less staff and getting new clients to sign up sooner since it always comes at once.

The governor and mayors refusal to control rioting and looting earlier in the year as well as their inability to defend the police who are attempting to make our cities safe, as well as these same politicians inability to deal with the homeless communities free-run in our cities is harming our communities. All of this, in addition to the cherry-picking of which businesses will be allowed to stay open and which businesses are forced to close during a flu-virus is an unwinnable hurdle for many businesses and crippling for many industries. Businesses and citizens should be allowed the freedom to hide in their basement or go outside, or go shopping or order out for goods and services, or decide to wear a mask or not wear a mask.

All of the above is of course harming our construction industry. Much of it unnecessary and based on overreaction and political gamesmanship with our industry as one of the victims. Being contractors in cities where retailers, developers, and small businesses of all sorts are being crushed by the above noted mess is an epic and historically destructive mismanagement by our governor and mayors. Tell them so.

I have noticed that there are more non-union firms being awarded most of the work that we have bid. These companies can bid lower due to lower cost employees. I feel compelled to start a non-union arm of business in order to compete on a level playing field. This has been the toughest year in business out of the last 15 years! I would like to explore partnering / forming a coalition with general contractors. All businesses and people have suffered due to COVID-19. Can't wait to get this behind us.

Cash flow

Everything in construction. The overall unknown is causing serious disruptions from owners to employees. We are keeping our head down and going forward, but for a small business, this is a trying time. We cannot "buy" work like the bigger companies and there is so much competition right now for projects that normally would have have just a few bidders. Shows that everyone is nervous about the future.

Pushing down of traditional owner risks to contractors in all manner of procurement, hard bid, CMGC, DB and P3.

Introduction of additional non-union general contractors into this market, specifically in the housing sector.

Union GC's that continue to solicit and hire non-union sub contractors and union BA's that don't do anything about it.

There is definitely an increase in frustration among experienced Foremen and Superintendents in the "new" labor force. It is having the most personal impact on them. They are forced to try to do more with less experienced people and some who have no idea on how to work professionally in the trades. I fear many of these people will retire early out of constant stress of the challenge....with no one of equal talent or drive to replace them. Complicating this is the workforce hiring goals and trying to manage that on an already a challenging situation imposed just by having to train Gen Z and millennials. The Unions have not seemed up to the task in regards to recruiting and training. Our culture seems to value a college degree beyond working in the trades which can be a rewarding career both professionally and monetarily. I hope I don't come off as the old guy (I'm 56) who is saying "kids nowadays" as that refrain has been going on for every generation...but this does seem different. The new labor force is not used to working with their hands and have not been imbued with a sense of duty and perseverance. I believe everyone, Contractors, the AGC, Technical Colleges, Training Programs, and Labor Unions really need to work together to solve these problems.

Long term funding solution to transportation

Response of the financial markets to finance projects, both equity financing and debt / bank financing.

Political polarization. Climate change. The dumbing down of Americans.

Just a forecast of what will be constructed in the next 3 to 5 years while we recover from this pandemic slowdown.

Uncertainty created by the current administration, and COVID19, is holding back investments in construction

Being on the line for the actions of my people who are exposed to so many varied risk exposures.