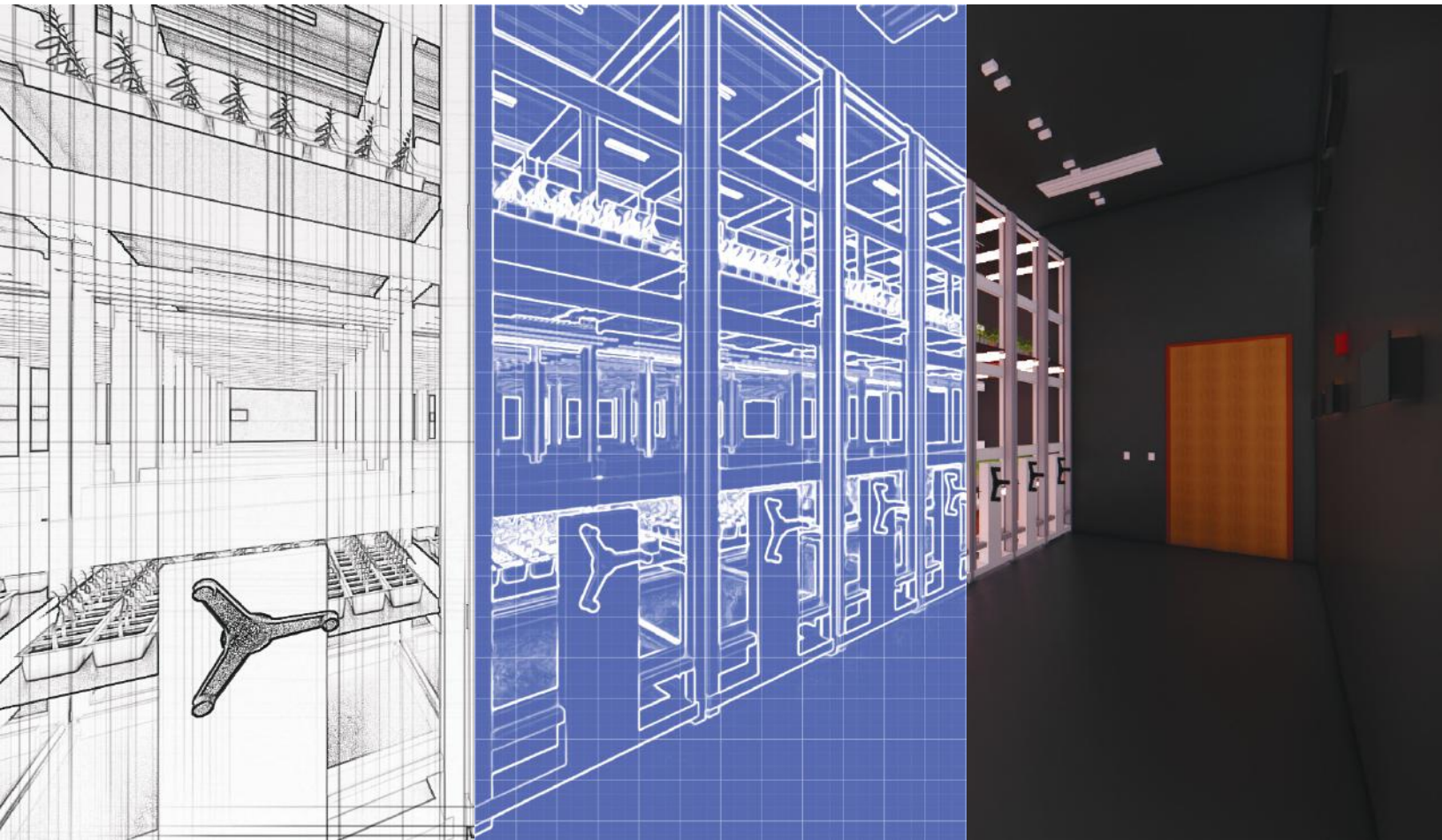


Turn-Key Design-Build Services for

# Cannabis Grow Facilities

Design. Engineer. Build.



