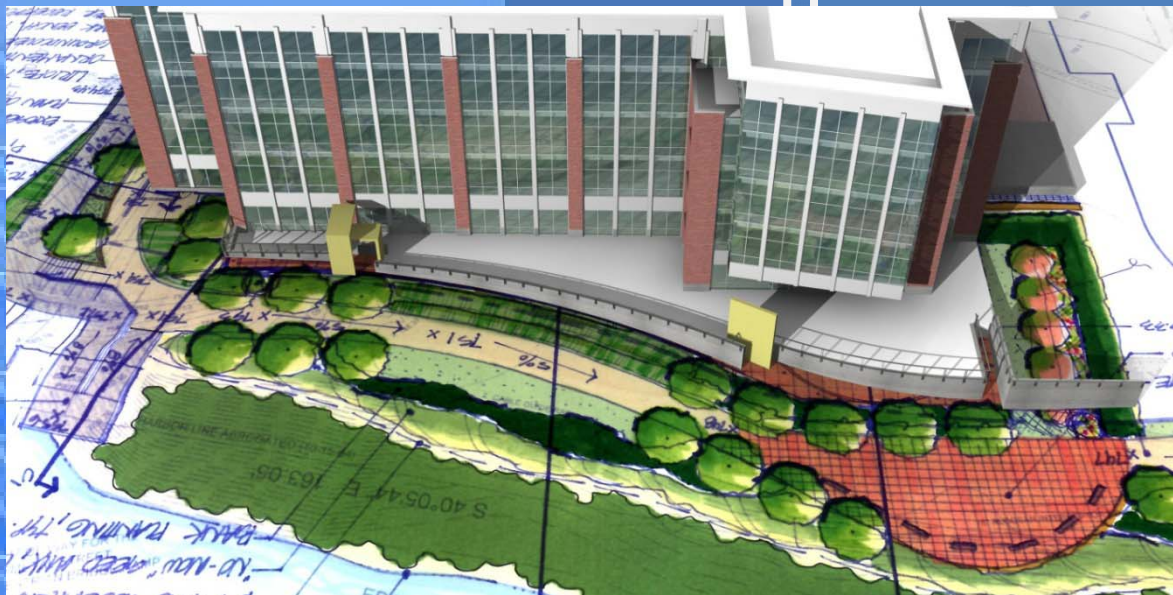


# American Eagle Outfitters: Quantum III



**Sam Jannotti**

**Structural Option**

The Pennsylvania State University

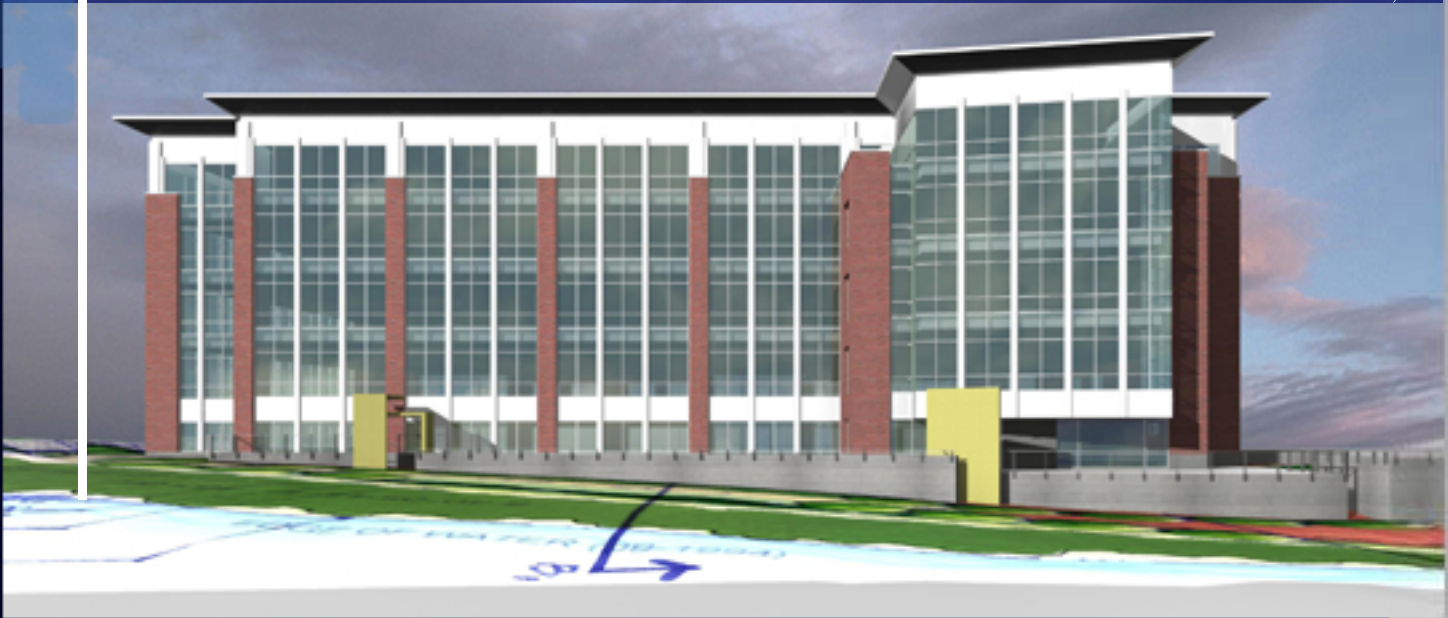
M Kevin Parfitt



# AMERICAN EAGLE OUTFITTERS

## QUANTUM III: SOUTHSIDE WORKS

PITTSBURGH, PA



### The Project Team

Owner: American Eagle Outfitters  
Architect: The Design Alliance Architects  
Construction Manager/Developer: The Soffer Organization  
Structural Engineer: Atlantic Engineering Services  
MEP Engineer: Tower Engineering  
Civil: The Gateway Engineers, Inc.  
Landscape: Environmental Planning and Design

### Building Statistics

Location: 19 Hot Metal Street, Pittsburgh, PA  
Occupancy: Office  
Size: 5 stories and 150,000 sq. ft.  
Construction Dates: May 2007-October 2008  
Cost: \$16 million Building Shell and Core  
Delivery Method: Design-Bid-Build

### Structure

Wide flange columns, beams, and girders with composite lightweight concrete on steel deck  
Typical bays are 30' on an open plan  
Bathrooms, mechanical spaces, and elevators/egress located in center of plan, also housing two vertical trusses to counteract lateral loads  
60 ton auger cast piles and 3000 psi spread foundations

### Architecture

Transparency through curtain walls, mass shown through brick facade  
Composite aluminum panels and cornice unify building facades  
