



DesignIntelligence

SPECIAL EDITION  
**CORONAVIRUS**

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# **Workplace Safety:** Learning Across Cultures

DesignIntelligence

**MICHAEL LEFEVRE**

Managing Editor,  
DesignIntelligence

*To cope with newfound safety risks, we need only look outside of our own cultures. And perhaps expand and adapt systems we already have. Technology and humans will be required.*

In the wake of the news of COVID-19 spreading across the globe, one is compelled to ask: what can we in the design and construction community do to be safer? How can we get better, smarter and more well protected in response to viral risks? One quick response approach is to look to the practices of those who build our buildings: the construction and trade contracting communities. What can we learn from them? What can we do to prepare? In times like this, these are thought-provoking questions. If we ask them, maybe we can find some answers.

### **A History of Safety and Risk Management**

Onsite, laborers have always been faced with risk. After all they are

working in the real world. Heights, machinery, weather – and perhaps the most dangerous of all – other humans, are present. To guard against such hazards the industry has evolved to a well-developed state of awareness and practices when it comes to safety. Further downstream, in the manufacturing sector, OSHA, EPA, unions and other regulatory agencies have long implemented safe practices in factory environments. While even they may not yet have virus testing and safety procedures in place, we can learn from them. Since it's well known that offsite work is safer, faster, more productive and more qualitative, we should continue the push to do more offsite. More prefabrication and componentization. Within a firm's

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own plant, they are much more able to control conditions – including processes, technology, and staff - even potentially to the point of tracking, preventing and controlling infections.

### **The Difference**

Despite the legacy of having mature safety cultures on job sites, the coronavirus invokes a new set of questions to



address. While the physical issues of safety have long been addressed, the systemic effects of a global pandemic now present us with new issues. What about psychological safety? When we can't touch one another or get close enough to see each other's eyes, smile, or facial expressions, we are forced to rely on new communication modes. Body language, appearance and other kinds of signals (perhaps technology assisted) could help. How do we cope with these new questions?

### **Human and Technological Solutions**

Scene: You're on the jobsite. The drywall man just coughed. Do you challenge him? Has he gotten the virus? or was it merely dust in his throat? You are in your office working in a shared, free-address, benching, or hoteling environment. Nearby, Jenny begins to cough, spreading aerosols visibly. How should you react?

In an eerily similar parallel to the zombie-apocalyptic TV series *The Walking Dead*, we are now faced with asking previously unasked questions. What are the new rules of an on-site construction "society" — or any business, retail, office, or social setting of any kind — in a world in which the infected walk among us? Is it time for paranoia and irrationality – "It's him or me!" Or are abundant caution and heightened awareness enough? Perhaps a kinder, more helpful outlook, behavior set, and collective thinking would be more prudent. And maybe putting some improved systems in place?

Since the dawn of building information modeling and virtual design and construction (BIM/VDC) decades ago, leading research universities such as Georgia Tech, Texas A&M, Stanford and others have been developing software and exploring the beta test use of on-site apps to track worker

location, proximity and safety. Apps are already deployed on job sites across the country that track - via sensors, badging, and chips - who is onsite, during which hours, and their location relative to hazardous points such as structural openings and deep excavations. Technologies such as these could be adapted to track new criteria such as: tested or not; trained or not, et al. Mobile devices, sensors and jobsite workplace intranets already exist. We simply need to expand their capabilities.

### **Expanded On-Site Testing and Training**

Large jobsites already have mandatory safety and drug training. It's built into the cost of the work. It's purchased into trade subcontracts. And who would have it any other way? Accidents or loss of life are unacceptable outcomes. In work environments filled with hazardous equipment and conditions the goal is always the same: to send every

worker home safely to their families every night. Do we have such practices in place in our office and homes for those we care about most?

