CENTRAL HIGH SCHOOL | MID-ATLANTIC REGION

Building Name: Central High School

Location and Site: Mid-Atlantic Region

Building Occupant Name: Confidential

Building Function: Higher Education

Size: 322,000 square feet

Height: 34 feet max but varies

Number of stories: 2 stories, 7 foot crawlspace below grade

Dates of construction: July 2010 – December 2014

Project Cost: $84 million

Project delivery method: Multiple Primes

Owner: Confidential

Construction Manager: Jacobs

Architect: SHW Group, LLP

Structural Engineer: Adtek Engineers, INC.

Mechanical and Electrical Engineers: SHW Group, LLP

Civil Engineers: Bowman Consulting

Kitchen Consultant: Nyikos Associates

Acoustical and Technology: Polysonics Corporation

Architecture

- Central courtyard for green space and daylight
- Curtain walls at main and rear entrance
- Red and slate colored exterior brick and CMU's
- Sustainable features such as low flow toilets

Mechanical

- 20 energy recovery units spaced throughout the building
- 4-pipe fan coil units service each zoned space
- 2 air cooled chillers creates chilled water for fan coil units
- 1 gas fired boiler creates hot water for fan coil units

Electrical/Lighting

- Fluorescents for classrooms and labs
- Metal halides for auditorium and gymnasiums
- 277/480V stepped down to 120/208V
- 130kW natural gas backup generator

Structural

- Entire building is steel framed
- Masonry interior shear walls
- Concrete slab on metal deck for second floor
- Shallow foundations with square footings

Adam Brown | Mechanical Option | Senior Thesis Abstract
http://www.engr.psu.edu/ae/thesis/portfolios/2014/afb5065/index.html