



The COVID-19 Pandemic and Its Impact on the Construction

Industry:

Staying Essential

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Abstract

This paper addresses the effects of the COVID-19 pandemic on the construction industry. Input from industry representatives, personal experience as well as statistical data will show that while the pandemic had many negatives such as labor and supply shortages, there were also some positives that could be embraced as best practices for the industry. Industry organizations, such as the AGC, need to continue to fight for changes in government policies contributing to unnecessary shortages; the organization can also lead the way into the future with guidance that will ensure the industry continues staying essential.

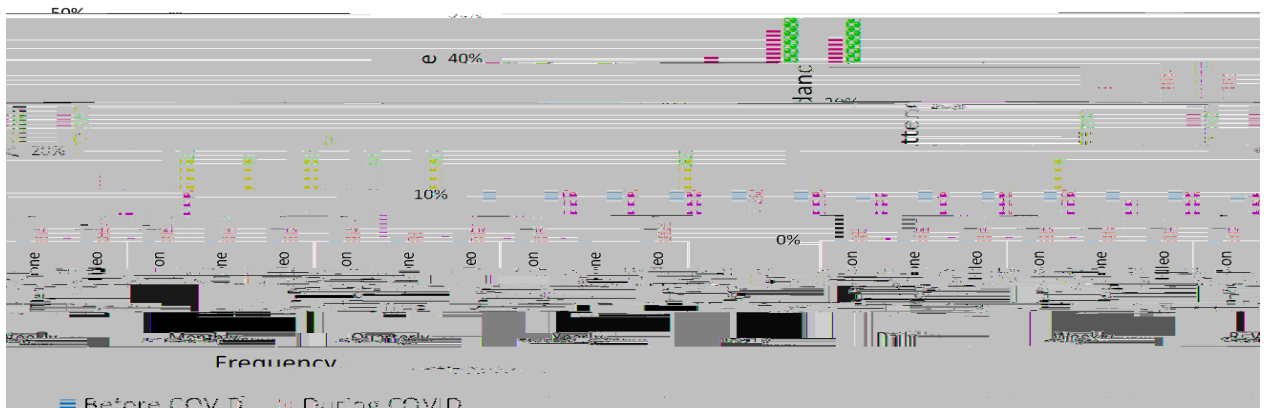
COVID-19 has affected the construction industry in both negative and positive ways. The industry was deemed all but four states (Michigan, New York, Pennsylvania and Washington). This was probably the single greatest positive for the industry during this time. However, as many adjustments had to be made, it was not business as usual. I asked seven representatives in the construction field (Appendix A) about the impact of COVID-19 on their business. Many of my first-hand experiences as an intern for two summers with Baker Construction in Washington D.C. were also experienced by these veteran construction professionals. The industry, which understands the importance of safety and the use of protective safety gear, was able to respond to the pandemic and adapt. Some of the necessary adaptations created positive situations that could be evaluated for best practices for the industry. However, government policies created labor shortages which in turn created supply chain issues. Lessons learned over the past twenty months can make the industry stronger if adaptive changes are embraced and a collaborative response addresses COVID-19-related issues that continue to impact the industry.

As the industry responded to the Centers for Disease Control (CDC) guidelines to maintain safety for its employees, some of these adaptations created positive situations that could be evaluated for best practices for the future:

- Group size limitations led to improved job site communication and workflow
- The need to limit shared equipment use led to increased productivity
- The need for social distancing addressed job site congestion, improving safety
- The led to re-imagining the office without impacting, and actually improving, team collaboration

Another positive safety protocol instituted during COVID is the need to outfit craftworkers use of equipment. Outfitting crews to be self-sufficient increased productivity. For example, a central location for cordless tool batteries, power tools or consumables. Foremen no longer had to spend time tracking down tools that were left around on the site. Instead, crews were issued the tools they needed for the task they were assigned to and were expected to keep that tool with them during the duration of the day. Equipment operators were also assigned specific equipment for a day. This led to employees maintaining their equipment, keeping it clean, and working efficiently. There was also better tracking of the operability of tools since the tools were turned in daily for disinfecting which allowed for daily inspection for damages.

The office environment was also impacted as a result of COVID-19. When office employees were sent home, companies quickly adjusted work practices in order to continue work. Technology allowed people to stay connected. According to a study by Auburn University, attendance for telephone or video meetings improved during COVID. One representative I spoke with discussed how he was able to attend more meetings because he could click off one meeting to join another.



The Auburn study also found that project teams saw improved verbal communications, improved virtual technology capabilities, and more efficient virtual collaborations.

Technology allowed

However, by spacing out people and reducing the contact between crews, this has the added benefit of giving crews larger areas to lay out and plan their work; essentially less congestion. Congestion is a leading factor in which make up 11.1% and 5.5% of fatal construction accidents. Thus, reduced congestion should improve job site safety.

While the construction industry was adapting to government guidelines, certain policies impacted the industry negatively as they led to a labor shortage:

- Government assistance has led to labor remaining at home
- Quarantining and contact tracing policies have created labor gaps
- Vaccine mandates are further contributing to labor shortage

The labor shortage then led to another negative still impacting the industry today:

- Disruptions in the supply chain has created shortage or delays of materials

Despite the industry being deemed stoppage as clients were responding to the unknown of the pandemic. Labor was furloughed or laid off. When projects reopened, a labor shortage was soon encountered. At the end of March 2020, the *Coronavirus Aid, Relief and Economic Security (CARES) Act* increased benefit amounts and extended the length of unemployment. A survey done by the Associated General Contractors of America (AGC) asked employers about worker availability. Forty-one percent of the respondents in the Midwest stated that recalled laid-off workers were refusing to work, citing preference for unemployment benefits. During the summer of 2021, one of my co- , told me that he had just returned to work after taking a year off. I asked him why he had

been gone and he told me it was because he was receiving unemployment benefits that were within \$200 of his typical

showed that respondents anticipated their companies would lose workers if a vaccine was mandated across the industry.

The labor shortage has created longer lead times and unavailability of materials. The AGC member survey conducted in June of 2021 found that 32% of the 104 respondents stated that they had project delays or disruptions due to shortage of materials, equipment or parts.

these protocols and best practices. COVID Safety Awards similar to the Construction Safety Excellence Award (CESA) or the National AGC Safety Awards (NASA), could also be recognized.

Once the issues creating the labor shortage are addressed, the supply chain will fear it will be another year before this occurs. So the industry should continue to plan for longer lead times, find solutions with substitute materials and seek materials that are produced in the United

The COVID-19 pandemic impacted industries around the world. Within the United States, the construction industry being allowed for the industry to forge forward. We adapted well and embraced changes. However, there are still major issues that need to continue to be addressed by industry leaders. AGC, wielding the collective voice of over 27,000 contractors, must continue to fight for changes in policies that are creating labor and material shortages. Creating construction-specific COVID protocols and guidance for the industry is essential in keeping the

This pandemic has forced our hand to adopt new approaches to staffing, material acquisition, and means and methods. Many of which are here to stay, whether that be to insulate the industry against future events or to reap the rewards in an industry that has always been slow to change and adopt new technology. Either way, these are changes we must make if we are going to stay essential.

Appendix A

Brad Benhart, Professor, Purdue University

Brett Shelton, Turnaround Event Lead Manager, BP, Whiting, Indiana

Carpenter Foreman, Baker Construction DC, LLC

Daniel Bush, Asst. Superintendent, Sterling Group

Don DiCola, Superintendent, Michuda Construction

Eddie,

