PENNSTATE

# New York Police Academy College Point, New York

# Information

- \* Architect: Perkins + Will
- \* Occupant: NYPD
- **Size:** 1,000,000 SF
- \* Overall Cost: \$656,000,000
- \* East Campus: Academic/Office Space
- \* West Campus: Physical Fitness/ Central Plant
- \* Architecture: Modern w/ Strong Geometric Forms
- **Sustainability:** Projected to USGBC LEED Silver

#### Construction

- Turner Construction Company and STV Inc. will lead as joint General Contractors.
- New York Department of Design and Construction will be responsible for overseeing the progression of the Project.
- 2,400,00 gross square feet of construction space. (Includes buildings, football field, track, parking lots, landscaping, muster courts.)
- Construction Dates: 10/1/2010-12/31/2013

#### Structural

- Structural Engineers I: Robert Siman Assoc.
- Structural Engineers II: Guy Nordenson Assoc.
- Foundation: 16" 100 ton capacity steel piles have been installed throughout the site to provide foundational basis.
- 14" Deep Structural Slab on Grade set on piles
- Steel Super Structure that must conform with AISC Specifications.
- Steel Decking/Concrete slab floor system.

Mechanical Option Senior Thesis 2010- 2011

# Mechanical

- Mechanical Engineers: WSP Flack + Kurtz
- Ventilations needs met by 63 AHUs
- AHUs Capacities: 3,000 CFM-30,000 CFM
- Total Cooling Load: 3,305 Tons
- ✤ Total Heating Load: 1,396 bHp
- Hydronic Water System
  - \* (8) 1350 bHp Chillers
  - ✤ (3) Water-Tube Boilers
- Due to the size of the building WSP Flack + Kurtz decided to house a central utility plant in the West Campus. The central utility plant will be responsible for hydronic needs of the entire Academy.

### Lighting/Electrical

- Electrical Engineers: WSP Flack + Kurtz
- Total Electrical Load: 8644kW
  18% Lighting, 19% Power, 63 % HVAC
- 460/265V 3-Phase High Voltage system stepped down to 120/208 V 3-Phase Low Voltage System
- ✤ 4580 kW Emergency Power Potential
- Natural Daylighting heavily used along perimeter of building. East campus includes large central atrium for lighting of interior lobbies.

# John M. Scavelli

Master of Architectural Engineering Bachelor of Architectural Engineering

The Pennsylvania State University

Department of Architectural Engineering