

## GENERAL BUILDING DATA

### Building name

URBN Center & URBN Center Annex

### Location and Site

#### URBN Center

3501 Market Street  
Philadelphia, PA 19104

#### URBN Center Annex

3401 Filbert Street  
Philadelphia, PA 19104

### Building Occupant Name

URBN Center

### Occupancy or function types

The occupants of the building primarily consist of the students and faculty of Drexel University. The URBN Center houses 13 programs in the Antoinette Westphal College of Media Arts & Design. Not only will this structure bridge the gap between the most creative and imaginative minds on campus, but it will also be open to the community.

Education | Theater | Art Gallery | Conference

### Size

145,917 ft<sup>2</sup>

### Number of stories above grade | Total levels

4 stories above grade (Roof Level – 56 ft.) | 4 total

### Primary Project Team

Owner:	Drexel University	<a href="http://www.drexel.edu/">http://www.drexel.edu/</a>
Architect:	Meyer Scherer & Rockcastle Ltd Venturi, Scott Brown and Associates (Existing)	<a href="http://msrltd.com/">http://msrltd.com/</a> <a href="http://www.vsba.com/">http://www.vsba.com/</a>
General Contractor:	Turner	<a href="http://www.turnerconstruction.com/">http://www.turnerconstruction.com/</a>
MEP Firm:	PHY Inc.	<a href="http://www.phyinc.com/">http://www.phyinc.com/</a>
Acoustical Design:	Walters-Storyk Design Group	<a href="http://www.wsdg.com/">http://www.wsdg.com/</a>
Structural Engineer:	O'Donnel & Naccarto	<a href="http://www.o-n.com/">http://www.o-n.com/</a>
Fire Consulting Firm:	Summit Fire Consulting	<a href="http://www.summitfire.com/index.htm">http://www.summitfire.com/index.htm</a>



## Dates of Construction

Start: August 2011

Finish: September 2008

## Actual Cost

\$31 Million

## Project Delivery Method

Design-Build

## ARCHITECTURE

The original architecture within the building has been completely redone. Contrastingly the Exterior has been lightly modified with new windows making use of natural daylight. There are various murals throughout the building site which have all been incorporated into the design of the new URBN Center. The main entrance positioned on a slant away from Market Street works to help ease pedestrian traffic. The interior is very modern and tectonic. In fact all of the mechanical, electrical, and plumbing systems have been left exposed without drop ceilings. The atrium is the main attraction within the interior. The floor levels from one side to the next are offset. This design makes for a lot of interesting points of view, literally. The open floor layout encourages interaction between different departments. The Annex is composed of three main rooms, a black box theater, an art gallery, and a large screening room. The floor layout is also quite open, similar to the URBN Center.

## Major national model codes

- 2006 International Building Code (IBC)
- 2007 Philadelphia Building Code
- 2005 National electric Code (NEC)
- 2006 ICC Electrical Code (ICC)
- 2006 International Energy conservation Code
- 2006 International Existing Building code
- 2006 International Fire Code
- 2006 International Fuel Gas Code
- 2006 International Mechanical Code
- 2006 International Plumbing Code
- 2003 ICC/ANSI A117.1-2003 Accessible and Usable Buildings and Facilities Standard

## Zoning

### URBN Center

Property Zoning C-4; 61,913 ft<sup>2</sup>

## BUILDING ENCLOSURE

### Building Facades

Nearly the whole existing façade will be left untouched while the core of this structure will be stripped to the structural steel. The south façade adjacent to Market Street is the crown jewel for the URBN Center. Originally designed by the Architects of Venturi, Scott Brown and Associates is composed of square brick veneer. The individual bricks are glazed different colors and porcelain panels are laid out in a symmetrical pattern across the entire south façade. Newly installed windows on the north and east side allow daylight to penetrate the spaces within the building. The facades of the Annex have also been lightly renovated. The Annex façade consists of brick and corrugated metals panel systems.

### Roofing

The main roof is constructed with an EPDM roof membrane on a lightweight insulating concrete of which is on a polystyrene insulation on a slope metal deck system. The estimated R-value of the roof is close to 19. A new skylight has been installed above the newly incorporated atrium. The Annex Center is quite similar, but it has 16 square glass skylights.

## SUSTAINABILITY FEATURES

The skylight above the atrium allows for this building to make use of daylight harvesting. Also the offices lining the sides of the atrium make use of half walls. This feature allows the daylight to penetrate into the offices, which makes for a better work environment as well as reduces the lighting load. Large windows have been installed upon the north side, which contributes as well to the daylight harvesting. Moveable walls in many of the floors let the daylight penetrate even further into the building reinforcing the daylight harvesting.

