

ACEC MEMBER FIRMS STEP UP TO ASSIST THEIR COMMUNITIES, CLIENTS, AND THE COUNTRY DURING THE COVID-19 PANDEMIC

# ESSENTIAL SERVICES



Left: Langan engineers provided environmental permitting and management of dredging operations to help make it possible for the USNS Comfort to dock in Manhattan.

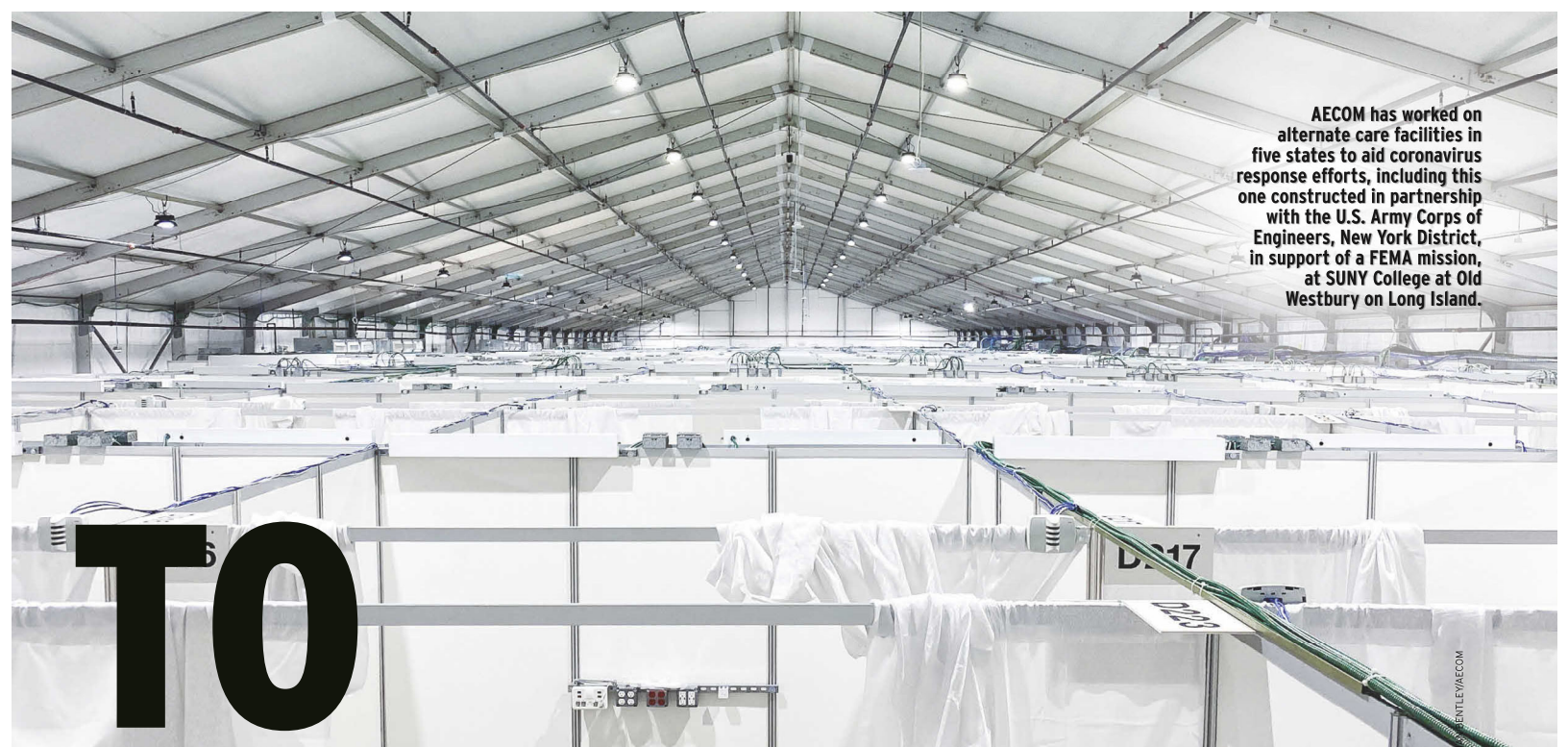


Right: WSP USA workers are disinfected during a recent facility decontamination cleaning event in Virginia.

**"E**ngineering firms provide essential services to essential services," says Jay Patil, executive vice president at Brown and Caldwell. "In the COVID-19 pandemic, I like to think we did our part and made a difference."

