

Project Type

Laboratory

Size (ft²)

51,000

Stories

3

Services Provided

Full design of HVAC, plumbing, and energy management & control systems. Energy modeling, LEED analysis and documentation.

Completion Date

2013

Owner

County of Alameda

Architect

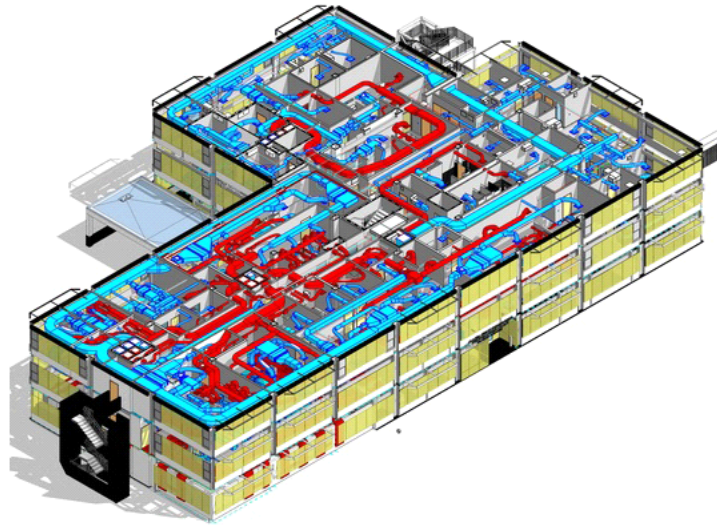
Shah Kawasaki Architects

References

Shah Kawasaki Architects – David Ogorzalek

LEED Certification

Silver Pending



Peralta Oaks is a high density, exhaust hood load dominated laboratory facility requiring space pressurization control. The building houses the Alameda County Coroner's Facility, Sheriff's Crime Lab, and Public Health Lab, and includes biosafety level 3 spaces. The HVAC system was completely redesigned and replaced in 2013 as part of a seismic upgrade and tenant improvement project.

Four of the five air handling systems at Peralta Oaks serve 100% outside air laboratory spaces with dedicated exhaust systems. Chilled water cooling coils and hot water heating coils are distributed through the building serving variable air volume terminals at the zone level. This innovative design approach allows supply air temperatures to be customized to match the loads in individual zones, thereby eliminating the overcooling and reheating that is common in laboratory buildings. Variable volume fume hoods are used where possible. Lab space pressurization is achieved using adaptive offset control to maintain control pressurization and allow for variable air volume. Taylor Engineering's design at Peralta Oaks exceeded the Title 24 standard by an impressive 31 percent.