

#### **GENERAL PROJECT INFORMATION**

Occupancy: Mixed Use Non-Separated - Theater Size 172,000 GSF Height: 5 Stories above grade Project Team: The project team is being withheld at the request of the building owner. Schedule: Feb 2011 (Demo Drawings Issued) Feb 2014 (Substanital Completion) Apr 2014 (Building Opening) Cost: \$75 Million (excluding soft cost) Delivery Method: Design- Bid - Build (GMP - design development)

## HISTORICAL INFORMATION

Built: 1929 Constraints: Changes to building exterior need to comply with State Historical Preservation Office guidelines.

### STRUCTURAL SYSTEM

Images ©Architect of Record

Walls: Exterior is loadbearing 3-wythe brick. Interior structural steel and post tensioned concrete support 3 balconies and roof trusses.

**Roof:** Seven steel trusses span the audience chamber and stage. Beams and girders support the remaining composite metal deck roofs.

### **MECHANICAL SYSTEMS**

Heating: Campus steam supplies a flooded high pressure heat exchanger which distributes hot water to fin tube radiaiton, radiant floor slabs, & 5 air handling units (AHU).
Cooling: Served through a 3000 ton campus chilled water plant located in the basement of the theater. Chilled water is distrbuted to the AHUs and active chilled beams.
Energy: A dual energy recovery wheel is located in a DOAS AHU which serves the active chilled beams.

# **ELECTRICAL SYSTEM**

Service: 13.8kVA from campus Main Distribution: Two 480/277V, 15,000kVA transformers distribute power to two 2500A switchboards. Other than the motors that require 480/277V, there are 7 transformers that supply 208/120V to the lighting, receptacles and controls systems.

### **LIGHTING DESIGN**

Theater: An outside consultant was contracted to perform the theatrical lighting design. Light lofts were redesigned to accomodate the new stage dimensions.
 Office Space: Occupancy sensors and time-of-day control sequences govern the lighting schemes of the office spaces.

NORTH EAST ELEVATION





NORTH WEST ELEVATION

contact: erin.c.miller@psu.edu

website: http://www.engr.psu.edu/ae/thesis/portfolios/2014/ecm5140/