



University Place

4 1 0 1 M A R K E T S T R E E T

Sustainable Design Overview

 THE SHEWARD PARTNERSHIP, LLC
www.theshewardpartnership.com

Certifications

LEED Platinum

- Achieved LEED Platinum Pre-Certification in 2013
- First LEED v4 Beta Platinum Pre-Certified Building in the World

WELL Platinum

- Anticipate WELL Platinum Pre-Certification in 2022
- First LEED & WELL Platinum lab building in the World



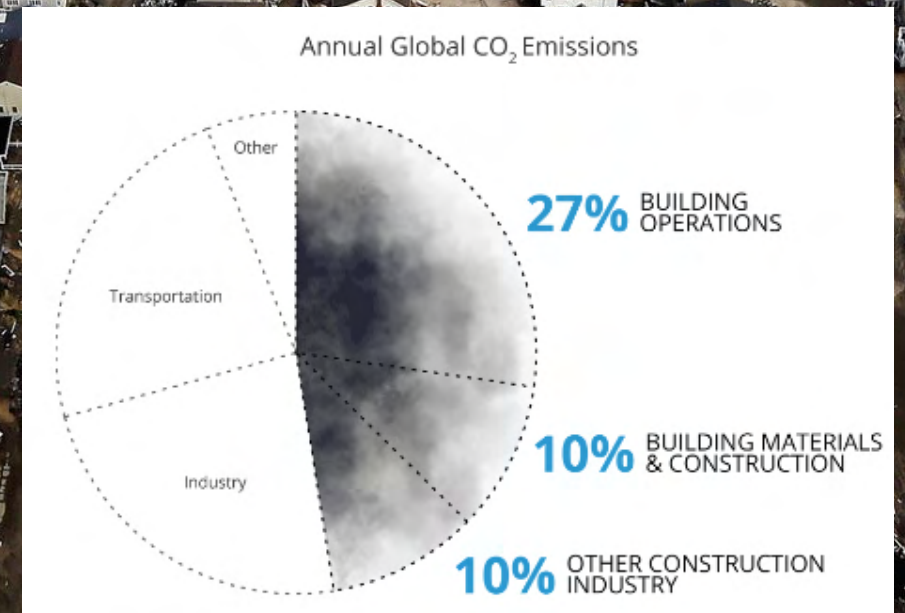
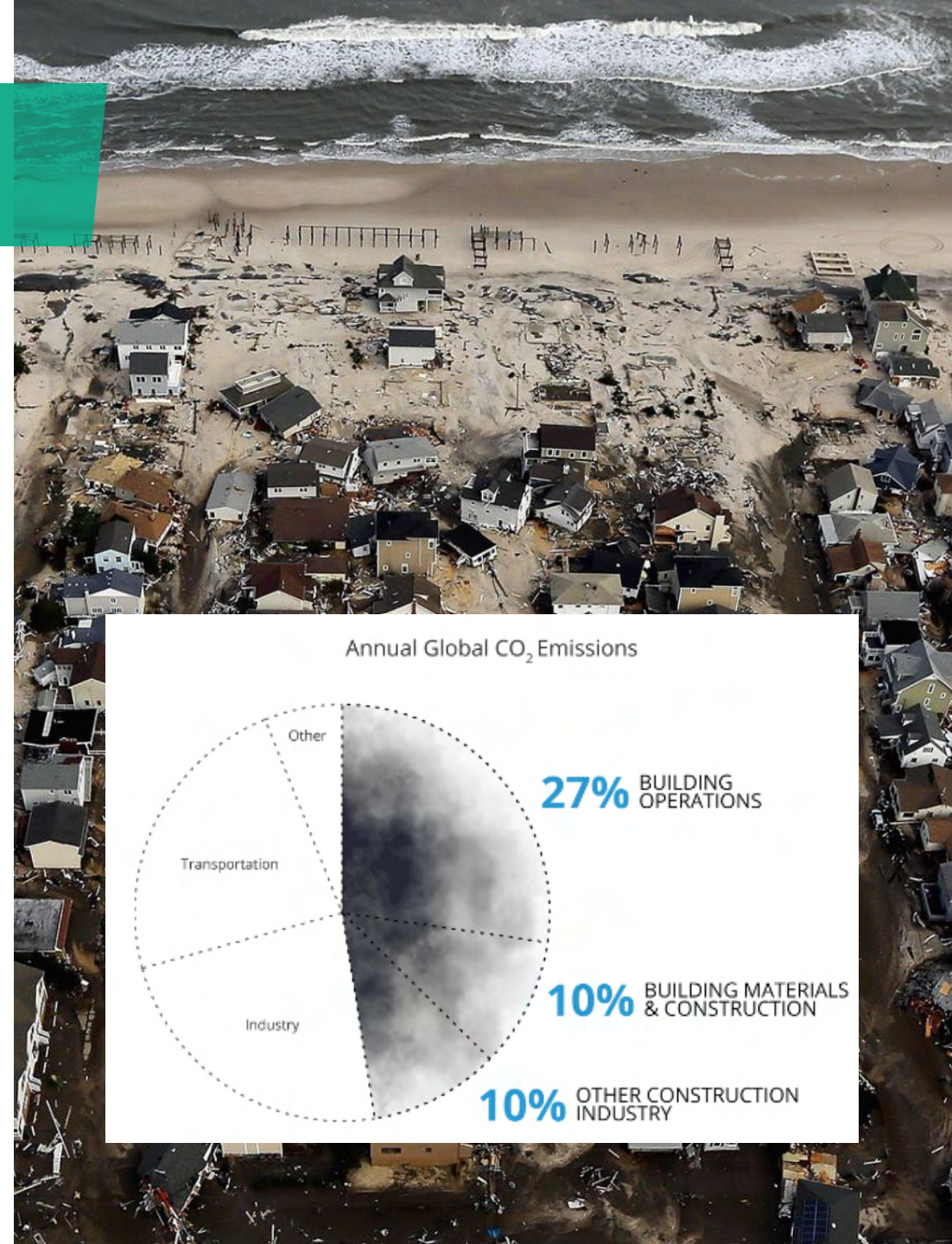
Climate Change