ACEC Member Firms throughout the nation have contributed during the pandemic, serving their clients in health care, transportation, water, and other essential services in a difficult time and sometimes dangerous conditions.

Here are five of their stories.



AECOM has worked on alternate care facilities in five states to aid coronavirus response efforts, including this one constructed in partnership with the U.S. Army Corps of Engineers, New York District, in support of a FEMA mission, at SUNY College at Old Westbury on Long Island.

# TO ESSENTIAL SERVICES

BY GERRY DONOHUE

## KEEPING THE MAIL FLOWING

At 5 p.m. in early April, Vince Ricevuto, senior vice president at WSP USA, received a call from the U.S. Postal Service (USPS) about a case of COVID-19 at one of its distribution facilities. WSP USA has a long-standing Emergency Planning, Response, and Recovery Services contract with the USPS.

“It was at a location that required immediate mobilization,” says Ricevuto. “We had a management team at the facility within two hours and met with the USPS management there to brief them on what we would need to clean the facility. We had one shift, from 12:01 a.m. to 8 a.m., to get it done.”

This was not the first and would not be the last USPS facility that WSP decontaminated during the first months of the COVID-19 pandemic. Many of the facilities employed hundreds of workers, and the invisible spread of the virus during its early stages meant that employees may have worked for days before developing symptoms.

“The first confirmed case was at a large plant, and they did not want to shut it down completely for an extended time frame,” Ricevuto says. “We focused on cleaning the contact

areas where the person worked and then traced their steps back through the entire facility.”

After that experience, WSP told the USPS that operations at the facilities, some of which are 1 million square feet, needed to stop during decontamination.

“It was too risky and was not effective having the plant in operation while we were cleaning,” Ricevuto says. “On some of the projects, we still only had one shift to complete the work, but in the more complicated facilities, they gave us a full day.”

Although WSP has had long experience in decontamination projects, having been involved in anthrax cleanup projects in 2001, there was still some on-the-job learning because of the unique nature of the COVID-19 virus, according to Ricevuto.

“We had established protocols from the Postal Service and the Centers for Disease Control, but we had continuing, collaborative discussions as we worked on these projects, always looking for ways to improve the effectiveness of the cleaning while ensuring the health and safety of the team and ultimately the client’s employees,” Ricevuto says.

## DRILLING DOWN TO LOCAL IMPACT

As COVID-19's impact spread across the United States, two geospatial specialists at Woolpert, an international architecture, engineering, and geospatial firm headquartered in Dayton, Ohio, brainstormed about what the firm could do.

"We are a geospatial firm, and the dynamics of a virus are geospatial: how it spreads and how it changes," says Dan Michalec, innovation portfolio manager at Woolpert. "We looked at how we could use the firm's unique talents to help the community at large."

Michalec and Darren Johnson, database specialist at Woolpert, created a U.S. County COVID-19 Visualization dashboard that shows the county-by-county impact of the coronavirus across the U.S., including percentages of those affected as compared to each county's population.

"We pitched the idea to our Chief Technology Officer Keith Zecchini, and he gave us the go-ahead, seeing an opportunity to use technology to understand the situation," Michalec says. "We were very fortunate to have leadership that supported this, especially because the initial data sets were messy and we were not sure where this would end up."

Woolpert used data from Esri and Johns Hopkins University to build the dashboard.

"The data was available, but it was not structured for rapid use," Michalec says. "We searched for data sets we could rely on, stabilized them, made the data structured and time-aware, and then visualized it for a public audience."

Adds Johnson, "There were already maps showing the impact of COVID-19 at the national and state level, but there was not a good breakdown at the county level. You can drill down with this map."

The application, which Woolpert created pro bono, is available on its website as well as on the Esri hub that shares COVID-19 resources.

"We put it out there for public consumption for people to use as they see fit," Michalec says. "We just did it to help."

## PREPPING FOR THE USNS COMFORT

When New York City was the epicenter of the COVID-19 epidemic and there were fears the city's health care facilities would be overwhelmed, President Trump sent one of the Navy's hospital ships, the USNS Comfort, to the city with its 1,000 beds and medical staff.

To prepare the Manhattan Cruise Terminal for the hospital



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**KARL JENSEN**  
EXECUTIVE VICE PRESIDENT  
AECOM NATIONAL GOVERNMENTS PRACTICE

ship, the New York City Economic Development Corporation and Skanska turned to Langan, a national environmental engineering firm headquartered in New Jersey.