# Our Story

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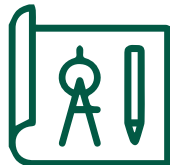
Designing and constructing a successful indoor cannabis cultivation facility requires careful consideration of the building systems design unique to the product and the indoor growth environment.

CORE, McKim & Creed and Rycon understand the importance of getting the right team with the right expertise in this market sector. After working on several facilities for multi-state operators (MSO), our team quickly realized that a state-of-the-art grow facility is a complex operation. A successful project begins with all stakeholders working together to understand the goals, needs, budget and schedule—all of which impact the design. The building architecture must go beyond aesthetics to consider the function of each space and the interaction between people, plants, and processes. Poor designs can be disastrous for the facility's product and result in significant loss of revenue associated with design rework, facility improvements, or poor product quality. In addition, many facilities experience significant expansion soon after they are constructed, so planning for future expansion is critical. An expert A/E/C design team charts a path in real time to move a facility from planning and design to construction while controlling costs.

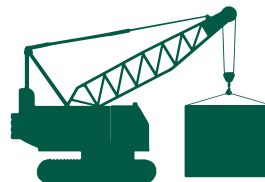
Permitting, regulatory compliance and system optimization are critical to staying competitive. Facility compliance greatly impacts the facility design and construction phases of the development. Our team has previously worked with numerous MSOs and understands the regulatory requirements unique to each state throughout the U.S. In addition, we understand the importance of keeping these facilities safe and secure. Our teams have a depth of knowledge regarding various security systems to protect your business.



