

Flight Office Building

Vertex Builders, Inc.

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Category #9. Best Building Project – General Contractor (\$10 - \$40 Million)

Overview

The \$22M Flight office building represents the most innovative and unique building on RiNo's Taxi campus to date. Ahead of Denver's Green Roof initiative, Flight was designed to have the largest private green roof in the nation. From the unique and complex exterior architecture to the in-residence artist studio, the building further develops the area while respecting the art district the RiNo area has become. With BOA as anchor tenant on floors one and two, floors three and four are a combination of fully furnished office suites and build-to-suit suites that provide an economical office solution to Denver's growing entrepreneurial community.

Construction of this 140,000 GSF building began in September 2016 and took 16 months to complete with full build-out. A CM/GC project, the integrated team nature allowed us to start the core and shell design package and allowed us to get started on the contaminated site cleanup efforts that would end up taking two months to complete.

Solutions of Special Projects: Environmental Clean Up and Coordination

The project site is located on a former railway and dump site and is contaminated with, amongst other things, asbestos. This type of contamination requires a Certified Asbestos Building Inspector (CABI) to monitor all soil activity. Heading in to construction, Vertex had allocated two months to the site clean up effort, and work hand in hand with regulating authorities to ensure a safe a proper clean up of the buried environmental hazards. This slow and tedious process required to constant screening of dirt for wood, trash, and contaminants. Contaminated soils had to be hauled off site, but remaining soil was cleaned and placed back.

As if the contaminated site weren't enough, the project (immediately off I-25 and I-70 and adjacent to the Platte River) was a hub of transportation and drainage activity and required constant coordination between Vertex, City of Denver, State of Colorado, and Federal agencies.

Vertex worked with the City of Denver Capitals Project Team for a new, larger sanitary sewer line that ran right through the property, delaying our sanitary tie-in until right before the building was turned over.

Further complicating the site effort was the new storm drainage outlet structure into the South Platte River. This effort required re-routing of the river and was a major scope of work to be coordinated closely with numerous agencies: City of Denver Stormwater, Colorado Flood Plain Control, Colorado Urban Drainage, US Army Core of Engineers, City of Denver Right of Way/Storm Sewer, and Denver Forestry Service.

Finally, Vertex had to work hand-in-hand with CDOT for the install of the new light rail project that ran on the western property edge of the project and required coordination with our parking lot and light pole installs and deliveries for CDOT to get through the property for their work.

Excellence in Execution / Team Approach

Working on a fully operational and occupied campus, with over 2,000 tenants, presents some unique challenges and requires a team approach from the Owner, Contractor, and Design Team. This project is within 12 feet of the existing roadway on the East, 30 feet of operational office buildings to the south, and 50 feet of an operational apartment complex to the West. Communication was paramount, and any disrupting activities were coordinated with the tenants weeks in advance.

Inside, the project reflected a modern, open concept that was challenging to sequence and achieve with a high level of quality. The floor finish is sealed concrete on all (4) floors and care had to be taken not to mark the floors with permanent marker, staining materials, and could not be covered due to the curing process. Simply leaving buckets and materials sitting on the floor during curing would have shown through the sealed floors in the form of dark marks.

Midway through the core and shell, BOA came on board as the anchor tenant of floors one and two. This design package was absorbed well into construction and the Vertex team worked closely with the Owner, Design Team, and BOA representatives to incorporate their needs into the project seamlessly.

In construction, weather can play a serious role in the success of a project. This project suffered from the devastating hail storm of May 2017 and had its roof system ruined as a result. In all, the hail storm caused over \$600,000 of damage. Vertix worked closely with the Owner on sequencing fixes, coordinating insurance requirements, and worked to maintain the scheduled turn over of the building.

Innovations / State of the Art Advancement

While most projects today utilize Building Information Modeling (BIM) and 3D coordination of mechanical and electrical systems, Vertix took an advanced approach with these tools prior to execution. The ceilings are exposed to structure and became an aesthetic feature for the building. Vertix utilized the modeling tools to keep piping and conduit runs straight and neat, showing very organized and thought out systems. This effort was taken so far, that, to maintain elevations of systems, holes through structural steel were modeled and given to the design team to analyze to maintain a clean ceiling space.

With an open office design, bare concrete floors, and exposed ceilings, acoustics became a focal point of the design conversation for this project. The team continued to ask how an office building can be productive with the amount of sound reverberation expected. For this reason, the design and construction team paused during structural steel erection to consider the best approach to the problem. In the end, after investigating more than ten products and mocking up five different scenarios, the team settled on an acoustical spray installation. This effort added time between structure and overhead rough ins, as well as create sequencing issues at the roof level – but it became an integral part of the success of the building.

Like the interior acoustics, the team was challenged to find great window solutions for the project. The owner wanted large, operable windows. While great for day lighting of the building, it created potential issues with the building envelope energy efficiency, a LEED requirement. There were over 700 windows, most of them operable 5'x10' or 5'x8' sliding windows to allow for fresh air. Multiple vinyl and aluminum window manufacturers were surveyed, which resulted in finding a low U-value aluminum window that could work with the

project budget and the required mechanical system. The fixed, 7' wide windows were .25 and the operable had a U value of .36. Because the operable half of the window was so large, we had to find a unique, innovative design for the sliding mechanism, so they could be meet the ADA opening requirements.

Environmental / Safety

With today's ever increasing fast paced construction schedules, Vertix worked 20,760 manhours and the entire project had over 200,000 manhours without a lost time accident. Safety is always a primary concern and was re-iterated weekly with all subcontractors as well as safety parties and incentives given out.

Flight is in the process of obtaining LEED Platinum certification. Items contributing to the points required for LEED Platinum are:

- High Efficiency VRF Mechanical system
- Photo Voltaics on the roof
- Green Roofs
- Lots of skylights
- Glass Entries to allow natural light to corridors and throughout building
- Water quality pond next to the building with sod and filter system to collect water for over half the Taxi Campus
- Recycled almost 1,000 tons of waste during construction

As mentioned above, Flight has the largest, completed green roof by a private developer in the nation. The roof is a high intensity system and over 13,000SF in size. There are mounds up to 3' high constructed of insulation and covered with over 250 tons of specialized soil. Over 1,200 plants are planted as well as (5) honey locust trees. The green roofs were so unique to the industry that Carlisle Roofing Supplier used it for their national marketing of green roofs.

Client Service / Contribution to the Community

The integration between Vertix and the end user (BOA) was a unique one. BOA is the world top manufacturer of shoelace replacing dials, found on shoes, ski boots, etc. As construction commenced, BOA believed that work boots would be a logical next step. BOA and Vertix

worked together as BOA outfitted (40) workers for work boots and conducted regular testing and interviews to determine how to improve their system in a construction setting. Eventually, the project team was featured in their on-line advertising for the new product line.

RiNo is known as an art district, and the developer wanted to bring that reputation into the Taxi campus. Working together, the team created and refined a first-floor residence area for local artists to show case their work.

Denver's business market is among the hottest in the country and is home to many start-up businesses. Vertex, being a start up only 4 years ago, was in a unique position to help steer the implementation of the third and fourth floor office suites, which are provided fully furnished and include all the essentials for a small start up business. We are very proud of how those suites turned out and even decided to lease one ourselves as a second office.