## PRIMARY ENGINEERING SYSTEMS

### Construction

The URBN Center, what is now known as the new home for the Antoinette Westphal College of Media Arts & Design, used to be known as the office building for the Institute for Scientific Information. The structure was completely gutted on the inside, while the façade remained for the most part untouched, excluding the added glazing features and window replacement. The original façade was designed by Robert Venturi and it has become an iconic building dominating the 1500 block of Market Street. It was clear from the start that this South façade was to remain untouched. The construction crew got started in December 2011. The steel framing within had to be chopped and revamped in order to make room for the new 4 story atrium. To make this process even more difficult, stepped floors engulf this atrium making for some very difficult steel framing construction/modification. A majority of the flooring is treated existing concrete. There are very few drop ceilings randomly located throughout the building, leaving most of the structure with exposed ceilings. Due to the unfinished ceilings, it was very important that the installation of all the mechanical equipment, plumbing, and conduit work be done in a very organized and clean fashion, as to not diminish the aesthetic appeal.

## Electrical

The URBN Center features an electrical system with a radial design layout. This meaning there is a single entry point, located on the first floor of the building adjacent to Filbert Street, where the power system then branches out to serve the entire building. There are three main switchboards, with a combined power of 2,150 kVA, that provide power to the 2,100 kVA building load. One medium voltage switchboard provides 480/277V power to the HVAC equipment, lighting systems, and elevators. Another medium voltage switchboard provides 208/120V power to the receptacle loads. The final medium voltage switchboard provides 480/277V power to the fire pump and fire pump controller. Special needs include four dimming panels acquiring 600 Amps each. Emergency power is provided by a 500 kilowatt diesel generator.

## Lighting

The lighting design concept for the URBN Center & URBN Center Annex can be described in one word, "linear." Primarily linear fluorescent lighting is featured throughout the building creating strong rhythmic strokes of light. Daylighting is also a key feature of the lighting design for the URBN Center. A four story atrium running the length of the building North to South is the central highlight and provides natural daylight to a majority of the buildings spaces. The offices neighboring the atrium make use of half walls allowing the daylight to penetrate into these spaces.

Due to the transforming capabilities of this building the lighting system has been designed to allow for tight control. A Lutron Quantum light management system controls the lighting for the URBN Center and URBN Center Annex. This system in combination with automated shades and dimming ballasts produces highly energy efficient lighting. Furthermore the linear fluorescent fixtures are fitted with highoutput T5 fluorescent tubes.

## Mechanical

The URBN Center makes use of chilled beams for its primary heating and cooling system. The chilled beams incorporate induction nozzles to transfer energy to and from the supply air. This type of system reduces the air velocities within the building, while reducing operating costs and the amount of duct work running through the URBN Center. The URBN Center Annex contrastingly uses a combination of air handling units, electrical heaters, and air conditioning units. The Black Box Theater in the Annex introduces a high cooling load within the dimmer room where the dimmer racks are located.

## Structural

The existing steel frame and curtain walls were one of the few aspects of the original building preserved. Seven main structural gridlines running east-west and north-south with equivalent spans of 30 feet generate the basis of the steel frame. The structural challenge for this project was introducing an atrium spanning the length and height of the structure. The foundation consists of strip footings and column piers with 36" caissons and a 48" square cap. The existing slab on metal deck makes up the general floor structure.

## ADDITIONAL ENGINEERING SYSTEMS

### Fire Protection

The Fire Protection System makes use of upright, concealed and sidewall sprinkler heads in combination with vane type waterflow devices. The main water feed is provided through one 6" pipe located in the mechanical room in the North-East corner of the building. One 6" bi-directional standpipe, located in the North stairwell, and another 4" bi-directional standpipe provided, located in the West stairwell, feed the sprinkler system. The system consists of two main zones on each floor, the atrium zone and a general zone. The first floor includes another zone specified for the mechanical room and the server rooms are supplied with a preaction sprinkler system. A 750 GPM electric fire pump with a 10 GPM jockey pump pressurizes the system.

### Transportation

The main entrance of the URBN Center is located in the South-East corner of the building and leads in to the main lobby. Located in the main lobby are two elevators leading to the lounge for each floor. The lobby also leads to the atrium and from this point a complex series of stair cases lead from floor to floor generating some very interesting viewpoints. Also, within the atrium, another elevator can be found leading to each and every floor including the stepped floors. To conclude the vertical means of egress there are two main stairwells located centrally on the South and East sides of the structure. This building makes use of operable walls that rotate and slide generating different space layouts every day. These unique features make for interesting journey through this building.

### Telecommunication Systems

The URBN center has an array of telecommunication systems. Card readers allow access to students for specific rooms, while 58 security cameras keep close surveillance throughout the building. The building also incorporates a hefty lighting control system, provided by Lutron. The system includes occupancy/vacancy sensors, daylight sensors, Ecosystem switching modules, time clocks, dimming/switching ballasts, graphic eye interfaces modules, all of which are controlled by the Quantum Light Management System through 4 Quantum 1.5 Light Management Hubs.