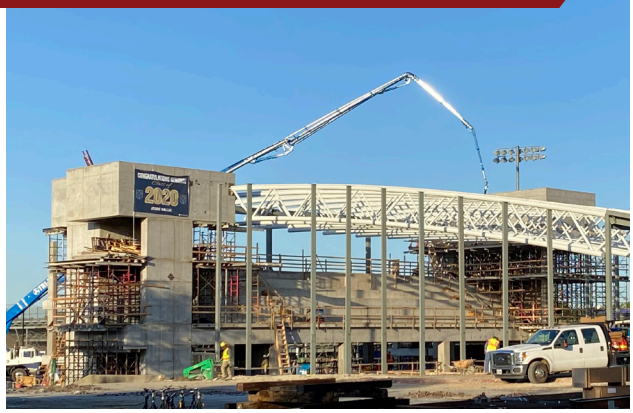
JESUIT COLLEGE PREPARATORY SCHOOL NATATORIUM

DALLAS, TEXAS



YEAR COMPLETED:
2021 (Anticipated)

PROJECT COST:
$15M

PROJECT SIZE:
30,000 SF

OWNER:
Jesuit College Preparatory School

ARCHITECT:
HKS

CONTRACTOR:
Hill & Wilkinson General Contractors

RLG SERVICES:
Structural Engineering
Civil Engineering
Surveying

PROJECT DESCRIPTION /SCOPE:

RLG Consulting Engineers provided surveying, civil, and structural engineering services for Jesuit College Preparatory School of Dallas' new natatorium. The addition of the natatorium will expand students' opportunities to learn more about water education. Students will be equipped to participate in the school's dive training and marine biology program. The school's swimming, diving, and water polo teams will also have the facilities needed to train and compete on campus.

The three-story, steel and concrete framed structure with masonry and glass veneer is 30,000 ground square feet. On the ground level, the natatorium is outfitted with a competition pool and warm-up pool, locker rooms, offices, lobby, and mechanical areas. The second level features spectator seating, restrooms, and concessions. Additional spectator seating is located on level three.

RLG's team of licensed land surveyors provided a topographic and improvement survey for the natatorium's parking lot. In order to accommodate the new location of the natatorium, which blocked the existing drainage pattern, the site was graded, and stormwater was picked up by inlets. RLG's team of civil engineers also routed a new storm sewer line to Bachman Creek Channel, and provided a new sanitary sewer line, new water services, and a fire hydrant.

RLG's team of structural engineers provided design services throughout the structure, including the cast-in-place structurally suspended ground floor over the partial crawl space; as well as the cast-in-place concrete concourse and tiered seating area. The building's structural steel façade and roof support include long-span built-up steel trusses over the competition pool. The three-story structure features a cast-in-place concrete elevator and stair towers with mechanical space at the top. The building's lateral load resisting system is a combination of ordinary reinforced concrete shear walls and steel ordinary concentrically braced frames.

The corrosive environment of a natatorium is a challenge to the durability of structural steel framed buildings. This challenge was top of mind as many decisions were made about how the building would be structured and what measures would be taken to protect the integrity of the structure. Maintenance and upkeep of the structure in a corrosive environment such as this would be a substantial concern and cost to the owner if considerations were not made throughout the design to minimize such efforts for as long as possible and to maximize the lifespan of the building.

The natatorium is currently under construction and is set to open in Spring 2021.