The goal of the Paris Agreement is to implement carbon reduction strategies that limit temperature rise below

2.0 °Celsius, preferably 1.5 °Celsius, above pre- industrial levels.

- This requires a complete transformation of how we produce, transport, and use energy.
- Buildings generate 40% of global annual greenhouse emissions.
- Carbon emitted from building materials account for 10% of building sector emissions.

Source: Architecture 2030 and National Climate Assessment



LEED Stats



Commercial New Construction Projects

Global LEED Certified Projects: 76,841

Global LEED Platinum Projects: 3,166 or 4%

Philadelphia LEED Certified Projects: 344

Philadelphia LEED Platinum Projects: 21 or 6%

Source: USGBC Project Directory July 2022

Philadelphia LEED Platinum Projects

- Aquatic Facility at the Overbrook School
- 2.0 University Place
 - US Citizenship & Immigration Services
 - US Facilities
 - Berman Indictor
 - Wright Commissioning
 - Benjamin's Desk
 - NTM Engineering
 - The Studio @ 2.0
- Project Felix
- Friends Center Philadelphia
- Comcast Technology Center
 - NBC 10 / Telemundo 62
- Jones Lang LaSalle Philadelphia Office
- Friends Center Philadelphia
- The Barnes Foundation
- United By Blue Flagship Store
- 1 Crescent Drive
- 5 Crescent Drive
 - GlaxoSmithKline
- Horticulture Center at Morris Arboretum

Energy

Building anticipates **17% energy cost savings** compared to typical code-compliant new construction