"It was pretty clear right away that where it needed to berth did not have the draft to accommodate the ship," says Dave Gockel, president and CEO at Langan. "So, what do you do? You dredge, but dredging requires a lot of upfront permitting and environmental work."

Langan deployed a team led by Jeffrey Stoicescu, senior associate, to work on two parallel tracks: one to obtain the emergency permits, and the other to do the environmental, civil, and dredge engineering support required to ensure all sediments were properly disposed and the berth was prepared to handle the hospital ship.

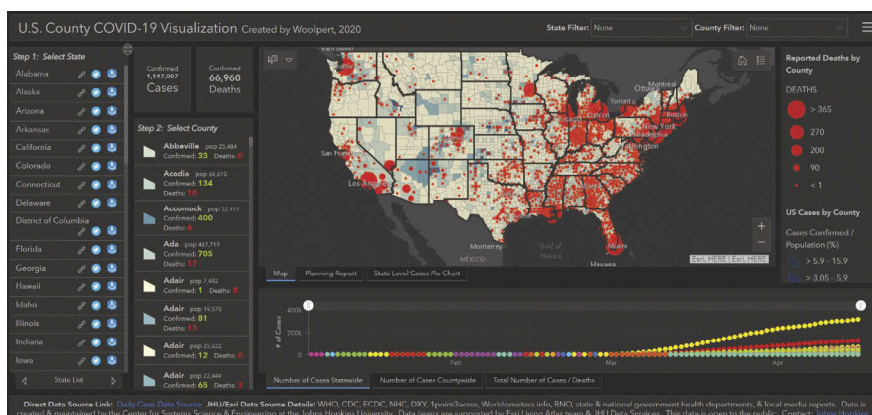
"I would say that there was probably six months' worth of work that happened in about six days," Gockel says. "When you think about the critical nature of the situation, the last thing in the world you wanted to happen was for the ship to come up the Hudson River and have to anchor while waiting for a berthing spot."

After docking, the USNS Comfort immediately started treating both COVID-19 and other patients, alleviating the pressure on the city's health care system. And in April, the USNS Comfort started treating COVID-19 patients from Philadelphia and the surrounding area.

"So often when we engineers are doing our work, it is a matter of time before people see the tangible end result," Gockel says. "In this instance, to be done with our work and literally a day later to see the USNS Comfort coming under the Verrazano Bridge and up the Hudson River, it was an immediate sense of gratification for everyone involved."

## TRAINING ESSENTIAL SERVICES STAFF

Brown and Caldwell, an environmental engineering and construction services firm based in San Francisco, bills itself as "the best virtual company in the industry," which made a huge difference in adapting to the COVID-19 pandemic.



This county-by-county dashboard developed by Woolpert includes confirmed COVID-19 cases and deaths, as well as a timeline for the spread of the virus across the U.S.

“We have invested hugely in technology and training, so we already had the IT structure in place when the Bay Area shut down,” says Jay Patil, executive vice president at Brown and Caldwell. “A lot of our clients, however, were not as well prepared, and we took that as an opportunity to help them out and to make a difference.”

The firm works primarily with water and wastewater clients, and while these utilities are essential services, many of its employees were not considered essential and had to obey stay-at-home orders.

“We hosted webinars twice a week for our clients on how to operate virtually,” Patil says. “Many of them had Microsoft Teams but they had not enabled it fully. Our digital services group showed them how to do that, how to set up and share files in the cloud, and how to use all of the features.”

Over the first two months of the pandemic, the firm provided free training to several hundred staff members at over 120 clients.

“We saw it as helping our clients continue to provide essential services to communities where we live and they serve,” Patil says.

Because the utilities needed to continue to interact with state and regulatory agencies and the public during the shutdown, Brown and Caldwell created guidance to help them use tools and best practices to organize and conduct these meetings in a virtual environment.

“A lot of our clients had projects that are under construction, so we helped them with virtual tools and procedures to keep working,” Patil says. “While the imposed restrictions added complexity and uncertainty, our clients have been able to pivot and emerge stronger to keep their projects moving forward.”



