

# CITY HOSPITAL – CAMPUS DEVELOPMENT

S.E. Pennsylvania

## Project Team

<b>Owner:</b>	City Hospital
<b>Construction Manager:</b>	Turner Construction
<b>Architect:</b>	Ballinger
<b>Civil Engineer:</b>	Pennoni Associates
<b>Structural Engineers:</b>	LeMessurier Consultants
<b>MEP Engineers:</b>	BR+A Consulting Engineers

## Master Plan

### **30-year development plan**

- 1 million SF Research Spaces
- 1 million SF Ambulatory Care & Clinical Office Spaces
- 1 million SF Parking & Support Services Spaces

## Structural System

- Shallow Spread Footing Foundations
- Steel Frame with Concrete Shear Walls
- Integrated Foundation Wall & Structural Frame System
- Composite Construction Floor System

## Electrical System

- (2) 13.2 kV Primary Service Feeds
- (3) 5,000 kVA Substations w. Tie-Breakers
- (2) 2 MW Emergency Diesel Generators
- 4160 Electric Chiller Distribution Voltage
- 480/277 & 208/120 Secondary Distribution Voltages

## Mechanical System

### **Air Side — Phase 1**

- (6) 100k CFM 100% OA AHU with VSDs
- (3) 120k CFM EAHU with VSDs & Heat Recovery

### **Air Side — Phase 2**

- (1) 100k CFM 100% OA AHU with VSDs
- (4) 50k CFM 100% OA AHU with VSDs
- (4) 50k CFM AHU with VSDs
- (3) 100k CFM EAHU with VSDs & Heat Recovery

### **Central Plant**

- (1) 2,000 Ton Steam Turbine Chiller
- 1) 2,000 Ton Electrical Centrifugal Chiller
- (4) 1,000 Ton Cooling Towers with VSD Fans
- (4) 800 Bhp Dual Fuel Boiler with VSD Blowers

**William K. Tang**

Mechanical Option

<http://www.arche.psu.edu/thesis/portfolios/2008/kzd108>