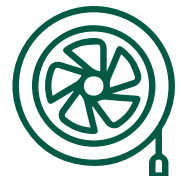
Cannabis Industry Professionals



Architects



Construction



HVAC



MEP



Structural & Civil Engineers



Grow Facility Security

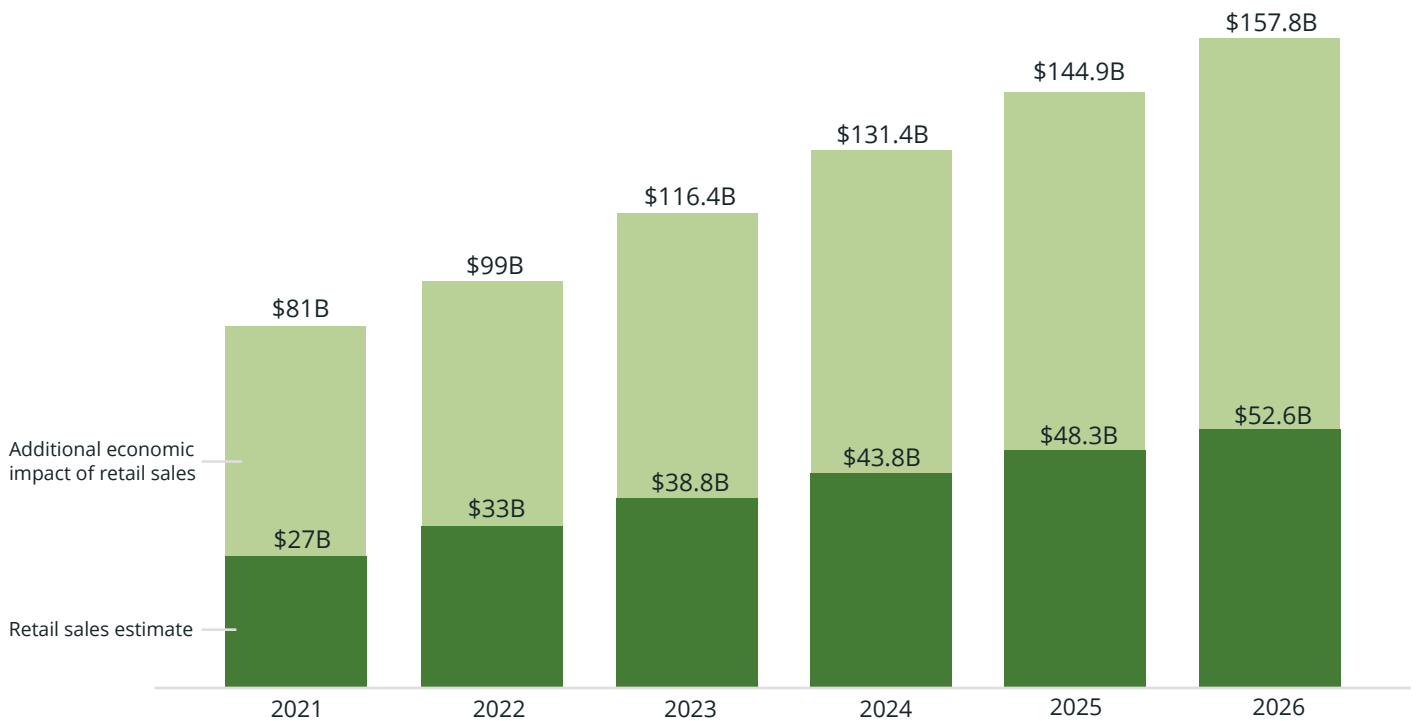
# The Demand

With states advancing cannabis legalization laws, both medical and recreational, there is extraordinary nationwide demand for new cannabis grow facilities and dispensaries.

Based on analysis from the newly published MJBiz Factbook, the total U.S. economic impact from cannabis sales in 2023 is expected to reach \$116 billion— up more than 15% from last year, and is projected to reach \$157 billion in 2026.

To keep pace with this increase, the country will need to build more cultivation, manufacturing, and dispensary facilities.

## U.S. Cannabis Industry Total Economic Impact: 2021-26



Source: MJBizFactbook  
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NOTE: Estimates are high end of scale.



## The Challenge

As cannabis businesses experience tight windows of time between licensure and becoming operational, it is critical to a company's bottom line to understand how the physical building and facility will help support a grow operation and position the business for future expansion.

As your partner, our team of experts strive to detail the aspects of grow facility design that should be considered to save time and money, eliminate pitfalls and ultimately increase a business' speed to market.

As of 2020, the average square footage for cannabis production space was 36,300 sq ft, up from an average of 18,200 sq ft in 2016, according to [Trym.io](https://trym.io).

# The Solution

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Our three firms deliver real-time cost control and real-time engineering input over the building design to this market sector. Together, we **DESIGN, ENGINEER, and BUILD** the owner's mission and vision to deliver a profitable facility—from seed to sale.

## Design.

Designing a precision-controlled grow environment requires an expert architectural team. Architects well-versed in plant-focused planning and design can ensure your grow facility functions optimally. More information can be found on **page 6**.

## Engineer.

Mechanical, Electrical, and Plumbing (MEP) engineering design for living buildings is complex. Poorly designed mechanical systems are often expensive to operate and maintain, and are often difficult to change once the site is operational. For example, undersizing or oversizing environmental equipment can lead to critical points of failure for the facility and the quality of your product. HVAC systems need to be properly sized to remove humidity created by plant growth. Additionally, air circulation must be sufficient to create an ideal growth environment. Incorrectly designed environmental controls can be a very costly mistake. In addition, backup power, equipment redundancy, and critical infrastructure for easy expansion must be considered. More information can be found on **page 8**.

## Build.

The best facility design is useless if the construction and start-up are poorly executed. The needs of a commercial grow facility are different than other structures. Engaging an experienced general contractor familiar with the types of systems and equipment installations within the building is critical to a successful grow operation. More information can be found on **page 10**.



# Design



Client-focused and design-driven, CORE Design Group is a full-service multi-discipline architecture firm founded in historic downtown York, PA in 2005.

From our adaptive reuse HQ and branch offices in Pennsylvania, Maryland, Delaware, and Florida, our 30+ person team provides national cannabis clients with responsive design, consulting, and construction phase services on cannabis projects large and small. Our designs balance creativity, functionality, and value every time. We deliver a distinctly different client experience based on mutual trust, clear communication, and an uncompromising shared vision of success.

