

CASE STUDY
Brooke Army Medical Center + Delta Controls

enteliWEB At Brooke Army Medical Center (BAMC)



Brooke Army Medical Center (BAMC) is the United States Army's premier medical institution. Located on Fort Sam Houston, BAMC, a 425-bed Academic Medical Center, is the Department of Defense's largest facility and only Level 1 Trauma Center. BAMC is also home to the Center for the Intrepid, an outpatient rehabilitation facility. The center is composed of ten separate organizations, including community medical clinics, centered around the Army's largest in-patient hospital.[1] BAMC is staffed by more than 8,000 Soldiers, Airmen, Sailors, Civilians, and Contractors providing care to wounded Service Members and the San Antonio Community at-large.

Background

Brooke Army Medical Center (BAMC) at Joint Base San Antonio-Ford Sam Houston in Texas stands as the largest and most robust military healthcare facility within the U.S. Department of Defense. Encompassing over 2 million square feet, it is equipped to deliver comprehensive medical services to military service members, their families, veterans, and civilian emergency patients.

BAMC's extensive facilities include specialized isolation rooms, critical care units, and surgical services. This case study explores the implementation of Delta Controls' Infection Control Dashboard via enteliWEB with partner J & J Maintenance and help from Delta Controls Partner, Team Solutions to enhance infection control, environmental management, and operational efficiency.



The Challenge

BAMC faced significant challenges in maintaining stringent environmental controls across its vast facilities to prevent infections and ensure operational efficiency:



- **Infection Control:** Monitoring in isolation rooms and critical care areas, with precise, real-time data display and alerts for pressure changes and environmental conditions.
- **Data Integration and Management:** Integrating data from the extensive network of over 80,000 I/O points, 5,000 VAV boxes, and 128 air handling units for accurate environmental monitoring.
- **User Interface Design:** Quickly accessing critical data and responding to alarms using an intuitive interface that could be easily used by facility engineers and nursing staff.
- **System Scalability:** Ensuring ongoing technological advancements and expansions of the building automation system (BAS).



The Solution

Delta Controls' infection control dashboard, integrated via enteliWEB, was implemented to address these challenges, featuring:

- **Comprehensive Environmental Monitoring:** Monitoring humidity, temperature, air pressure, and other critical parameters throughout the extensive facility.
- **Real-Time Data Display and Intuitive Alarming:** Optimizing response time to environmental deviations through live data visualizations from critical areas like isolation rooms.
- **User-Friendliness:** Interface tailored to the needs of different user groups within the hospital to ensure efficient interaction with the system.
- **Historical Data Logging:** Analyzation of trends and proactive management of environmental conditions through detailed records of data.

Outcomes & Benefits

The implementation led to notable improvements:

- **Enhanced Infection Control:** The real-time dashboard provided immediate alarming and improved the accuracy of environmental monitoring, significantly reducing infection risks.
- **Operational Efficiency:** The user-friendly design allowed for quicker alarm resolutions, improving patient safety and reducing periods of operational downtime.
- **Energy Efficiency:** Optimized HVAC control resulted in significant energy savings while maintaining necessary environmental conditions.
- **User Satisfaction:** Both engineers and nursing staff reported high satisfaction due to the system's effectiveness and ease of use.

Conclusion

The use of enteliWEB's advanced infection control dashboard at BAMC significantly enhanced the facility's capability to manage critical environmental parameters effectively. This project not only met but surpassed the initial goals, setting a benchmark for environmental control and infection prevention in healthcare facilities.

About Delta Controls

At the forefront of building automation systems, Delta Controls provides global solutions through its network of Partners in 80+ countries. Focusing on innovation and sustainability has made the company industry leaders for over 40 years. Delta Controls manufactures all products in Metro Vancouver, Canada, offering dependable, user-friendly control solutions for buildings in the commercial, healthcare, hospitality, education, and leisure markets. As part of Delta Electronics, Delta Controls is committed to leading building automation into a sustainable future. deltacontrols.com