

Science and Technology Center

Coppin State University
Baltimore, MD



Project Information

Owner: University of Maryland
Occupant: Coppin State University
Construction Manager: Barton Malow Company
Architect: Cannon Design
Total Stories: 4 Stories plus Penthouse
Size: 135,000 SF
Contracted GMP: \$76.2 Million
Delivery Method: CM at Risk
Construction Dates: 11/2012 - 11/2014

Architecture

In comparison to the rest of the CSU campus, the architectural design of the Science and Technology Center includes sleek lines and a modern façade. The surrounding area buildings have typical brick facades with rectilinear building footprints. With this new design, the glass curtain walls add a modern and lively touch to the campus while still tying into the existing brick architecture. This building is designed to be LEED Gold Certified.

Structural

Foundations are made up of spread footings with support on the south end from a rammed aggregate pier system. The major structural component includes cast-in-place concrete. This starts from the lower level and extends to the fourth floor, where the greenhouses are located. The penthouse level is constructed of laterally braced structural steel framing.

Mechanical

The building is supported by 6 different VAV Trane air handling units (AHUs), 4 cooling towers and multiple boilers, lab exhaust fans, and computer room air condition units. There are three large AHUs with total CFM ranges from 23,500-44,500 that serve the building's main floors. The remaining 3 AHUs with total CFM ranges from 3,200-4,500 serve the lower levels and the lecture hall area.

Electrical

The main building switchboard is rated for 4000A, 480/277V at 3 Phase. A total of 6 transformers supply power to the building. The lower level main transformer is a general duty dry type transformer with an integral USS rated at 2500kVA. The main building load was designed for 3,066,675 VA and 3690 amps. In addition, the emergency power system is supplied by two generators (750kW and 500kW).

Nicholas Zitterbart | Construction Management

<http://www.engr.psu.edu/ae/thesis/portfolios/2013/naz5020/index.html>