Photo Courtesy of Burchick Construction

University of Pittsburgh
Chevron Annex

September 12
2011

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BUILDING STATISTICS

The Chevron Annex is an addition to the University of Pittsburgh's Chevron Tower and Ashe auditorium. The construction of the Annex started on November 20, 2009 and is expected to be complete by September 2011. The facility is a two phase project that included a renovation to the existing auditorium, as well as a three story vertical addition above it.

The project includes spaces which encompass a number of functions. The first floor and mezzanine level consist of a main lobby, computer lab, auditoriums and lounge area. The second and third floors are similar to each other and are devoted to chemistry labs and student desk areas. A few offices and other rooms are also scattered throughout the floor. The fourth floor of the new addition is a mechanical space that houses most of the mechanical equipment.

Burchick Construction was the General Contractor for this project, and is also the sponsor for this thesis.

BUILDING INFORMATION

Name: Chevron Annex

Location: Pittsburgh, PA

Owner: University of Pittsburgh

Occupancy Type: Group B Occupancy per IBC 2006

Size: Approximately 35,000 sf

Number of Stories: 3 Story Vertical Addition (2 Chemical Research and 1 Mechanical Penthouse)

Dates of Construction: November 2009 – September 2011

Delivery Method and Cost Information: Design-Bid-Build = $25 Million

PRIMARY PROJECT TEAM

Owner: University of Pittsburgh - http://pitt.edu/

Construction Manager: Mascaro Construction Co. - http://www.mascaroconstruction.com/

General Contractor: Burchick Construction Co., Inc. - http://burchick.com/

Architect: Wilson Architects - http://www.wilsonarch.com/

Associated Architect: Renaissance 3 Architects - http://www.r3a.com/

Structural Engineer: Barber & Hoffman, Inc. - http://www.barberhoffman.com/

MEP/FP: Affiliated Engineers, Inc. - http://www.aeieng.com/

Civil Engineer: The Gateway Engineers, Inc. - http://www.gatewayengineers.com/

Landscape: Brown/Sardina, Inc. – http://www.brownsardina.com/bsi/

ARCHITECTURE

The Chevron Annex is a vertical addition to the Ashe Auditorium and is separated from the Chevron Tower with a fire wall. The addition is three stories, which consists of two floors dedicated to chemical research and one floor for mechanical space. The annex is connected to the Chevron Tower by a ramp at each of the new floors.

There are a few key architectural features that stand out on the Chevron Annex. The main feature of the building is its complex façade that uses a number of different systems and is described in the next section. An aluminum cladded eyebrow also accents the building's southwestern corner (Figure 1). Additionally, the interior is also complex because each of the lab floors have an extensive amount of laboratory casework, architectural millwork and glazing that all work together to create a unique space.

Figure 1 Aluminum Cladded Eyebrow
Photo Courtesy of Burchick Construction

The Chevron Annex uses the 2006 International Building Code (IBC 2006) as its main building code. It is a fully sprinkled building and also complies with the requirements for type 2B construction. The building is a chemical research lab for the University of Pittsburgh and follows the zone type of an Education Medical Institution (EMI).

BUILDING ENCLOSURE

The façade of the building is a combination of a number of systems (Figures 2 & 3). Some of these systems include terra cotta, metal panels, louvers and glazing. The terra cotta system is a clay tile veneer that is placed on a series of rails and clips. This system is a total of six inches in depth and uses a combination of six and twelve inch high tiles of various lengths to help accent the other systems used on the façade. The metal panels and louvers are used together to help add contrast to the building. The metal panel system is roughly four inches thick and consists of aluminum panels, clips and insulation. A curtain wall glazing system is also used on the building's façade. The curtain wall is two stories high and is surrounded by the terra cotta and metal panels. A sunshade system accents the curtain wall and is comprised of aluminum sunshade support outriggers and twelve inch extruded aluminum airfoil blades.

The roofing system is a new Thermoplastic-Polyolefin (TPO) system which is placed over protection board on three inch tapered rigid insulation with air barrier and gypsum board sheathing. This is all placed on top of metal decking supported by the building's steel framing.

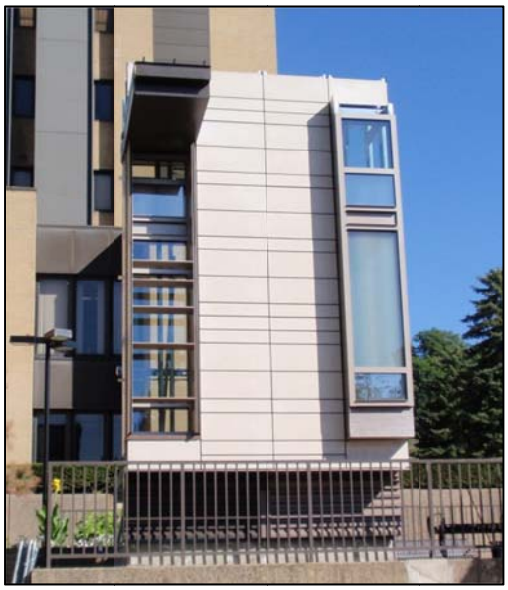

Figure 2 Mock Up of the Terra Cotta Tile System

Photos Courtesy of Burchick Construction

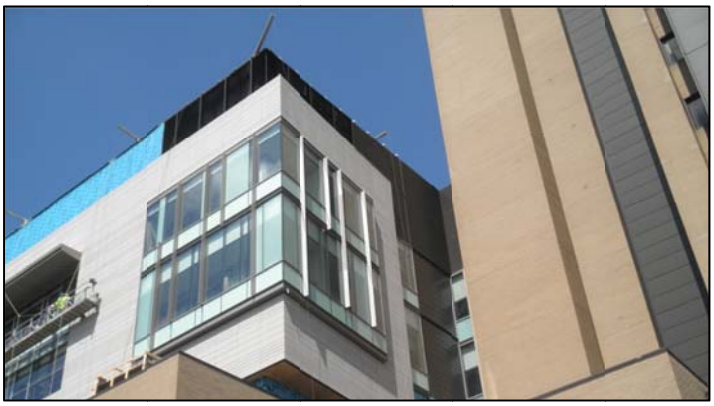

Figure 3 Southeast corner of Chevron Annex showing the different systems on the building's facade

SUSTAINABILITY FEATURES

Requested LEED checklist from Burchick on August 25, 2011 and am currently waiting on a response. Received response on September 2, 2011 and they are in the process of accessing the information from AEI.