As industry-leading cannabis facility designers, we see the architecture of your space as the foundation for everything you want to achieve in it. This is why we tailor our designs to each project's unique needs and goals.

We are always growing our cannabis facility expertise through lessons learned on projects, industry trade shows, our robust consultant network, and collaboration with ASTM International defining new industry standards.

We are known and recognized for developing and delivering solutions that balance the big picture and the bottom line.

## Let CORE's expertise elevate your grow, processing, or dispensary facility



Help navigating project decisions that affect your business



Flexible cultivation spaces ready to grow when you are



Artful brand integration for a memorable customer experience



Seamless 3D coordination of spaces & systems to prevent costly clashes

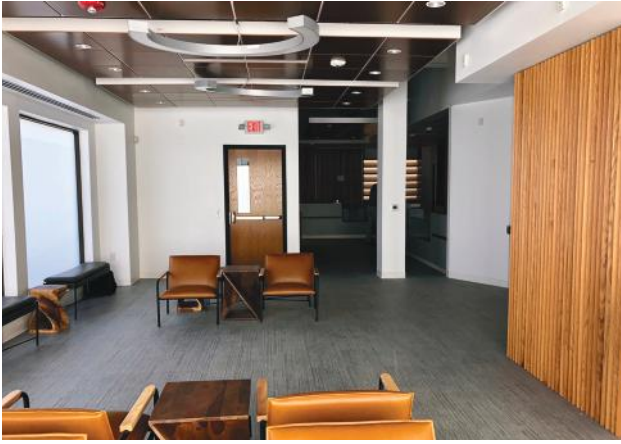
## GET TO KNOW YOUR CORE TEAM



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# CORE Considerations

## Scalable Solutions

CORE has designed ground-up new buildings and tenant fit-outs for satisfied clients across the US. We dig into the details of your current and future needs to ensure your grow facility or dispensary delivers from day one and is ready to grow when you are.

## Visitor Experience

We can help develop your brand identity or roll existing brand standards into our integrated design process. We ensure a consistent and memorable customer journey through refined details in signage, interior finishes, lighting, and furniture layout.

## Planning for Success

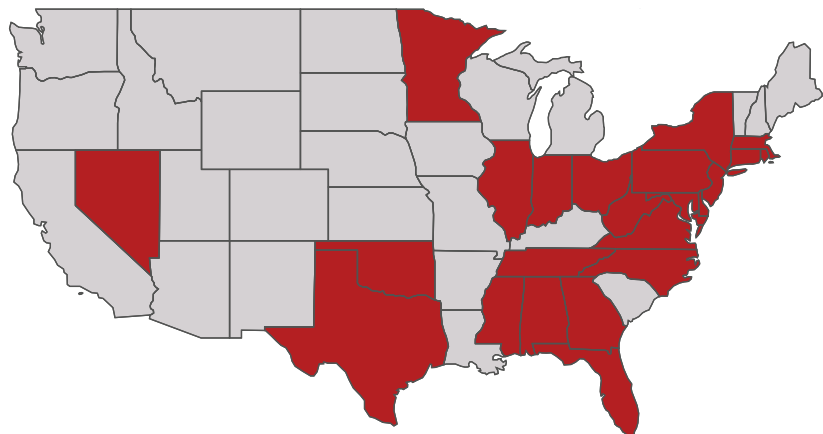
CORE can help you determine how much space is needed to meet your business goals. Our expertise in Good Manufacturing Process (GMP) lets us bake operational efficiencies into your facility's design and systems while streamlining maintenance.

## CORE Strengths

- Demonstrated project experience
- In-depth technical expertise
- Established strategic partnerships
- Responsive communication
- Good Manufacturing Process (GMP)
- Brand development and integration
- Interior design
- BIM / 3D modeling
- Construction Phase Services

## Have Licenses, Will Travel

CORE Design Group serves clients across the US from our York, PA HQ and branch offices in PA, MD, DE, and FL.



