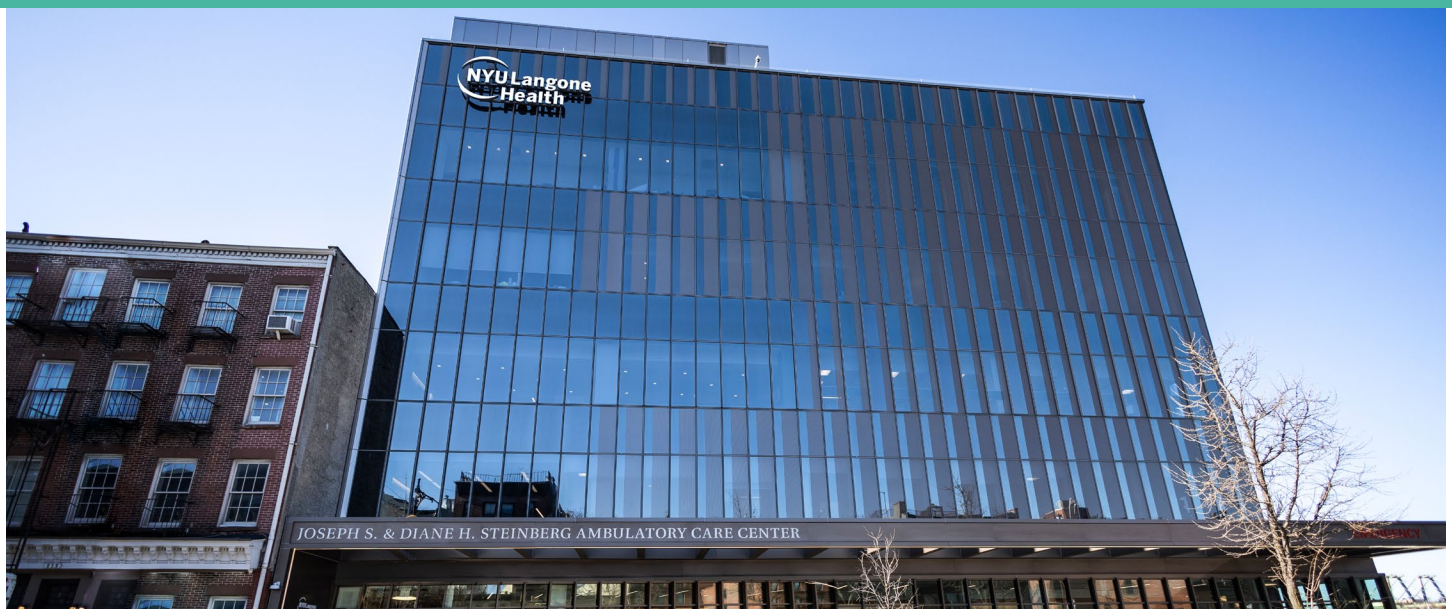
NYU Langone Health

Sustainable Design

Joseph S. & Diane H. Steinberg Ambulatory Care Center

70 Atlantic Avenue, Brooklyn, NY 11201

Building Profile



Designed with healing and sustainability in mind, this facility earned LEED Gold certification in 2023.

About the Facility

Joseph S. & Diane H. Steinberg Ambulatory Care Center - Cobble Hill (Cobble Hill ACC) is designed to be a healing environment with superior air quality, ample light, access to green spaces, and green cleaning procedures. The new building features 164,000 square feet of state-of-the-art healthcare facility with 4 patient floors and 4 operating rooms, as well as image-guided labs.

This facility was designed with sustainability top of mind and received LEED Gold certification from the U.S. Green Building Council in 2023. LEED-certified buildings are critical to addressing climate change and meeting sustainability goals, enhancing resiliency, and supporting more equitable communities. It is holistic system that doesn't simply focus on one building element.

What is LEED? Leadership in Energy and Environmental Design (LEED) is a U.S. Green Building Council certification. It is an international standard that recognizes innovative design practices that reduce environmental impact.

About the Neighborhood

Located in Brooklyn's Cobble Hill, this neighborhood is home to more than 7,000 residents, and is known for its vibrant Italian and French populations and plentiful bars, cafes and eateries. Its historic district was designated in 1969, a reflection of its remarkable preservation of 19th century brownstone architecture and bluestone sidewalks.

LEED Scorecard:

This Project Achieved 62 Points, earning Gold Level Certification

SUSTAINABLE SITES	20 / 26
WATER EFFICIENCY	3 / 10
ENERGY AND ATMOSPHERE	15 / 35
MATERIALS AND RESOURCES	7 / 14
INDOOR ENVIRONMENTAL QUALITY	11 / 15
INNOVATION IN DESIGN	6 / 6
REGIONAL PRIORITY CREDITS	0 / 4

Sustainability Program

NYU Langone Health's sustainability program develops initiatives aimed at reducing its environmental impact, such as responsible waste practices, and reducing greenhouse gas emissions and chemical use. It is a collaborative effort across the institution to implement best practices and build a culture of sustainability.

A Healthy Planet Means Healthier People

We are proud to deliver high quality care to our patients and extend that care to the environment. Our sustainability program develops initiatives that reduce our environmental impact while protecting our patients and employees from the climate-driven health impacts. The program stands on four pillars to ultimately build a culture of sustainability within the organization and to embed these priorities as part of our everyday operations and decision making.

