

Category: 11 – Best Building Project – GC (\$70M)

Contractor: Saunders Construction

Project Name: 16 Chestnut Office Tower, Denver, Colorado

Denver is growing up. So many cranes have been visible for so long that they almost seem to be a permanent feature of the city's skyline. In the past few years, many of these cranes have been clustered around one of the city's most iconic, densest and rapidly growing areas: Denver Union Station.

One look at a satellite image from just five years ago shows the amount of change in the area around the station, which has seen its adjacent empty lots transformed into a sea of towers and continuous waves of people. One of the newest and most stunning of these high-rises is [16 Chestnut](#), a 19-story office tower situated between Union Station and Millennium Bridge. Its major tenant occupies 12 floors in the building and is one of the largest and most-well-known of Denver-based companies, DaVita, a leading national health care provider.

A Neighborhood on Construction Overdrive

As developer East West Partners and owner Invesco worked through the project plans, they knew they'd need a trusted partner to deliver this nearly 650,000-square-foot tower located smack dab in the middle of the city's busiest core, within a 24-month construction schedule. Saunders Construction and their team of 83 trade partners and suppliers did not disappoint. The company knows the area well, having built six other buildings around Union Station in the past decade. Saunders employees often proudly refer to their work on "The Saunders Block." The pride and ownership they take in their work is just as evident on 16 Chestnut.

The project included construction of the core and shell building designed by Gensler, as well as a 340,000-square-foot tenant interior finish project for DaVita designed by Acquilano Leslie. Several other major construction projects were taking place concurrently on the same block, including the Born Hotel, 17 Chestnut and The Coloradoan, among others. Having built DaVita's

headquarters in the same vicinity in 2012, the project team understood the nature of activity around Union Station. Except now it was in overdrive. The Saunders team knew it had to be proactive to be successful, and set up a plan to communicate and meet with all involved stakeholders, including neighboring project teams with completely separate contracting teams.

The Critical Importance of Safety

The entire site is surrounded by heavy pedestrian traffic, Millennium Bridge, 16th Street Mall, the Regional Transportation District's (RTD) Free MallRide RTD Light Rail, and Union Station itself. Nearly 50,000 people travel through the area on a daily basis, and it is the central hub for commuter connections through downtown Denver. So much activity teeming below the reach of the 16 Chestnut tower cranes, meant constant communication had to be maintained with RTD, Central Platte Valley Metro District and the City and County of Denver. Weekly meetings were coordinated with these parties and the surrounding construction teams in order to coordinate all of construction activities in the area and ensure public safety.

Numerous traffic control and pedestrian walkway changes were required to ensure public safety. Several blocks along Chestnut Place were changed from a two-way road to a one-way road to accommodate all the construction activity along this corridor. RTD's Free MallRide bus lane circles directly around the west side and underneath the south side of the building. More than 35 buses, with an average daily weekday ridership of 43,000 people, drive up and down the length of 16th Street from 5 a.m. to 1:30 a.m., each day, and at peak times a Free MallRide bus leaves once every minute. RTD's Chestnut Pavilion borders the entire north property line of 16 Chestnut. This 22-gate, 1,000-foot-long underground concourse operates 365 days a year and serves 16 bus routes, with a bus departing every 48 seconds.

Safety is, of course, the most critical priority on any project, and the team's record of ensuring safety both on the jobsite and for the public is testimony to its understanding of the importance of the area around Union Station. It is a face of Denver, representing its brand to people here and travelers from around the world.

Crews officially broke ground on the project in June 2016. Access to the site was limited to Chestnut Place, as RTD's Free MallRide bus circled the north, west and south portions of the site. The construction team worked with RTD to maintain the current bus loop until the building construction would need access to this area. At that time the RTD bus stop at Union Station was relocated for approximately one year to 17th Street between Chestnut Place and Wewatta. This separated public from any construction hazards and allowed the construction of 16 Chestnut over the existing bus loop. With so many other concurrent and planned projects going on in the same area, RTD needed to ensure its Free Mallride buses would be back on track on their original route by early 2018. The team worked closely with RTD to get the bus loop open prior to the construction completion in order to minimize any inconvenience to RTD and the public.

