**Category: 7 - Best Building Project – Specialty Contractor (Over $10 Million)**

**Contractor: MTech Mechanical**

**Project Name: McGregor Square**

**“If you build it, [they] will come.” - Field of Dreams**

Baseball game days in downtown Denver are a sea of purple with fans cheering on the Colorado Rockies. This experience for fans in Denver’s Ballpark neighborhood is now enhanced year-round by the new McGregor Square mixed-use development located directly across from Coors Field. MTech Mechanical was a key player of the team as the mechanical and plumbing contractor, truly excelling from pre-construction through project execution staying nimble to design changes and delivering a quality product to the client and multiple end users.

McGregor Square includes 3 towers totaling over 835,000 square feet – a 13-story residential building, the 13-story Rally Hotel and an 11-story office building. ***[Photo 1]*** The 8th floor of the hotel is located exactly 5,280 feet above sea level and unique finishes set it apart for a unique “mile high” experience. The development also features a 25,000 square-foot open-air plaza, restaurants, retail stores, Rockies Hall of Fame and a sub-grade parking garage.

**“Pick me out a winner, Bobby.” -The Natural**

MTech received an RFP from the general contractor on December 26th, 2017. At this point, documents were at the schematic design level, and it was expected that the mechanical partner would be heavily involved in preconstruction and value analysis/engineering. The selection was based on cost opinion, team approach, relevant experience, and the ability to dedicate resources needed to complete all three buildings at the same time.

MTech’s team got called to the plate by winning the project pursuit in early February 2018, a full year before construction was to commence. Once on board, MTech’s preconstruction team was hard at work to align the target value with ownership goals.MTech and the team selected a line-up of mechanical systems to best serve each building type, based on cost efficiencies and constructability, and the mechanical rooms were located accordingly to the most efficient service routing.

**“It’s supposed to be hard. If it wasn’t hard, everyone would do it. The hard... is what makes it great.” -A League of Their Own**

MTech’s team initially mobilized on-site in January 2019, starting with underground utilities below the sub-grade parking garage. Six months later, when the underground parking garage was built up to final grade, the residence, office, and hotel structures began. This highlights one of the first challenging aspects of the project. Even though it was constructed as a single jobsite, the project was segmented into four separate structures which had to be built congruently. ***[Photo 2]*** To achieve this, MTech had multiple project managers, project engineers, superintendents and field managers assigned to the respective structures, something the team had never experienced before on past projects. This allowed the team to compartmentalize the workload and champion each structure separately while still wearing the same team uniform.

Last-minute design changes were a huge challenge for the MTech team. As the garage was being erected, residential unit floorplans were reconfigured, hotel programming was evolving and space for future tenants on the retail floors continued to develop. Deck sleeves were being relocated while teams were standing on the deck getting ready for a concrete pour. ***[Photo 3]*** This evolution changed the location of many of the utilities serving the building, and MTech’s mechanical and plumbing teams had to work fast to accommodate the changes. MTech’s virtual construction team worked hand-in-hand with field teams to relay information on real time data in the model, never missing a concrete pour date.

**“This is how we do business in [Denver].” – Moneyball**

The 835,702 square feet of total space is comprised of 272,000 square feet of leasable office/retail space, 108 residential units, 176 hotel rooms and 13 custom hotel suites. To help track changes and ensure quality, MTech created individual quality checklists for each condominium and hotel room. ***[Photo 4]*** Pressure testing procedures of hydronic and plumbing piping systems were done twice in the residence building prior to energizing systems with water ensuring there were no issues.

Building four structures in two years is no easy feat, especially when that project is in the heart of downtown Denver and a global pandemic occurs. To ensure the project would stay on schedule, MTech took a proactive approach to material handling. Each trade had a dedicated material handling supervisor and support team to receive and transport material setting the install team up for success. ***[Photo 5]*** MTech drove the use of Trello (a mobile software platform) to schedule and prioritize deliveries and crane use amongst various trade partners on the project.

Forecasting and tracking costs is a crucial measure to properly managing a project of this size. MTech’s project management team utilized over 960 individual cost codes throughout the course of this project, helping to evaluate time frames needed for work in different areas and schedule the work with the general contractor and other trade partners. The plumbing team had an especially large scope with thousands of fixtures spread across the entire site. This team was comprised of over 65 plumbing craftspeople teamed up into smaller groups to specialize in various activities (domestic water, storm, sanitary waste/vent, natural gas, etc.). Productivity and quality was monitored based on weekly timecards.

MTech also utilized prefabrication to assist with schedule. 40-foot-long sections of prefabricated pipe were delivered to the project and installed in a single piece. ***[Photo 6 & 7]*** From the basement all the way to the roof, every 2-floors MTech would hoist the prefabricated pipe in sections. This reduced labor, saving time and money as well as eliminated risks of welding the pipe from a safety aspect in the field. Once the pipe arrived in the building, MTech’s pipefitting superintendent worked with the prefabrication shop to create custom forklift stands as a mechanical means to lift the very heavy pipe into place. ***[Photo 8]*** This eliminated all potential injuries that can occur with improper physical lifting.

**“There’s no crying in baseball!” - A League of Their Own**

COVID-19 challenges began at the height of construction with over 600 total team members on site in Spring 2020. Safe work practices, necessary quarantines and cleaning protocols all threatened productivity. Designated stairways and travel paths, temperature checks, symptom confirmations, tool cleaning and more provided the protection required for all workers on the site. MTech provided masks and sanitizer to all team members as well as piped in temporary hot water for wash stations available for everyone’s use onsite.

One significant obstacle created by the pandemic was acquiring plumbing fixtures for over 300 spaces. MTech’s team had to coordinate with end users and fixture manufacturers to circumnavigate the delays affecting lead times. Several key fixture selections were changed during construction to accommodate not only the schedule, but also the demands of luxury condominiums, hotel rooms and restroom facilities.

**“If you give something your all it doesn’t matter if you win or lose, as long as you’ve risked everything put everything out there.” - For Love of the Game**

MTech encountered some surprise spring winter weather in April 2020, throwing a curve ball into their plans. To maintain schedule, the team worked on a Saturday lifting two chillers each equivalent to the size of a greyhound bus onto the 11th floor penthouse of the office building! Because the tower crane’s capacity fell slightly short of being able to reach the final location of the chillers, the team had to safely place the equipment and slide the chillers about 6’ on skates into the final location. ***[Photo 9]*** At a cooling capacity of 800-tons each, the chillers serve all of McGregor Square with chilled water for air conditioning, supplemental cooling, and mission critical cooling for electrical equipment. ***[Photo 10]***

MTech had over 110 players working on-site at peak including sheet metal, plumbing, pipefitting, and project management. Over 210,000 labor hours were worked on this 28-month project, and it was a home run with MTech only having 1 recordable injury! The minute any player joins MTech’s team on-site, they meet with a lead field manager to complete site-specific orientation. Toolbox talks were completed each week as well as site-specific training, including confined space, specialty tool, lifts and scaffolding.

**“You’re the best thing to happen to baseball since Cracker Jack!” - Rookie of the Year**

The Rally Hotel was successfully able to open to guests on March 25, 2021. The first owner moved into their condominium the same month, shortly after the building achieved WELL certification, which only four residential buildings in Colorado have obtained. The Colorado Rockies hosted opening day at Coors Field on April 1, 2021, vs. the Los Angeles Dodgers and finally All-Star week took place in July, putting Denver and McGregor Square on the MLB map! While MTech might not be able to help the Colorado Rockies with a World Series, we certainly are proud to have been part of the fan experience and forever change the Denver skyline with McGregor Square!

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