### **Signage, Prevention and Incentives**

As is the mantra for most safety-conscious construction firms, safety is everybody's business. "If you see something, say something", "Zero Accident Culture" and other slogans and campaigns have proven highly effective in managing risk. Most large projects are staffed with one or more safety directors whose job it is to train, observe, and report incidents. Who is the safety director in your office or home?

Smart firms have evolved to instill safe cultures in their firms and with their partners and clients – even to the point of self-insuring through Contractor Controlled or Owner Controlled Insurance Programs. (CCIP and OCIP).

Teams in such programs that are aware and safe reap the benefits of their performance: reduced premiums and the return of the resulting unspent common funds as rewards for their efforts. In such onsite construction cultures, lost time accidents and incidents are reported and enforced with penalties for non-reporting. On the positive side, there are rewards for safety performance. Give-aways such as small tools, coolers and promotional stickers are dispensed regularly to promote safety - all with demonstrable, measurable results.

I'll be the first to admit, coming from my first career as an architect, all this emphasis on safety and risk management on construction sites was news to me. It was a new language and set of concerns. But it spoke to the life and death nature of the work in the field. And it paid off. Based on the metrics, my former employer, Holder Construction, was recognized by the industry as



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the safest contractor in America on multiple occasions. This resulted in lower insurance modifier rates, lower bonding rates, and happier staff with better retention rates. And all of it meant lower construction costs passed on to owners. Those of us in the design, retail and other professional communities would do well to learn more about safety from our construction brethren. I bet they would even to talk to us and help us get started if we asked.

### **Stretch and Flex and Other Safety Policies**

For the sake of their workers, many major construction projects start each day (and even many in-office meetings) with a safety minute – a brief, informal message to keep safety top of mind. It could be as simple as to keep hydrated during summer hours, or to keep skin covered from damaging UV rays. Most jobsites also begin their days with mandatory stretch-and-flex exercise programs

to ensure that their most important resources – their people – are limber and ready to do their jobs effectively and safely. Daily task plans and other safe practices support these safety programs. It seems easy to imagine that policies for social distancing and viral safety could also be implemented and communicated on site and in offices. Equally so, in a possible new world involving significantly more remote work.

### **Personal Protective Equipment (PPE)**

Along with currently required OSHA protective gear such as hardhats, safety goggles, gloves, vests, and safety harnesses for vertical, above-ground work, new gear incorporating filtration and medically-rated breathing masks and respirators could be implemented. Masks are already in use for particulate-generating work such as drywall, stone cutting, asbestos mitigation, and other processes.

New policies such as staggered work hours to achieve lower onsite staffing densities could flatten the curve for peak onsite staff loading, easing demands for parking, as well as concerns for exposure to viruses. Projects already work extended hours to account for concrete pours, schedule recovery, work-flow sequencing and other efficiencies. Why not worker safety and better resource use?

A recent article by Stephen Sandherr, President of the Association of General Contractors, posits that construction should be slowed, not stopped, due to the virus. This is an understandable position given the number of on-site laborers across the country and the attendant economic impacts.

### Adaptive Strategies

To check the pulse of what others are doing to manage their situations, I reached out via phone to former colleague, Jorge Cisneros, Corporate Safety Director at Holder Construction Company. They are immediately implementing the following measures:

- 1 **Asynchronous Safety Orientations.** Training is being developed and delivered creatively via use of video and audio. To avoid physical contact, completion and metrics are self-governed. Employees take stickers left on the desk and mark themselves complete.
- 2 **Shift Work.** To allow for 6-foot minimum social distancing, onsite work crews have been split into two shifts.
- 3 **Remote Work.** Office staff are working remotely from home
- 4 **Daily Leadership Communication.** Company leadership convenes on a daily Zoom call to update, react

and stay ahead of virus-related issues and impacts. Our own team at DesignIntelligence is doing the same.

