

Army National Guard Readiness Center

Arlington, VA

Ian Herron | Lighting/Electrical

Project Team:

Owner: Army National Guard General Contractor: Tompkins Builder, Inc. Architect: CH2M Hill Engineer: AECOM

Electrical System

- 35.4 kV total utility load.
- (2) 15 kV medium voltage feeders at building.
- 480/277, 3 phase, 4 wire system in building.
- 208/120, 3 phase, 4 wire lighting system.
- (2) 1500 kW diesel-powered back-up generators.
- Majority of illumination done with fluorescent lighting.

Architectural Features

- Aluminum curtain wall system.
- Architectural precast panels.
- Single-ply roofing system for tower.
- Outdoor Plaza also functions as a green roof for lower floors.
- Building expected to achieve LEED Silver Rating.
- Steel Tricorn on top of building designed to give the appearance of an eyebrow.

Project Overview

Function: Administrative office building.
Size: 251, 500 ft².
Stories: 5 stories above grade +3 below.
Cost: 100,000,000.
Delivery Method: Design-Bid-Build.

Structural System

- Cast-In-Place Concrete and Structural Steel.
- Two-Way Concrete on Metal Deck.
- Shear Wall Lateral System.
- Spread Footing Foundation.
- Typical Bay Size: 20'x25' 20'x30'
- Typical Column Size: 1'-10"x 1'x10"

Mechanical System

- AHU's and VAV units on each floor.
- Hydronic four-pipe heating and chilled water system.
- Emergency generators and energy recovery units located in mechanical penthouse.

http://www.engr.psu.edu/ae/thesis/portfolios/2011/ijh5004 | Images and data courtesy of The Army National Guard and Tompkins Builders, Inc.