Open plan for future tenant fit-out  
Single vertical truss fully visible through curtain wall, demonstrating building structure

### Lighting and Electrical

277/480 V, 3 phase, 4 wire system dropped down to a 208/120 V system  
Transformers present at each level in panel room  
At least two panels for each voltage level on each floor  
Only lighting included in contract is emergency and egress fluorescent tubes, exit signs, and loading areas with metal halide mounted on walkways and in trees for aesthetic purposes  
Each floor lighting to be furnished by tenant

### Mechanical

Two air handling units providing 120,000 CFM total  
30% or 36,000 CFM outside air  
Heat recovery/enthalpy wheels operate at 64% efficiency for cooling and 77% efficiency for heating

**SAMUEL M. P. JANNOTTI**  
STRUCTURAL

<http://www.engr.psu.edu/ae/thesis/portfolios/2008/smj167/>



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Tim Jones  
Andy Verrengia  
John Schneider  
Chris Kim

**The Soffer Organization**

**Tower Engineering**

**American Eagle Outfitters**

**The Gateway Engineers, Inc.**

**The Design Alliance Architects**

**Environmental Planning and Design**

**Finally, To the AE Faculty:**

Kevin Parfitt  
Andres Lepage  
Ali Memari  
Robert Holland  
The entire AE Faculty and Staff



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