Advanced Engineering Building (AEB)
Need for the Building

- Unprecedented Growth – 2010-2021
  - Enrollment: 1,800 students to 3,300
  - Degrees Conferred: 183 undergraduate degrees to 357
  - Ph.D.'s Graduated: doubled
  - Research Awards and Expenditures: >60% growth

- Need more space for additional lab sections and Graduate Teaching Assistants
- Out of research lab space for new faculty
- Out of office and research space for graduate students
- Student headcount expected to hit 4,000 in 2030
New Advanced Engineering Building Plan

- Three floors – each 17,000 sq. ft.

**First Floor** dedicated to hands-on experiences
  - Freshman, Sophomore, Junior and Senior Design Experience
  - Collaborative makerspace - open to all of campus (goal is 24/7)
  - Flexible space (Flexitorium) accommodating up to 150 students in classroom style, or small events
  - Additional classroom space
  - Outdoor event space for large events such as the Graduate Celebration and Design Competitions
New Advanced Engineering Building Plan

Second Floor – Dry Labs
- Graduate student spaces
- ~ 12 faculty offices
- Planned for Electronics, Robotics, Cybersecurity, Big Data and AI/ML
- Computational research areas (not requiring Chemistry-type hoods)
New Advanced Engineering Building Plan

Third Floor - Wet labs
  • Graduate student study spaces
  • Faculty offices
  ▪ Planned for Water Resources, Bio-medicals, etc.
  ▪ Materials or areas requiring gasses and hoods
Advanced Engineering Building

View from Southwest: Creating a presence on the Mall with “Bridge Gateway” leading to Science and Engineering Quad

View from Southeast: Exterior “exhibit” space with landscape courtyard adjacent to Artemus Ham Concert Hall
Site Selection Goals

- Close proximity to Thomas Beam, if not attached.
- Be visible to students - recruitment tool
- Engage students and the campus in the Engineering College
- Share existing resources: service yard and shops
- Easy access for students & faculty to both buildings
- Maximize use of site by being three or four stories
- Be expandable, understanding this is first phase.
Three Sites are Selected:

A. On the campus mall, adjacent to Thomas Beam, Building A
B. In parking lot to the west of Science & Engineering Building
C. In parking lot to north of Science & Engineering Building
Site ‘A’ Selected:

Pros:
- New building rebrands Engineering’s front door.
- Maker Space has Mall Frontage
- Creates a Gateway to Science & Engineering Building
- Excellent recruitment tool
- Does not require demolition of buildings
- Does not displace existing parking spaces
- Ties directly into Thomas Beam
  • Utilizes existing service drive to Ham Hall

Cons
- Lack of immediate adjacency to existing yard and shop space.
- Reduces the available open space for potential expansion of Ham Hall.
Notice to Proceed/Begin Construction: January 17, 2022
AEB Construction Plan

Legend | Activities

- Construction Entrance
- Construction Fence
- Dumpster / Recycle
- First Aid
- Construction Limits
- Access Road / Crane Road
- Temporary Toilets
- Pedestrian Traffic
- Construction Traffic
- Wash Down / Wash Out Area
- Trailer Area
- Trailer
- Parking
- Lay Down & Staging Area
AEB Construction Project Schedule

Notice to Proceed/Begin Construction: January 17, 2022

Construction Completion: October 2023

Furniture, Fixture, Equipment Move In: November 2023

Occupancy Move-In: December 2023

Open for Use: January 2024