Submeters collect real-time energy data for ongoing benchmarking

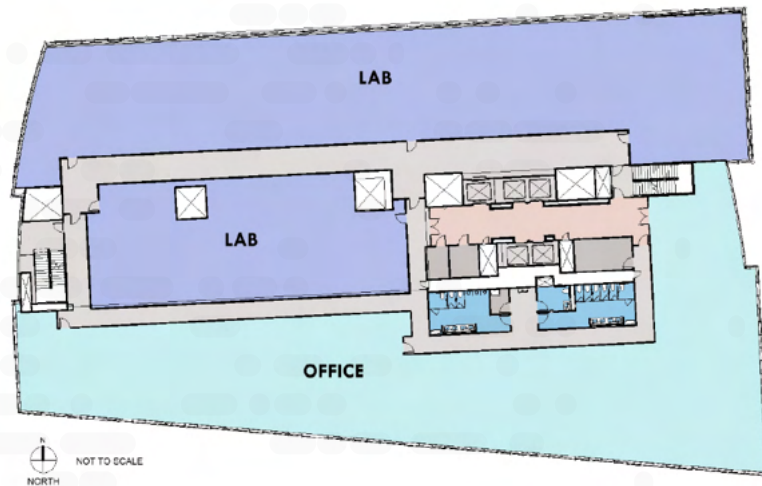
Superior energy efficiency strategies include:

- 1 Electrochromatic glazing**
- 2 Innovative chilled beam heating and cooling system**
- 3 Improved daylighting**
- 4 High efficiency LED lighting**

LEED Stats

The Design Team developed a tenant-specific energy model to estimate energy costs for an entire floor made up of 55% laboratory space and 45% office space. See diagram of typical floor plan below. The tenant model provides specific information about how occupant density, operational hours, and equipment loads shall impact ongoing energy costs. Results are average costs via parametric modeling. Energy costs are variable based on provider, consumption, and demand. Indicated energy cost rates are best estimates per state average data.

TYPICAL OFFICE & LAB FLOOR PLAN



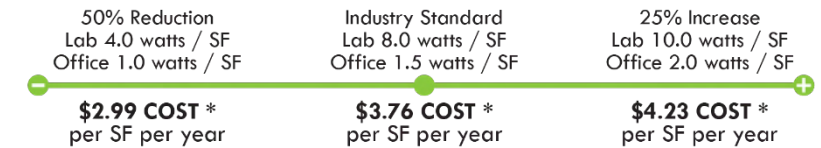
Occupant Density

The number of people in a space demonstrated little impact on energy performance. The energy model uses industry standards to estimate number of typical occupants.



Equipment Loads

The quantity and energy intensity of equipment that is plugged into receptacles can greatly impact energy performance. The energy model uses industry standards to estimate typical equipment loads.



Hours of Operation

The number of shifts in a space can greatly impact energy performance. The energy model assumes typical one shift 40-hour work week from 9:00 am to 5:00 pm.



* Predicted energy use based on energy model

LEED Stats

The following analysis is based on publicly available energy consumption data from the 2020 calendar year, which was impacted by COVID-19. Energy costs are variable based on provider, consumption, and demand. Indicated energy cost rates are best estimates per state average data.



Office

2.0 University Place | 30 N 41st St

Year Built: 2013

Space Types: Office

Certifications: LEED Platinum & ENERGY STAR

70.9 ENERGY

kBtu per square foot per year

\$1.62 COST

per square foot per year



Office

Glaxo Smith Kline | 5 Crescent Dr

Year Built: 2013

Space Types: Office, Small Ground Level Retail

Certifications: LEED Platinum & ENERGY STAR

41.2 ENERGY

kBtu per square foot per year

\$1.27 COST

per square foot per year



Medical Office

Penn Medicine | 3737 Market St

Year Built: 2014

Space Types: Medical Office (Exam Rooms, Radiology, Operating Rooms), Ground Level Retail