# Engineer



You wouldn't buy a car without a test drive or build a house without a set of plans. So why would you build a grow facility without consulting an engineering professional who understands the nuances of controlled cannabis cultivation environments?

All too often, we hear stories about owners jumping into construction without properly researching equipment, understanding the balance between heat and humidity, or recognizing the impact appropriate lighting will have on optimizing production.

McKim & Creed understands that some of the biggest risks associated with building a new cannabis facility can include:

- Improper equipment and insufficient MEP infrastructure to support cultivation and processing
- Schedule delays
- Increased cost

As emerging industry experts in mechanical, electrical, and plumbing (MEP) design for grow facilities, we recognize that engaging your engineering consultant early in the design process can mitigate these risks.

**With this design-build approach, McKim & Creed in the early stages of facility design will help**



Ensure the most effective, efficient solution for your specific facility



Leverage your resources



Get your product to market more quickly



Create an optimum growing environment

## REACH OUT TO LEARN MORE



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## Case Study

### Early Design to Avoid Delays

The McKim & Creed team partnered as an engineering consultant with a major grower in the cannabis market. Our task was to assess the HVAC system equipment and to offer recommendations. During construction, our engineering experts noticed that the equipment procured by another contractor would not meet production standards, nor the growing environment desired by the client. This oversight caused the project to be placed on a temporary hold while McKim & Creed staff quickly redesigned the new HVAC system and made recommendations for the proper equipment—which ultimately ended up being a cost savings for the client.



### Lessons Learned

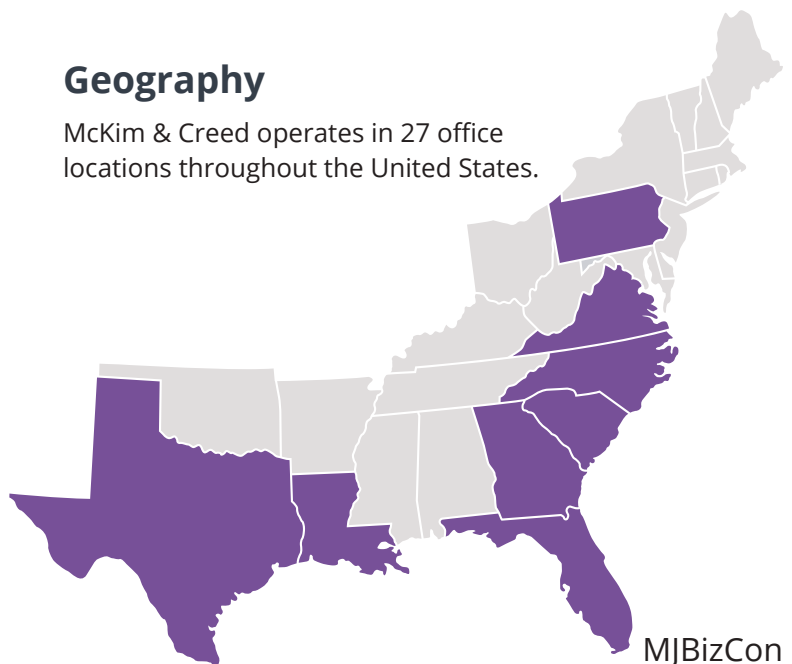
Had McKim & Creed been engaged earlier in the project, our experts could have recommended the proper equipment and avoided delays in construction, allowing our client to operate their facility more quickly.

### Grow Facility Services

- Electrical Distribution / Lighting Systems
- HVAC Systems
- Plumbing Systems
- Process Plumbing/Piping
- Fire Protection Systems
- Control Systems
- Central Boiler/Chiller Plants
- Emergency Standby/Energy Systems
- Building Structural Design
- Security Telecom/Data
- Commissioning

### Geography

McKim & Creed operates in 27 office locations throughout the United States.



