



Cheyenne Mountain High School

Category 10: Best Building Project - General Contractor (\$40 - \$70 Million)

The Cheyenne Mountain High School expansion and renovation project in Colorado Springs was a monumental undertaking which represented Cheyenne Mountain School District 12's largest single investment in decades. The project – the majority of which was completed while school was in session – was funded as a result of a successful bond election in 2014, and completely reinvigorated the historic campus. Together, GE Johnson Construction, CRP Architects, and School District 12 accounted for every need present at the high school – including the modernization of classroom and administrative spaces, the creation of dedicated academic wings divided by subject, the enclosure of the campus for security reasons, and a comprehensive overhaul of the architectural language of the school to match the excellence of its students.

The first phase of the project – which included the relocation of the varsity baseball field – included new administration offices, counseling spaces, math and science classrooms, a new cafeteria, and kitchen. The second phase of the project involved extensive demolition and the renovation of existing areas – including both levels of the library (constructed in 1995), KIVA (student commons area), locker rooms, and the addition of air conditioning to the Auditorium.

These renovations were much needed in regard to student needs, but also unified the campus, bringing older areas up to par with the newly delivered spaces.

Phase 2 also included the complete demolition of the existing academic wings which were constructed in 1962 and 1967. These academic areas were then replaced with approximately 36,000 square feet of new space, thus achieving the goal of providing a single enclosed campus. This was completed on schedule, reaching completion on December 31, 2016. During construction, modular trailers were set up onsite to accommodate 24 classrooms housing art, social science, and English classes while the new facilities were constructed.

Collaboration and Campus Coordination

CMHS is built into the side of a mountain and presents an uneven site with limited access and egress. Furthermore, most of the new construction was directly adjacent to the most concentrated student areas. GE Johnson worked hand-in-hand with the design team, completing extensive site planning and phasing which allowed safe access to the school. The project superintendent briefed the student body on project expectations and safe conduct around active work sites, and temporary classrooms were installed onsite to accommodate students during construction. Wayfinding helped keep

students, faculty, and visitors well away from work areas, and the project team planned in detail to mitigate any possible disruptions to the educational environment. Finally, workers were shuttled to the site daily to minimize traffic and all deliveries were carefully scheduled outside student pick up and drop off times. Throughout the project, communication was an invaluable tool in completing the project with no student or faculty incidents.

Another key challenge was the transformation of the school from a multi-building campus into a unified, enclosed campus. This required six separate building tie-ins at six separate finished floor elevations. The team relied on extensive as-built survey coordination with the architect to successfully unit the school. Additionally, utilities had to be rerouted during summer breaks to allow for the new configuration. Throughout these challenges, the team's exhaustive phasing plan allowed the school to keep functioning while being transformed into a modern, secure facility.

Innovation and Community Solutions

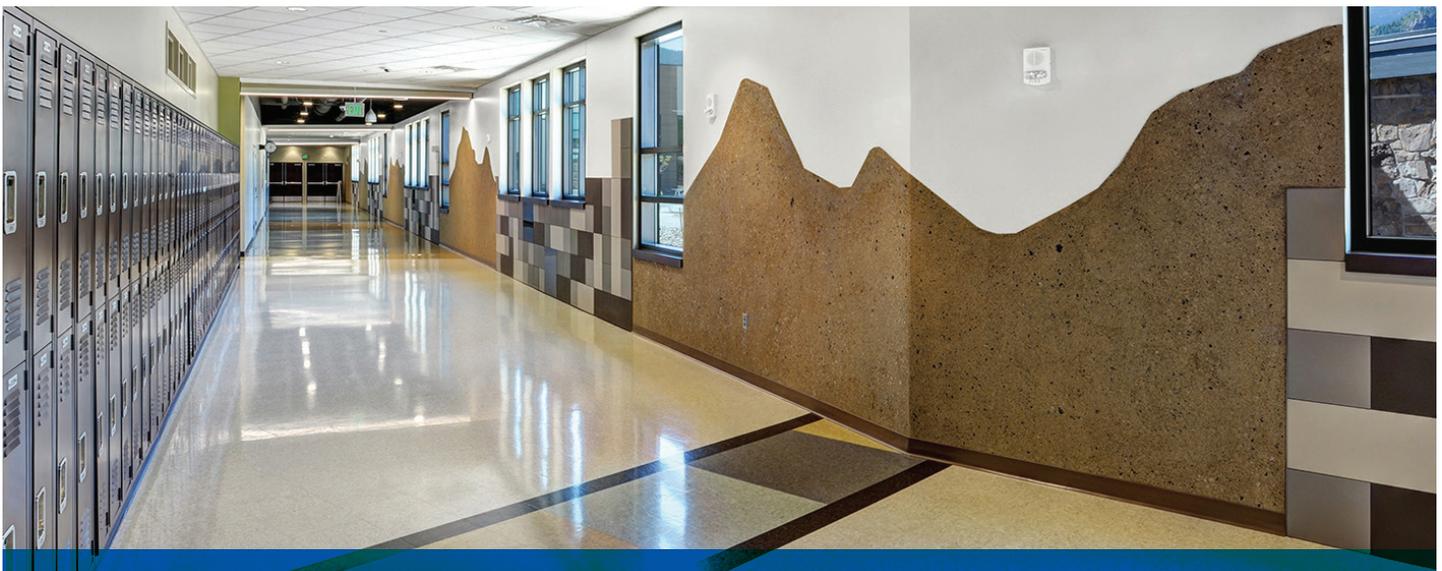
From the onset of construction, full 3D coordination was used for both the building and the site at large. The building was mapped out with students and faculty at the top of mind. Whereas traditional school design houses student