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**JAY PATIL**  
EXECUTIVE VICE PRESIDENT  
BROWN AND CALDWELL

COVID-19 Response Guide //

## How to Succeed with your Virtual Workshop

In response to an urgent need for social distancing and in many cases stay-at-home orders, we must explore new ways of interacting with internal staff, project teams, community stakeholders, and the public at large. Many of our projects rely on interactive workshops to advance ideas, gather feedback, and gain consensus on a path forward. These types of engagements are ideally held in person; however, under these circumstances, BC has compiled the following guidance that includes tools, best practices, and lessons learned to help us transition to virtual workshops.

### Workshop planning

Rethinking virtual workshop agendas, advanced materials, participant preparation, and presentation logistics.

### Rethink agendas and facilitation approach

- Shorten sessions.** Consider breaking your workshop into multiple shorter sessions. For example, if you would normally have a two-hour live workshop, run two shorter online versions.
- Build in more time.** Add 15-20 minutes into the agenda to address technical issues associated with a new platform.
  - Provide materials and contacts for technical support in advance.
  - Without visual cues to rely on, add time to be able to call on each person.
- Bring facilitation support.** If you are planning a workshop with more than 10-15 people, bring in additional facilitation help. Your co-facilitator can manage things like the chat questions, interactive activities, and technical support if needed.

While there are many digital collaboration platforms available to conduct a virtual workshop, BC uses **Microsoft Teams**, which is available through the Microsoft Office Suite. Learn more, and even sign up for a free training session, at [brownandcaldwell.com](https://brownandcaldwell.com). BC has no association to Microsoft, and all software noted in this document is subject to licensing and other terms and conditions.

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**Virtual Delivery**

Brown and Caldwell is here to serve our community. Please contact us with questions.

**Wendy Bailey**  
One Water Leader  
[wbailey@brownandcaldwell.com](mailto:wbailey@brownandcaldwell.com)  
858.571.6712

**Rosely Jenkins**  
Senior Manager Client Services  
[rjenkins@brownandcaldwell.com](mailto:rjenkins@brownandcaldwell.com)  
925.210.2466

**Luca Skutecki**  
Senior Manager Client Services  
[lskutecki@brownandcaldwell.com](mailto:lskutecki@brownandcaldwell.com)  
858.571.6739

**Kirk Wedgopal**  
Managing Principal  
Environmental Engineering  
[kwedgopal@brownandcaldwell.com](mailto:kwedgopal@brownandcaldwell.com)  
978.983.2054

**Excerpt from Brown and Caldwell's virtual workshop training guide developed for water and wastewater utility clients, which includes tools, best practices, and lessons learned to help them transition to virtual workshops.**

## BUILDING TEMPORARY HOSPITALS

Early in the pandemic, when forecast models predicted huge runs on hospitals in many cities, AECOM saw there would be a pressing need for emergency health care facilities.

“In the first few weeks, we submitted more than 35 qualifications and proposal packages to the Army Corps in support of Federal Emergency Management Agency missions to build temporary hospitals, and we communicated with states and municipalities about what we could do for them,” says Karl Jensen, executive vice president of AECOM’s National Governments practice.

AECOM’s first project was to build a temporary hospital on the SUNY Old Westbury campus on Long Island in New York. The project, which AECOM turned over to local authorities at the end of April, has 1,000 beds, of which 90 percent are designated for COVID-19 care.

AECOM also was awarded contracts to transform McCormick Place in Chicago, a fairground in Colorado, and three facilities in Rhode Island into temporary hospitals.

As a construction manager, AECOM is committed to the safety of the workers on-site.

“We have had experience working with other epidemics—Ebola, Legionnaires’ disease, anthrax—so we know what to do, but it was still a learning experience every day,” says Jensen. “We had health and safety representatives on the teams from day one, establishing policies and ensuring people had training before they went on the site.”

One of the early challenges was acquiring enough personal protective equipment for AECOM staff and the subcontractors.

“We had some gear already, but we also got in touch with our offices in China and other parts of Asia where the pandemic had eased up to get additional equipment,” Jensen says.

The challenge of working in difficult conditions brought out the best in many people, according to Jensen.

“We had a team member on one of our job sites who lost a relative to COVID-19. We told him to take as much time as he needed, but he came right back to the job because he said finishing the hospital would mean that others might not die.”

Another employee had a heart attack and within a week was lobbying his doctor to let him go back to work.

“Engineers are essential, and putting them on this essential work gives meaning to us as an organization and as a profession,” Jensen says. “More than one team member has told me that these were the best projects they have worked on.” ■

**Gerry Donohue** is ACEC’s senior communications writer. He can be reached at [gdonohue@acec.org](mailto:gdonohue@acec.org).