FAST-TRACKED DESIGN FOR $40MM MOLDING FACILITY DESIGN-BUILD

ABOUT THE CLIENT

Our client is a medical device manufacturer and one of the largest global medical technology companies in the world. They are dedicated to advancing global health outcomes by improving medical discovery, diagnostics, and the delivery of care. Their innovative technologies, services, and solutions help advance both clinical therapies for patients and clinical solutions for health care providers.

SERVICES

Controls & Automation
Engineering
Project Management
Construction Management

HIGHLIGHTS

- Nearly doubled client's facility production rate in the first phase
- Provided long-term options to quadruple operational capacity
- Fast-tracked design packages to meet condensed project schedule

PROBLEM TO SOLVE

When the international manufacturer approved funding for a $40MM design-build expansion for their flagship medical device molding center, they didn't know the world was on the eve of the COVID-19 pandemic. But they did know of EAD's proven record of success executing complex engineering and construction projects under a tight deadline.

The manufacturer shared their utilities and structure with an adjacent industrial manufacturing facility. This fact made the already complex 160,000 square foot expansion (combination of production and office space) even more challenging. The project required multiple tie-ins for the chillers, HVAC, and piping. The project was also complex in that it required the extensive coordination of skilled trade laborers and numerous suppliers and equipment vendors. EAD was ready for these challenges and dedicated to delivering our client with the best solution with the most value.

APPROACH & SOLUTION

Employing the front-end loading (FEL) process, EAD worked with our client to develop a design basis and user requirement specification (URS) for the project. We ensured that the design continued to meet the project stakeholders' expectations as the definition of the design grew over the course of the project. We ensured that construction packages were developed in phases to facilitate a "just-in-time" execution that matched the speed-to-market, fast-tracked schedule. EAD employed 3D modeling to showcase the layouts and design components of the proposed expansion to ensure our client could visualize the proposed engineering design concept prior to the start of work. The 3D modeling technology also enabled our client's remote corporate HQ team to easily collaborate throughout the design and construction phases of the project.

EAD facilitated project communication through meetings with the project stakeholders. During the project period, an expansive team of stakeholders from the local site and corporate headquarters (operations, engineering, sales, HR, IT, finance, legal) met twice a month to address challenges with the site conditions, any competing priorities, and redesign requests. This collaboration ensured that the entire team was on the same page at each project milestone.

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We embedded a construction manager in our client's facility to further enhance communication, expedite project RFIs and submittals, and keep construction on schedule and compliant with the design throughout the project. We also provided the project stakeholders with free access to Procore, a construction project management software, that served as an on-line repository for all project documentation and ensured the stakeholders had full visibility of the project progress at all times.

RESULT & BENEFIT

EAD produced multiple fast-tracked design packages for our client to keep construction moving ahead with minimal impact to the schedule. By the end of the first phase alone, we had nearly doubled the molding facility's production rate. We also provided our client with long-term engineering recommendations that could quadruple the operational capacity of the facility.

By working in close collaboration with the client and contractors and by being flexible with the design modifications during the construction period, EAD was able to ensure the fast-track building expansion could be completed on time and within budget. EAD's engineering and construction management expertise increased efficiencies and production, and improved the safety of the facility.

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