ALEXANDER HOSKO - MECHANICAL OPTION

ARMY RESERVE CENTER - NEWPORT, RHODE ISLAND

Owner: U.S. Government - Department of Defense
Owner Representative: U.S. Army Corps of Engineers - Louisville District
General Contractor: J&J Contractors, Inc.
Architect, MEP Engineer, Structural Engineer, Civil Engineer, Project Manager: Michael Baker Associates

Project Information

Location: Newport, Rhode Island
Size: 59000 ft_2
Levels: 2 levels
Cost: $17 million
Construction Time (estimate): January 2009 – September 2011
Delivery Method: Design-Bid-Build

Architecture

The building will consist mostly of white range field brick on the exterior. Bands of tan ground face block will be present with period fields of matching tan split face block to break up the long mass of the elevations. A tower is used to highlight the main entrance. This tower is clad in a metal panel, colored to match the field brick. The wall system is a non-load bearing, insulated masonry cavity wall with decorative concrete masonry unit (CMU) or brick masonry veneer. The roofing system is a hipped, standing seam metal roof with a 3:12 pitch.

Structural

The substructure consists of concrete spread footings and 5" slab on grade. The structural framing system is comprised of steel wide flange columns and beams supporting a 2" galvanized composite steel deck and a 4 ½" concrete slab at the second floor and a pre-engineered light gage metal truss system at the roof. The roofing system is supported by 1 ½" galvanized metal deck spanning between the steel joists.

Electrical

13.8 kv electricity shall be brought in and then stepped down to 480/277V, 3PH, 4 wire by a 750 KVA transformer. Lighting will be accomplished with fluorescent lights with electronic ballasts and energy efficient T8 lamps.

Mechanical

Serving the building are three AHUs supplying 19,000 CFM, 24% of which is outside air. There are two boilers and two air-cooled rotary screw packaged water chillers piped in parallel. The chillers have capacities of 40 and 52 tons.