

CASE STUDY
COVID-19
WHEN AIRFLOW IS CRITICAL

Answering the Call

An impending surge of COVID-19 cases. Fears of overflowing hospitals. A narrow window of opportunity to prepare for a potential tsunami of patients. An unprecedented situation for the city, the country and the world.

This was the situation in the City of Chicago in April 2020, when the Federal Emergency Management Agency (FEMA) and the Army Corps of Engineers were called in to build a 3,000-bed field hospital. The site they selected for the facility was McCormick Place Convention Center Chicago.

Of course, transforming space traditionally used for trade shows into an enormous field hospital was a massive undertaking. It would require three entire halls in the convention center.

Instead of the 6–9 months that it typically takes, the Army Corps of Engineers awarded contracts in a little over 3 days by negotiating directly with contractors they knew could deliver on time.

Essential Air Movement Equipment

One of the many needs in building the field hospital was to find a supplier who could handle the essential air movement equipment. They selected Mitsubishi Electric drives not just because of the quality and performance, but also for the quick delivery.

Our job was to provide fan control for the ventilation and filtration system for the negative pressure tents installed in the convention center to handle the more severely ill patients. Controlling airflow is critical with an airborne disease like COVID-19. To keep the virus from escaping whenever doors were opened, 500 negative-pressure tents needed to be created. The negative pressure airflow would also keep contamination away from caregivers.



It took just days to convert the nation's largest convention center into the nation's largest field hospital.



“If it was never used, that would be a best-case scenario¹.”

— Gov. J.B. Pritzker
Governor of Illinois

So while everyone else was shutting down, we were working weekends to get the ventilation controls produced for negative pressure tents so they would be ready for overflow patients that potentially couldn't be accommodated in city hospitals. It was an incredibly fluid project with lots of changes in scope and many late evening phone calls.

Of course, the lockdown complicated things. Even so, within days of confirming the specifications, Mitsubishi Electric had a dozen PowerGate Series Engineered Drives on their way to be installed. When a switch got damaged, our channel partner relied on us for additional parts due to our proximity to the job site.

Winning the Race to Build Illinois' First Field Hospital

It was a bit of a roller coaster ride. They were such unusual times, but everyone felt fortunate to be doing something to help protect the people of Chicago.

The project required monumental, round-the-clock dedication to complete. It's definitely an example of the power of partnership we see everyday.

While fewer people than feared got sick in the first wave of the pandemic, valuable lessons were learned and the city is better prepared for another surge or for future pandemics. COVID-19 has changed ventilation and filtration requirements for hospitals, schools and restaurants. These learnings will be applied to any project that requires improved HVAC and ventilation system controls.

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Source:

1. <https://news.wttw.com/2020/05/01/field-hospital-mccormick-place-will-close-after-treating-few-patients-curve-bends>

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CS-VH-00140

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