Certifications: LEED Gold

103.0 ENERGY

kBtu per square foot per year

\$2.05 COST

per square foot per year

Updated: September 23, 2022



* Predicted energy use based on approved LEED energy model

Office & Lab

3.0 University Place | 4101 Market St

Year Built: 2023

Space Types: Office, Laboratory, Ground Level Retail

Certifications: LEED Platinum Pre-Certified

61.5 ENERGY *

kBtu per square foot per year

\$1.61 COST *

per square foot per year



Lab

Wistar Institute | 3601 Spruce St

Year Built: 1894 / 2014

Space Types: Office, Laboratory

Certifications: None

285.3 ENERGY

kBtu per square foot per year

\$6.09 COST

per square foot per year



Lab

UCity Square | 3675 Market St

Year Built: 2018

Space Types: Office, Laboratory, Ground Level Retail

Certifications: LEED Gold

155.2 ENERGY

kBtu per square foot per year

\$3.05 COST

per square foot per year



Lab

UCity Square | 3711 Market St

Year Built: 2008

Space Types: Office, Laboratory, Ground Level Retail

Certifications: LEED Silver

119.5 ENERGY

kBtu per square foot per year

\$3.24 COST

per square foot per year



Lab

University of Pennsylvania

Translational Research Lab | 125 S 31st St

Year Built: 1948 / 2004

Space Types: Office, Laboratory (Vivarium)

Certifications: None

310.1 ENERGY

kBtu per square foot per year

\$11.81 COST

per square foot per year

Water

Low-flow plumbing fixtures achieve 35% potable water savings in restrooms

State-of-the-art rainwater harvesting system:

- 1** Rainwater from the tower roof is collected into basement cistern
- 2** Harvested rainwater is reused for cooling tower make-up
- 3** Harvested rainwater is reused in irrigation

Wellness & ESG Overview

Attract and retain top talent by prioritizing employee health and well-being.

Post-COVID demands healthier buildings, as seen in outdoor air amounts, improved filtration, and high floor-to-floor heights for greater air mixing.

Hybrid workplace strategies require environments to be more intentional and provide better amenities.

Jones Lang LaSalle study developed the 3-30-300 rule per square foot per year.

- \$3 for utilities
- \$30 for rent
- \$300 for payroll



WELL Overview

- New green building certification and rating
-
- Each strategy is based on scientific and medical research
-
- Intent is to improve employee **productivity, engagement, and retention**
-
- Project undergoes on-site testing to verify performance



LEED Stats



Commercial New Construction Projects

Global WELL Certified Projects: 655

Global WELL Platinum Projects: 161 or 25%

Philadelphia WELL Certified Projects: 3

Philadelphia WELL Platinum Projects: 0

Source: IWBI Project Directory July 2022

Philadelphia WELL Projects

- FMC Tower: WELL Bronze
 - NASDAQ: WELL Silver
 - Wharton External Affairs: WELL Silver

US LEED & WELL Platinum Projects

- 1 Vanderbilt
- Phipps Center for Sustainable Landscapes
- Phipps Exhibit Staging Center
- American Society of Interior Designers National Headquarters Office

Global LEED & WELL Platinum Projects

- JLL Shanghai Office, China
- Glumac Shanghai Office, China
- One Taikoo Place, China
- K11 Atelier King's Road, China
- Lemajor Premium Experience Center, China
- GBCI India Office, India
- Wisdom Park West Zone 2nd Floor, China
- Landsea Green Center, China
- Swire Properties Head Office, China
- One Museum Place, China
- SKF Gotaholm, Sweden
- PWC Shanghai Office, China
- BIAD Office, China
- Guocoland Changfeng, China
- Sierra ODC e-Facility, India
- Gartner Center of Excellence, India
- 218 Electric Road, China