### What Can You Do? Six Lessons to Apply

Based on the practices above, organizations of almost any size can begin, adapt, or continue these best practices. Few of us in the design and construction community have the skills to preemptively deal with the medical and social issues we now face. We trust that those responsible do - and will. For the rest of us, here are seven specific lessons we can borrow and apply to our own safety - at home, in the office, and interpersonally, to cope.

- 1 **Track your people / Manage your data.**  
Starting now, create a list, spreadsheet, database or central shared file of all members of your firm, team, family and friends. In the

absence of some other more urgent task, if you can afford to, now is a fine time to update your network. Keep track of your most valuable resources - those you love and work with. Who are they? Where are they? What is their health status? Are they connected? Is there anything you can do to help or reassure them? You can't meet face-to-face or give them a hug, but you can connect in other ways. You may not have the infrastructure to have already equipped them with sensors, but, using existing technology, you can see when they are online, are available for a chat or text. Reach out to those most important to you - and maybe some you may have forgotten. It's possible that hearing from you may be the most important thing for their health - whether physical, psychological, spiritual or emotional.

## 2 Manage Your Resources

Now would be a good time to organize your material possessions for your business and personal lives. List them. On a personal / home level this could include food and critical resources. Any good contractor or businessperson knows where their materials or resources are and when they need them. You, and your business and home should too. Time permitting, you may find you can cull, organize, label and make accessible all the stuff that was cluttering or slowing you down because you couldn't (or didn't) manage it. Get your Marie Kondo on.

## 3 Develop an Emergency / Crisis Management Plan

On every well-managed construction job site, every good contractor has – visibly posted – a crisis management plan. When a storm or an accident occurs, clear steps

have been communicated and trained for. Who do you call? What do you do? Where do you go? Do your business and home have one? Keep it simple. Write it down, communicate and practice it. Plan for the worst case. Hope for the best.

## 4 Use Safe, Healthy Practices

Review with your team and family the best practices for social distancing, hand washing, mental health and other advice we've gotten recently from the experts.

## 5 Control What You Can / Don't Fret About the Rest

This is, and always has been good advice. Stay rational.

## 6 Be Creative

Creativity is little more than combining two things that haven't been together before. I have delighted in seeing countless stories about out-of-the-box workarounds. Visiting your parents in assisted living through the windows, video

conferencing and signing more to release endorphins are just a few examples. Reverting to homemade, do-it-yourself crafts, trades, and skills such as sewing your own masks gives hope. Based on my clever sister's suggestion, I made a face screen out of a plastic sheet protector and some strips of double-sided tape. Binder clipping it to my glasses worked well. Sure, I looked like a nerd, but I was better equipped to block aerosols at the grocery store. Was it medically rated? No. Better than nothing? Yes.

## 7 Stay Connected

One of the best ways to be creative is to reach out. Use more than one mind. Diversity and inclusion are proven to generate better ideas. Call your colleagues or family. Brainstorm. Do the things you might do in the office to generate a stellar design.



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*To have good ideas,  
have lots of ideas.*

— Linus Pauling

In his seminal book, *Together*, Richard Sennett shares the German concept of *Geselligkeit*: the pleasure people take in one another's company. While we may not be able to physically connect for a while, we should do all we can to keep in touch. Not only will give us the kind of ideas discussed above, but it will provide in the best way possible the essential need for human connection.

### **Crossing the Line**

Suggestions such as the ones above are the kind of learning we can achieve if we are willing to look outside our own

cultures. Traditionally, such behavior would have been frowned upon. They're contractors! We're architects! We do different jobs! That's work – this is home! are all responses that exemplify past, conventional thinking.

The stakes are higher now. We're in a global correction. It's time to open our culture, eyes, and ears. It's time to cross the line. In such challenging times, what better way do we have than to learn from each other?

I hope we do.

# DesignIntelligence®

**DAVE GILMORE**  
President and CEO

**MARY PEREBOOM**  
Principal, Research and Administration

**MICHAEL LEFEVRE**  
Managing Editor

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