

Twin Cities Police Headquarters

Larkspur, California

Owner

Twin Cities Police Authority

Architect

Glass Architects

General Contractor

Jeff Luchetti Construction

Completion Date

January 2012

Construction Cost

\$8.7 million

Total Area

18,000 sf

Number of Stories

2



Thornton Tomasetti is providing structural design and construction administration services for a new two-story wood and concrete masonry unit (CMU) building that will house multiple offices, locker rooms, an evidence room and a temporary cell holding facility composed of a six-inch concrete roof slab and CMU walls. Design challenges included providing load continuity along varying diaphragm heights, particularly between the low roof and the second floor; distribution of lateral forces at the second-floor diaphragm composed of a mix of rigid concrete slab and flexible plywood sheathing; and the associated complexity in distributing shear loads along a lateral force resisting line with wall elements of varying stiffness due to the combination of CMU and wood shear walls.

The foundation system includes partial overexcavation along the building perimeter and replacement with lightweight fill, driven precast concrete piles, grade beams and reinforced concrete structural floor slab. This foundation system will result in a minimal settlement over the thick bay mud underground and was designed specifically to resist extreme ground shaking and potential liquefaction from higher magnitude earthquakes. The main vertical and horizontal building structure is wood framed with prefabricated trusses. Exterior finish materials include split-faced concrete block wainscot, stained cedar sidewall shingles, and standing seam metal roofing.

The entire building structure is designed to meet or exceed the California Essential Services Building standards and will be certified LEED Platinum after completion.