**There are buildings with WELL & LEED-EB Platinum that were not included on this list*

Connection to Nature

- **Accessible green roof** will be a building-wide amenity to enjoy native plants and city views, including movable furnishings, Wi-Fi, and event area.
-
- Incorporates **biophilic design** by demonstrating human's love of nature and living things through the incorporation of natural plantings, patterns, and materials.
-
- Scientific research indicates views of nature **improve productivity and lower stress levels.**



Chilled Beams

- Innovative chilled beam system provides superior indoor air quality than typical forced air systems.
- Ventilation system delivers 100% outside air.
- Scientific research indicates additional fresh air make occupants feel refreshed and awake.
- Superior MERV 14 filtration media surpasses typical office buildings.
- Air handling units are equipped with **ultraviolet (UV) lights** to kill mold, bacteria, and viruses in ventilation equipment.



Chilled Beams



VIEW DYNAMIC GLASS

- Eliminate glare control and uncomfortable solar heat gain
- Maintain beneficial access to daylight and views



TRADITIONAL WINDOWS WITH SHADE

- Glare and irregular daylight distribution causes occupant discomfort
- Blinds obstruct daylight and views
- Blinds collect dust

Source: View Glass

Healthy Materials

- **Evaluated over 500 building materials** for improved environmental and health impacts.
- Collected material transparency reports, like **nutrition labels**, for building materials.
- Selected **low-emitting materials** to provide superior indoor air quality.
- Made careful decisions to **avoid chemicals of concern**, like PVC and formaldehyde.

Declare.

1600 Wall System™ 1 Curtain Wall and System™ 2 Curtain Wall Kawneer Company, Inc.

Final Assembly: Multiple Locations in North America

Life Expectancy: 40+ Year(s)

End of Life Options: Recyclable (90-98%), Landfill (2-10%)

Ingredients:

Frame: Anodized Aluminum; **Thermal & Weathering:**

Bicyclo[2.2.1]hept-2-ene, 5-ethylidene-, polymer with ethene and 1-propene; Carbon black; Calcium carbonate; Calcium Oxide; Clay; Dicumyl-peroxide; Polyethylene; Zinc oxide; Acrylonitrile-Butadiene-Styrene Copolymer; **Fasteners:** Stainless Steel

Living Building Challenge Criteria: Compliant

I-13 Red List:

■ LBC Red List Free	% Disclosed: 100% at 100ppm
□ LBC Red List Approved	VOC Content: Not Applicable
□ Declared	