# Build



We've worked **NATIONWIDE** and can provide services coast-to-coast. We utilize our eight (8) offices and staff of traveling project managers and superintendents to support your national needs.

In addition to Rycon's experienced construction managers, our team has in-house mechanical, electrical and plumbing (MEP) coordinators and engineers to help assist the design team early in the project. They will be involved with preconstruction, value engineering, on-site MEP subcontractor coordination, closeout, and Owner training.

Cannabis is ever-evolving. Our team will drive the design and coordinate upfront with the Owner's vendors to meet the needs for infrastructure such as CO2 supply, controls, labeling/packaging, security, water filtration/reverse osmosis, and fertigation. We will work with Department of Health (DOH) and Authorities Having Jurisdiction (AHJ) to implement security requirements and pass all inspections.



## The Rycon Difference



FOUNDED IN 1989 IN PITTSBURGH, PA (HQ)  
EIGHT (8) OFFICES IN DC, FL, GA, OH, PA, TX



RANKED #139 ON ENR'S  
TOP 400 CONTRACTORS LIST



PROVIDES CONSTRUCTION MANAGEMENT, GENERAL CONTRACTING, AND DESIGN-BUILD SERVICES THROUGHOUT THE U.S.



SPECIALIZE IN NEW CONSTRUCTION, RENOVATIONS, AND ADAPTIVE REUSES

## CONTACT INFORMATION



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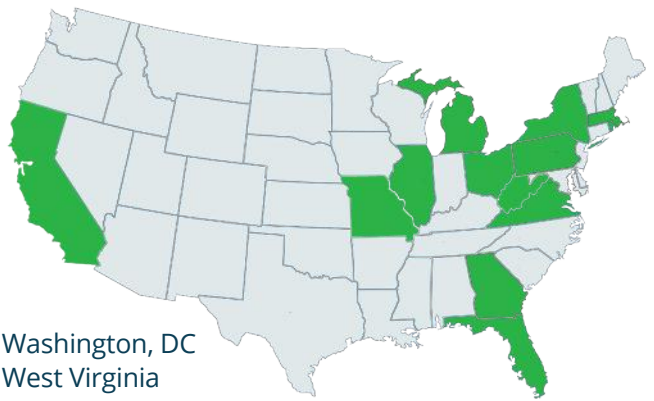
**Armand Tortorice**  
*Project Executive*  
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atortorice@ryconinc.com

## AREAS OF EXPERTISE:

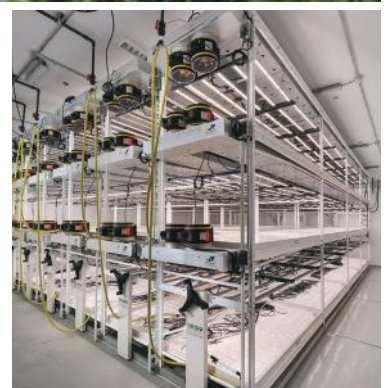
- Casework/Millwork
- CO2 Supply
- Controls
- Coordination / Install Owner Furnished Cannabis Specific Items (Grow Table and Racking, C1D1 Rooms, Fans, Fog fans, & VAS)
- Lighting
- Security
- Water Filtration / Reverse Osmosis / Fertigation

## COMPLETED CANNABIS WORK IN:

- California
- Florida
- Georgia
- Illinois
- Massachusetts
- Michigan
- Missouri
- New York
- Ohio
- Rhode Island
- Pennsylvania
- Virginia
- Washington, DC
- West Virginia



## CULTIVATION FACILITIES



## DISPENSARIES



## ARCHITECTURAL WOODWORK & SPECIALTY FABRICATION

Rycon's full service casework and millwork shop can effectively design, estimate, fabricate, ship, and install casework and display cases for your dispensaries. Our AWI and FSC Certifications ensure you receive the highest quality products.



# Design. Engineer. Build.

High Performance Team Delivers New Facilities

Let our specialized team assist you through the entire process for a turn-key, cost-effective facility that meets your operational needs.

We're ready when you are.



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