Widener University
Metropolitan Hall
Chester, PA

Kevin Engel
Construction Management

General Info:

- Size: approx. 92,000 s.f, 4 Levels
- Owner: Widener University
- CM: HSC Builders & Construction Managers
- Design Architect: Cue to Kearney
- Executive Architect: Wallace, Roberts, & Todd, LLC.
- Civil Engineers: Catania Engineering Associates
- Structural Engineers: O'Donnell & Naccarato
- Mechanical, Electrical, and Fire Protection

Construction:

- Construction Schedule: July 2005 – August 2006
- Estimated Cost: $18 million
- Project delivery method: Design-build, with a Guaranteed Maximum Price.

Structural:

- Floors & Roof: 8" Hollow Core Plank
- Load Bearing Walls: 8" CMU
- Lateral Load supported by grouted CMU shear walls
- Shallow Footings 5'W x 14"H

Electrical:

- Fed from Moll Hall
- Enters building at 13.2kV
- Transformer reduces to 208Y/120V source for building
- Distributed by switchgear immediately following transformer
- Emergency power for life safety systems powered by 1000kW generator at 208/120V

Mechanical:

- Air enters and exits through rooftop heat recovery units
- Air then travels to geothermal heat pumps located in mechanical closets
- The air is then ducted to bedrooms and the hallway
- After flowing through the living spaces, the air is returned to the roof through the bathroom exhaust system

Fire Protection:

- Building is fully sprinklered
- System capable of providing .10 GPM per s.f. to the most remote 1500 s.f. area
- 100 GPM reserved for hose streams
- Sprinkler heads release at 165 degrees Fahrenheit.
- Annunciator panel located in the vestibule at the main entrance to the building
- System meets requirements of NFPA 13.

Special Issues:

- Geothermal heat pumps used for mechanical system required 72-500 ft. deep wells.
- LEED™ Certified Building
- Precast plank floors leave very little flexibility

http://www.arche.psu.edu/thesis/eportfolio/current/portfolios/kle155/