



## SHOWCASE PROJECT: ARIZONA STATE UNIVERSITY: STUDENT PAVILION

### SOLUTION OVERVIEW

Arizona State University’s (ASU) Student Pavilion is located at the center of student activity. Designed as a student-centric facility, students manage and operate the pavilion with oversight from Memorial Union resident staff. The building hub provides opportunities for entertainment acts, guest lecturers, and student productions. The event space seats 1,200 and features movable partitions to allow subdivision of the space into three separate rooms. The second floor houses office space for student government and organizations. Classrooms and other academic functions are located on the third floor.

Due to the location and student-centric focus, the Student Pavilion was selected to become the first Net Zero Energy building at ASU. The pavilion provides an opportunity to demonstrate and teach Net Zero Energy and Zero Waste practices. ASU has committed to achieving Zero Waste by 2025. Post-occupancy commissioning will address building systems refinement and identify lessons learned for future NZE and ZW projects at ASU.

### SECTOR TYPE

Education

### LOCATION

Tempe, Arizona

### PROJECT SIZE

75,000 Square Feet

### FINANCIAL OVERVIEW

\$39.9 Million

### SOLUTIONS

The following energy conservation measures were implemented at the Student Pavilion:

ECM	
Planned Solar PV	
Systems & Process	
Metering	

Energy-efficient o classroom, kitche equipment	
Exterior shading o windows and wall	
High levels of buil envelope insulatio	
High-efficiency HV including chilled b and evaporative c	
Interior Daylightin including solar tub	
LEDs and Energy Lighting	

Low window-to-wall ratio and high-efficiency
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## **OTHER BENEFITS**

The Student Pavilion is planning for Zero Waste by diverting 90 percent of solid waste through composting, recycling, and surplus sales. ASU is further enforcing sustainable purchasing practices and on-site reuse to avoid waste generation.

During construction, ASU vetted materials generated to maximize diversion by finding methods for material separation and reprocessing. ASU will use the Student Pavilion project to develop best practices for solid-waste flow, life-cycle assessment, and waste hierarchies in future campus construction.

The building design allows users to have a greater role in reducing landfill waste. The Student Pavilion will be the standard for future ASU buildings.

Zero Waste strategies include:

- Deconstructing and handling of materials for maximum recyclability.
- Designing spaces to increase operational waste flow and consumer use.
- Employing standardized Zero Waste stations that accept Blue Bin commingled recycling, Blue Bag materials, e-waste, Green Bin compost, soft plastics, and special materials.
- Finding new remanufacturing processes for hard-to-recycle materials.
- Local reprocessing, remanufacturing, and reuse of materials when possible.
- Tooling equipment, fixtures, and furniture for recyclability and maximum lifespan.
- Use of post-consumer recycled materials in project build, finishes, and furnishings.

## Annual Energy Use

(Source EUI)

Baseline(ASHRAE)

207 kBtu/sq. ft.

Expected()

99 kBtu/sq. ft.

Actual()

Coming soon

## Energy Savings

52%

## Annual Energy Cost

Baseline(ASHRAE)

\$112,000

Expected()

\$61,000

Actual()

Coming soon

## Cost Savings

\$51,000





