

## 2021 AGC ACE AWARDS

# CU Denver City Heights Residence Hall

Category 13: Best Building Project  
(General Contractor – Over \$70 Million)

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There is a first for everything. In the case of the construction of the City Heights Residence Hall at the University of Colorado Denver, one first is the capstone of a trail of firsts. Located on the Auraria Campus in the heart of downtown Denver, this 181,000 square foot, 7-story building is the first on campus residence hall and is designed to accommodate first-year students. CU Denver focuses on creating a welcoming and diverse environment and consists of 49% first-generation college students. City Heights provides an affordable on campus living experience to students who otherwise would have lived at home, missing out on the benefits of a campus community.

JE Dunn, in a design-build partnership with Stantec, delivered the 270-unit, student housing facility, dining hall, and learning commons on time for students' arrival on August 18<sup>th</sup>, 2021. The building includes single, double, and triple occupancy units that are now home to 555 first-year students. Following over a year of losing meaningful social interaction that helps make college impactful for students, the delivery of this project could not have come at a better time. The central location with plenty of gathering spaces is just what the campus and students need.

The team created a project purpose statement at the onset of the project to establish and communicate its clear goal to stakeholders and on-site workers: "CU Denver strives to provide an affordable education that honors the core value of diversity and fosters the culture of inclusion. The First Year Student Housing and Learning Commons will be a contribution to the CU Denver community that nurtures student success by providing an environment that is healthy, vibrant, and supportive for students to live, learn and thrive." Completion for the fall semester was emphasized and ensured as the team expedited design from the very beginning, understanding the importance of combatting the difficulty first-year students typically face in their initial engagements with peers.

### **Solutions of Special Projects:**

JE Dunn and Stantec were selected as the design-build team in the Summer of 2019, completely unaware of the difficulties the pandemic would quickly bring. With such a dynamic situation, the firms committed to working as a fully unified team. During construction JE Dunn promptly adapted their existing safety protocols to guarantee optimal safety and comply with CDC and university guidelines. A task force was also created to ensure all guidelines were being followed and on-site precautions were in place. These additions included a full-time screener, additional hand washing stations, stations to clean off safety glasses (due to fogginess from mask wearing), and extra masks provided for trade partners. A problem for one was a problem for all in the pursuit to complete the residence hall on time for students' arrival, so JE Dunn provided solutions. From building hand washing stations to distribute across the jobsite until commercial units were available to helping smaller trade partner firms stay abreast of the ever evolving local and CDC guidelines.

The team worked tirelessly to maintain connectivity by way of technology. The project team utilized technology to offer virtual tour style visualizations of project progress. Microsoft Teams was used to live stream weekly walk throughs, so all project stakeholders were able to stay connected to the jobsite even when working remote.

Despite all the challenges of the pandemic, schedule, and budget, the team was still able to complete the project on time and on budget.

### **Excellence in Project Execution and Management/Team Approach:**

From the start of the project, key team members generated excitement and promoted the significance of the City Heights Residence Hall. Joel Pennick, JE Dunn Project Executive, expressed his passion for creating more connectivity on a campus that has been a commuter school for decades. The residence hall now provides a first of its kind opportunity for first-year CU Denver students.

Scott Seaford, JE Dunn General Superintendent, found success to be built through communication. Throughout the project, communication was at a high level, with Plan of the Day (POD) meetings to set the tone. Maintaining transparency between JE Dunn team members, trade partners, and the University was a priority. Options were introduced when it came to major

decisions, ensuring that key stakeholders were informed and could make confident decisions. Given that the University wanted flexibility for future expansion, decisions such as the framing structure of the building were taken in a specific direction to utilize an Infinity Structure framing system, after evaluating three different systems in partnership with a structural engineer.

The key to success was having the entire team aligned on project goals. With these goals in mind during collaborations, the team continuously found quality solutions that were constructable and timely. Designs were expedited from the beginning because of the emphasis on completing the building for the fall semester, making productive discussions crucial. Everyone had a stake and the group never lost sight of that.

Seaford regarded, “In my 20+ years in running projects, this is one of the best teams I have worked with by far. Everyone had a vested interest!”

### **Construction Innovations/State-of-the-Art Advancement:**

Unique to this project was the use of an Infinity Structures framing system. While the system provides some advantages with regards to speed, safety by way of prefabrication and flexibility, there is a very low margin for error in the installation with a variation as small as ¼” can have a significant impact, so a critical eye and attention to detail was key.

To maximize student comfort and individual heating and cooling preferences, the project utilized a Variable Refrigerant Flow (VRF) system. This mechanical system provides both heating and cooling to individual units simultaneously on demand. Each unit is served by refrigerant lines that loop throughout the building and tie each unit to rooftop condensers, creating miles of refrigerant lines throughout the building. The long-term success of this system is reliant on a quality install to ensure there are no impurities in the lines. A considerable amount of coordination was allocated to managing installs and quality control checks to optimize the system. Ultimately, VRF allows for the flexibility required by 270 individual rooms in a manner that is far more cost and energy-efficient than what a traditional system would have allowed with the added benefit of enhancing the student experience.

### **Environment/Safety:**

Working on an active campus, in the heart of downtown can create difficulties. Prior to the pandemic moving classes online, traffic was busy and on all four sides of the building. A project specific safety plan was developed based on the walking paths and flow of traffic. To maintain control and inform stakeholders, the team also created a monthly bulletin board of upcoming events and big project milestones. The time allocated to the board was worthwhile and a success for planning. The team also met with all the neighbors to make sure traffic control plans were established and continued close coordination with the Auraria Higher Education Center (AHEC) on any closures in the area.

The City Heights Residence Hall is pursuing LEED Gold. To support sustainability goals and the City of Denver's requirement that a certain amount of roof drain off water be caught and filtered, Stantec and ProCraft Mechanical worked to design a unique and visually appealing solution. The green roof was another notable sustainability element which will soon be home to a honeybee community. In addition, the building includes efficiencies in transportation, such as bike racks, scooter parking, and the availability of different transportation in the surrounding area.

### **Excellence in Client Service and/or Contribution to the Community:**

For the past year, students have been disconnected. Additionally, dorms have historically been built like barracks, giving students little reason to interact inside of them. The team sought to move away from the seclusion style of dorms and bring campus connectivity to CU Denver. Through the City Heights Residence Hall, first-year students are provided the resources to comfortably build a community away from home. The mini communities from floor to floor, and the connection of every two floors, creates an exciting place to gather. The emphasis on technology and Wi-Fi in the residence hall gives students the state of art resources they need to be productive and promote comradery. Students can play games in the common areas with one another and have access to a kitchenette and study spaces.

Faculty and staff were thrilled about their newfound connectivity to students with the addition of the learning commons adjacent to the residence hall. It serves as a major upgrade from previously being dispersed throughout campus. Students are now able to get extra support from faculty and truly benefit from collaboration outside of the classroom.

Members of the team did not initially realize the magnitude and significance of the cafeteria. It will serve the students in the building as well as the broader campus. The cafeteria is expected to serve 800-900 people daily. Hours of discussion went into the menu that ultimately drove the design of the space.

All students are truly able to make City Heights their home and CU Denver now encompasses a campus community. As CU Denver's Chancellor Michelle Marks said, "For CU Denver, City Heights is more than a residence hall; it's a game changer."