Beyond these critical safety measures, the constraints of this project created another challenge for the team to overcome – building a 650,000-square-foot building on a zero lot line. Design of the project called for two levels of underground parking and five levels of above-ground parking. The team was tasked with erecting the southwest corner of the building on top of RTD property and the active bus lane. With zero laydown space, just-in-time deliveries were required, with steel being hoisted straight off the truck and into place.

With so many material deliveries arriving on a site with such limited access, the team created an hour-by-hour delivery board that all trade partners bought in on, establishing a plan for proactive communication and management that benefitted everyone: project team, owner and the public.

Quality Execution of Inspiring and Evolving Design

The precast concrete on the parking podium is a key design feature of the project. Each of the precast panels include a detailed weave pattern, providing visual interest along the street level, and enhancing the overall design of the entire project. The only time these installations could occur was during very busy daytime hours. The team coordinated shutdowns to minimize negative impacts to downtown residents, workers and visitors while still maintaining the critical path and schedule. The result is seamless and a highly visible expression of the quality of construction.

The original design of 16 Chestnut called for only one main lobby, but when DaVita committed to occupying twelve floors, an additional lobby was added for floors six and seven for the building's other tenants, reserving and repurposing the main lobby for DaVita. The 12th floor's 8,000-square-foot terrace was also redesigned with added structural support to accommodate large group gatherings. This entertainment space features grass and plants, grills, a water feature and expansive views over Denver and the Rocky Mountains. A cable tension glass system, made in Germany, was installed in the main lobby. This glazing system is one of eight materials used to complete the exterior of the building – ribbon window curtain wall, structural curtainwall, precast, metal panels, marble, granite, louvers and ironwood. A louver wall highlighted with custom, colorful LED lights wraps around the west and south sides of the building. The project also features an 8,000-square-foot fitness center and yoga studio, first-floor retail space, two lobbies and a bike box — a secure bike storage room for up to 30 bikes and a bike repair station.

Sustainability

The project has a goal of achieving LEED Platinum. Twenty percent of materials used on this project were extracted and manufactured within 500 miles of the site, and 20 percent of all building materials contain recycled content. All wood used on this project came from sustainable forests, including the ironwood. A custom aluminum trellis designed to look like wood was imported from Australia. Incorporating these unique design elements added challenges of coordinating deliveries of overseas product with just-in-time laydown restrictions.

Compared to code-compliant buildings, the 16 Chestnut building uses 41 percent less water and 23 percent less energy, and the landscaping uses 50 percent less water. The office levels of the building feature a high-efficiency curtain wall, and the building is equipped with a, rooftop solar panels and a metering system that tracks energy use over time to ensure energy goals are met.

16 Chestnut is a beautiful new addition to the Union Station neighborhood and a prime example of many the positive impacts of well-planned and executed construction projects can have on a city and its reputation.



Photo: Aerial Construction Progress – October 2016 | Photo by: Rocky Mountain Photography



Photo: Aerial Construction Progress – July 2017 | Photo by: Rocky Mountain Photography



Photo: Aerial Construction Progress – January 2018 | Photo by: Rocky Mountain Photography



Photo: Aerial Construction Progress – July 2018 | Photo by: Rocky Mountain Photography



Photo: Start of Structural Steel June 2017 | Photo by: Saunders Construction



Photo: RTD Bus Drive Lane and Pedestrian Plaza Adjacent to Project | Photo by: Saunders



Photo: Final Project Photo | Photo by: Rocky Mountain Photography



Photo: Final Project Photo | Photo by: Saunders Construction



Photo: Final Project Photo | Photo by: Rocky Mountain Photography