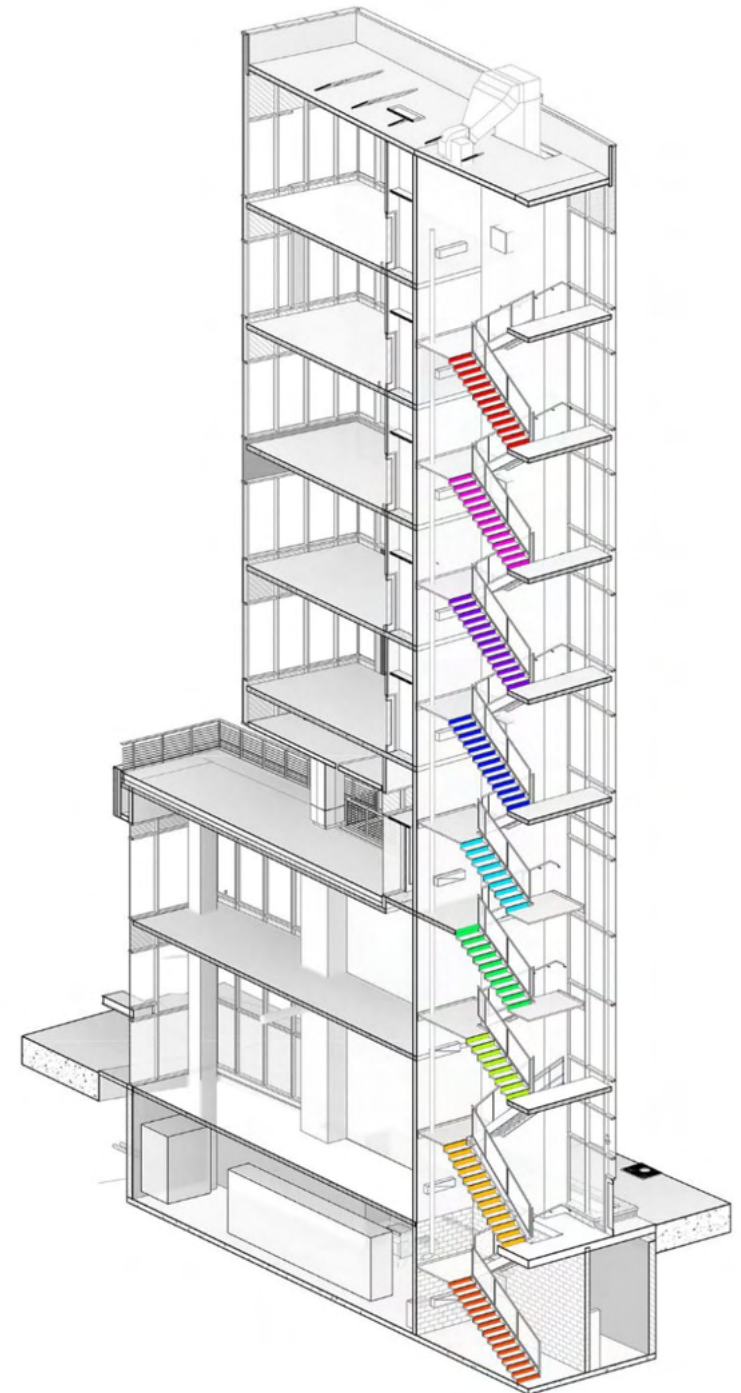
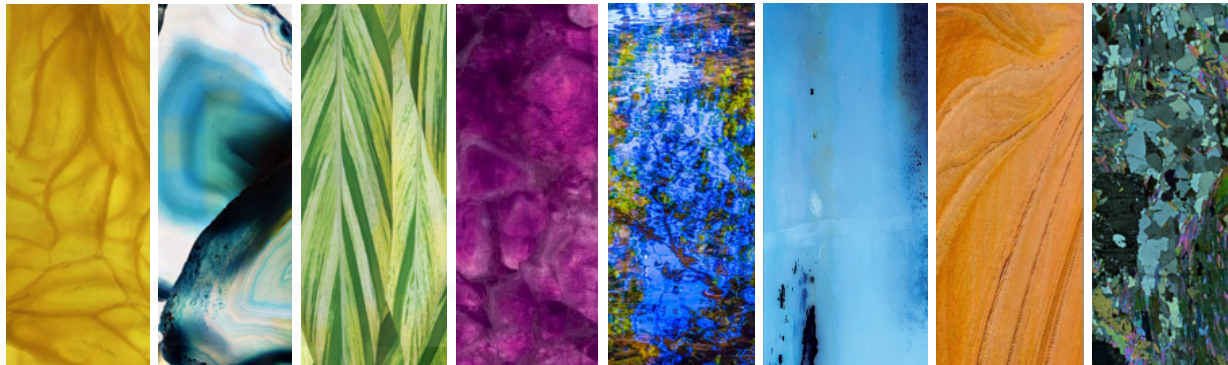
I-10 Interior Performance: Not Applicable

I-14 Responsible Sourcing: Not Applicable

KAW-0003
EXP. 01 DEC 2022
Original Issue Date: 2017

Active Lifestyles

- East stair was carefully designed to **encourage occupants to skip the elevators and take the stairs.**
- Stairs are prominently located before the elevators.
- Hold open devices shall keep doors open throughout the day.
- Corridor, stair tower, and stair riser feature artwork to create a unique identity for each floor.
- Signage shall encourage stair use.





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