



DUQUESNE UNIVERSITY FORBES EXPANSION

FORBES AVENUE, PITTSBURGH, PA

PROJECT INFORMATION

Owner - Duquesne University
Architect - DRS Architects, Inc.
Structural - Atlantic Engineering Services
Mechanical - Dodson Engineering, Inc.
Electrical - Hornfeck Electrical
Construction - Jendoco Construction

Size - 125000 square feet
Height - 7 Stories
Project Cost - \$24 million
Delivery Method - Design, Bid, Build

Construction Start - March, 2006
Anticipated Finish - January, 2008

MECHANICAL SYSTEM

- Six AHU's ranging from 5000 to 33000 cfm
- VAV system with terminal and fan power boxes
- Local reheat for individual space control
- 45 degree chilled water supplied by university chiller plant
- 110 psig steam supplied from university boiler plant, reduced to make 180 degree hot water

LIGHTING/ELECTRICAL SYSTEM

- 2000 Amp MSB provides 480/277V, 3 phase, 4 wire power
- Transformer converts 480/277V to 480V, 3 phase, 3 wire and 208/120V, 3 phase, 4 wire power
- Emergency 275KW Diesel Generator with AT switches
- Recessed 2'x2' or 2'x4' indirect fixtures in office areas
- Pendant mounted metal halide fixtures in gymnasiums

ARCHITECTURE

- Style is consistent with the existing campus buildings
- Exterior materials include a red brick and glass facade, with intermediate strips of rock faced CMU
- Steel pedestrian bridge arches above Forbes Avenue, connecting the facility an adjacent parking structure

STRUCTURAL SYSTEM

- Beams, girders, and columns are wide flange steel members
- Composite slab and metal deck on composite steel framing
- Braced frames used to resist lateral forces
- Foundation consists of auger cast piles and grade beams



MICHAEL J. SZOTT - STRUCTURAL

[HTTP://WWW.ARCH.E.PSU.EDU/THESIS/EPORTFOLIO/2007/PORTFOLIOS/MJS577/](http://www.arche.psu.edu/thesis/eportfolio/2007/portfolios/mjs577/)