lockers and social space directly adjacent to classrooms, CMHS now features a social corridor which is separated from classroom pods by double doors, thereby isolating loud, fraternizing space from classroom space while improving the student learning experience. Additionally, every teacher is provided with a permanent office in his or her respective academic wing. This provides a constant unity in each discipline and allows students consistent access to their teachers. Additionally, the school was designed and built with flexibility in mind from Day One. Much of the newly constructed space – including the new cafeteria, academic pods, and social corridors – was created in order to be adaptive to the school into the future. CMHS now has the ability to continually reinvent their school to accommodate the changes in the student body and curriculum offered at the school.

Community was also important in the new school, as a great deal of the parents and community members are themselves CMHS alumni. For this reason, the school’s “Kiva” – the old student cafeteria and one of the most recognizable features of the campus – was completely overhauled to become a student commons and community gathering area. Giving the school the ability to host neighborhood events in the heart of a campus icon is just one way the project enriched the community.

Quality and Attention to Detail

Quality was monitored from Day One, ensuring every material and system utilized on the project was up to the standards of the district. Weekly walks with the entire project team – including representatives from the school – further ensured the end product was top notch. The minimal



Academic Wing



Relocation of Varsity Baseball Field

punchlist was completed prior to any students occupying the building, further evidence of a remarkable effort. While the time and effort expended to uphold GE Johnson’s quality standards was extraordinary, the most unique challenge was one driven by the history and legacy of the school.

Based on extensive community feedback, the decision was made that the new school structures must reflect the look and feel of the old school. Several features of the historic campus – including native rock walls and wooden outdoor awnings – were so central to the school’s identity that they were deemed crucial to the new facility. During demolition, workers took great care in isolating and preserving these materials for future incorporation into the high school’s modern design. This process put the craftsmanship to the ultimate test, as there was zero room for error; the finite amount of material made any rework impossible. GE Johnson’s craft ranks rose to the challenge, and today elements of the old school can be found throughout the new school as

design elements – a fitting reminder of the school which came before.

One aspect of Cheyenne Mountain High School which has always been unique is the ease in access to outdoor space and fresh Colorado air. To preserve this legacy, the project created the largest enclosed exterior space in a school within the state of Colorado. At almost 51,000 square feet, the “courtyard” spans just shy of a football field. Apart from access to sunlight and fresh air, this area has room for group seating, homework tables, various patio levels and access to electricity for outdoor events. Students have the option to walk outside in between any class period, but can now do so in a safe and secured environment.

Safety

GE Johnson Construction Company is committed to protecting the environment and the health and safety of our employees, customers and the communities where we work. At Cheyenne Mountain High School, this meant developing

a safety plan inclusive of the large number of workers onsite, but also of the 1,600+ students, faculty, staff, and visitors onsite during the bulk of construction. Accordingly, a site specific safety plan was developed to account for the challenges of an occupied campus. GE Johnson relied heavily on existing relationships within the district to cultivate a high level of communication to foster the distribution of this safety plan.

As work began, every trade subcontractor, vendor, and laborer onsite was provided with a copy of our safety expectations on the project and completed buy-in was required for participation. Workers were badged with CMHS arrowhead stickers identifying them easily should any unsafe conditions arise. Furthermore, the project team took the time to learn from and communicate safety concerns to cement the culture of safety at the school.



Cafeteria



Entrance



Collaboration Area



Library



Topping Out Ceremony