



Marijuana Cultivation Facility: St. Louis , MO



PROJECT DESCRIPTION

Client: A Medical Marijuana Cultivation and Manufacturing Facility in St. Louis, MO
Project: Specialized Mechanical Systems for Cannabis Cultivation and Manufacturing
Floor Area: 56,000sf with 20,000sf grow space
Construction Schedule: Completed May 2021
General Contractor: Kadean Construction

ROLE

Installing Mechanical Contractor
Engineer of Record (EOR)

PROJECT APPROACH

Design/Build

PROJECT SCOPE

Wiegmann Associates tapped into their extensive experience engineering complex systems for temperature and humidity-controlled specialty projects as the Mechanical Engineer of Record for this state-of-the-art cannabis cultivation facility.

During the pre-construction phase, Wiegmann provided the conceptual design and HVAC system budgets for the project, which involved converting an existing building into a specialized cultivation facility with strict temperature and humidity requirements. Once the owner approved the budget, Wiegmann designed, coordinated, and installed the HVAC components for the office, propagation rooms, vegetation rooms, flower rooms, trim rooms, dry rooms, extraction rooms and a full-service kitchen.

The main office and non-grow areas are served by DX rooftop units while the grow rooms are served by a chilled water system with in-room dehumidification. Wiegmann designed and installed the compressed air piping system and also installed the CO2 enrichment distribution piping, the owner-furnished fertigation equipment, and the drip irrigation system throughout the building.

PROJECT CHALLENGE/SOLUTION

A primary project challenge was maximizing the amount of racking and vertical grow height in the grow rooms within the restrictive space limitations. Because these rooms require a large amount of cooling to offset the heat produced by the intense grow lighting, Wiegmann's engineers had to effectively design the grow room systems to provide the owner with the most amount of grow space possible.



CONSERVING ENERGY BY DESIGN