ARCHITECTURE BUILDING: GREEN BY DESIGN

INDOOR ENVIRONMENTAL QUALITY

Low emitting materials
This project used low-emitting materials in construction, including low-emitting adhesives, sealants, paints, sealants, floor systems and composite wood and agrifiber products.

CO2 Monitoring
CO2 monitoring sensors were installed to help Air Quality. They also work with the building automation system to identify occupied areas, ensuring building systems run only when needed.

Public Transportation and Bike Amenities
Temple is easily accessible by regional rail and transit, such as bus and subway. Transportation emissions from commuting are a top contributor to the university’s greenhouse gas emissions. This project provided ample bike parking for building occupants to encourage alternative forms of transportation. Shower facilities are in Annenberg, the building adjacent to architecture.

GREEN ROOFS

The first of its kind on Temple’s Main Campus, the Architecture Green Roof spans four levels and encompasses nearly 2/3 of the roof (~ 9,351 square feet). The primary purpose of the green roof is to assist in stormwater management for the site. Planted with drought resistant, native species, the green roof captures rainwater during a storm and holds it before releasing it to the building’s rainwater plumbing. This rainwater moves from roof to roof until the green roof is irrigated. The remaining water is captured in a rainwater cistern and temporarily held during a rain event.

SUSTAINABLE SITES

Green Space and Plantings
The project maximized available open space by creating a shared courtyard and a small front and side yard. Newly planted trees line 13th Street in front of the Architecture building. The trees not only help with efforts to reduce stormwater runoff.

WATER EFFICIENCY

Low Flow Fixtures & Rainwater Pumping
This building features low flow fixtures in the bathroom, which help to conserve water.

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Water Bottle Refilling Stations

This building is designed to maximize the presence of existing systems in the adjacent building. Many systems such as fire protection, chilled and hot water systems are fed from the adjoining building.

Daylighting

The windows in this building provide more than a stunning view of campus life at Temple. They allow building occupants to use natural light to light their space. More than 75% of the building’s facade is comprised of glass. The windows have a highly energy efficient glazing and low-e coating. The southern wall of the building abuts an existing building, further reducing radiant heat loss.

Building Module & Construction Waste

The Architecture building was constructed using panelized wall systems, which is a resource efficient way to build. In addition to resulting in minimized waste stream, this type of construction allows for a shorter construction period. From start to finish, the construction of the Architecture building took one year, compared to an average build time of 18 months to two years.

In addition to reducing the amount of construction waste generated, the project also utilized Revolution Recovery to recycle 77.9% of the construction waste generated.

Lighting Features

This building features energy efficient lighting fixtures utilizing induction lamps. Induction lamps have an average life span of 15 years, which is typically longer than a fluorescent bulb.

While induction lamps do use mercury, the university operates a mercury recycling program to provide for the safe recovery of the mercury in the lamps.

Motion Sensors

The lighting systems in the Architecture building are designed to maximize energy conservation. The built-in motion sensors are present to make sure that the lights are only on when the room is in active use.

Recycled Materials

This project was designed with the intent to reduce the amount of virgin materials used in construction. This both lowers the embodied energy of the project, but also minimizes the amount of waste entering the landfill. The structure of the building is made of steel with a high level of recycled content. The interiors also feature reclaimed furniture, such as the studio desks and pin up boards.

Materials and Resources Energy & Atmosphere Innovation Design

Water Bottle Refilling Stations

Water bottle refilling stations provide students with the convenience of chilled and filtered water without the waste associated with bottled water. This visible reminder of the university’s sustainability efforts contributes to Temple’s waste minimization efforts.