Our Four Pillars:

1. **Reduce Our Impact**
   Efficient operations and resource use reduction
2. **Increase Resiliency**
   Infrastructure and operational preparedness for climate hazards
3. **Create Healthy Environments**
   Design healthy interiors and ensure community access to key drivers of health such as local, seasonal fresh foods
4. **Advocate**
   Sustainability and climate resiliency leadership alongside our peers

Learn more about the sustainability program here: www.nyulangone.org/sustainability

Our Commitment to Carbon Neutrality by 2050

In 2022, NYU Langone fortified its goal to reach carbon neutrality by 2050 through a commitment to the U.S. Department of Health & Human Services Health Sector Climate Pledge. We joined other leading health systems representing hundreds of hospitals and thousands of physician providers, to strengthen national resilience to climate change. NYU Langone is among just a handful of health systems in New York State to join the pledge.

This Building is Designed* for:

38%	28%	30%
Less water usage	Less energy usage	More fresh air flow

*Compared to similar buildings built to Building Code requirements only

Building Healthy Spaces

> *The physical environment plays an important role in wellness and health outcomes, and this informs every aspect of our design, down to the thoughtful selection of materials and furnishings, connection to nature and natural light, and the integration of art by local artists."*

Vicki Match Suna, AIA
Executive Vice President and Vice Dean for Real Estate Development and Facilities

This facility features design elements that positively impact healing such as providing access to nature and daylight and the use of materials and cleaning practices that minimize exposure to pollutants.

Natural Views and Access to Daylight
Research shows that views of nature can boost people's moods and expedite healing time for patients. NYU Langone's outdoor spaces provide beautiful environments and most are easily accessible to everyone; and its terraces and open spaces fill lobbies and rooms with natural light.

Cobble Hill ACC is designed to bring in as much natural light as possible. Its high performance windows minimize glare, which increases comfort and reduces heat absorbed from the sun. Solar shades in each room help keep the room cool and reduce energy use. Studies have shown that natural light leads to better sleep, and views of nature help reduce stress, which can positively impact healing.

Sustainable Materials

55%
Of building's wood is certified by the Forest Stewardship Council

23%
Of building materials include recycled content

39%
Of building materials were procured within 500 miles of the facility

91%
Of construction waste was recycled

Sustainable Sourcing and Composition

Our furniture and furnishings are built from materials better for the environment. Over 55% of the building's wood was sourced from sustainably managed forests certified by the Forest Stewardship Council. Additionally, 23% of the building materials used recycled content, from rebar in the building's foundation and the exterior curtain walls, to flooring, bathroom accessories and decorative ceiling elements.

Products with Environmental Product Declarations and Material Ingredient disclosures were sought out. These declarations promote transparency in the industry and allow designers to make more educated decisions about the materials they are putting into the building.

Low-Polluting Materials and Practices

Exposure to environmental pollutants like vehicle exhaust and volatile organic compounds (VOCs) in products can cause health problems such as respiratory diseases, heart disease and some types of cancer. This is why we prioritize better and healthier products and practices that minimize exposure to these pollutants.

Materials within the Cobble Hill ACC were selected based on several environmental criteria, such as high recycled content, reduced chemical use, and local sourcing and manufacturing. We select low-VOC paints, coatings, adhesives, and flooring systems. The majority of our furniture and furnishings are free of chemicals of concern including formaldehyde, flame retardants, per-/polyfluorinated compounds, polyvinyl chloride (PVC), and antimicrobials.

Additionally, no fire suppression systems and refrigerants use ozone-depleting substances such as CFCs, HCFCs, and halons. Our Green Cleaning Policy ensures that we use cleaning products free of antimicrobials, bleach, and unnecessary chemicals, while meeting regulated safety standards.

A Closer Look at Our Materials and Furniture

	SUSTAINABLE ATTRIBUTE			
Item	Recycled Content		Local - Distance from Site	Third-Party Certification
	Pre-Consumer	Post-Consumer		
Ceiling Tiles	92%			California Air Resource Board's Airborne Toxic Control Measure Phase II
Nurses' Station	53%	5%		Living Building Challenge Red List Free Requirements
Pantry & Reception Countertops	20% min.			
Metal Staircase	12%	76.8%	>150 miles from site	
Cabinets	60%			
Millwork, Casework Laminate		22%		Forest Stewardship Council Controlled Wood
MDF Panels	70.4%	20.4%		
Interior Glazing		33%	500 miles for raw materials 20 miles for fabrication	

Operating Efficiently

At Cobble Hill ACC, we utilize technologies and design to ensure we only use the resources we need. Waste is diverted from landfill throughout construction and operations.

Energy Efficiency

Through smart design and equipment selection, the building is designed to deliver 28% in energy savings compared to a building of similar size and use-type built to code.

- This facility has been, and will continue commissioning to assure all mechanical systems are working correctly and efficiently.
- A setback program at the facility uses occupancy sensors to reduce heating and cooling needs when select areas are unoccupied.
- To reduce demand on fossil-fuel based electricity, 35% of the electricity will be sourced from renewable power for the first two years of operations through the purchase of Renewable Energy Certificates (RECs).
- The building uses LED lights, which are 80% more energy efficient than fluorescent bulbs.

Waste Management

NYU Langone Health responsibly manages more than ten types of waste to ensure unnecessary waste does not end up in the landfill.

- During construction, 91% or 1,299 tons of construction waste was recycled.
- A robust recycling program at the facility is expected to keep 22 tons of healthcare and pantry waste out of the landfill each year.

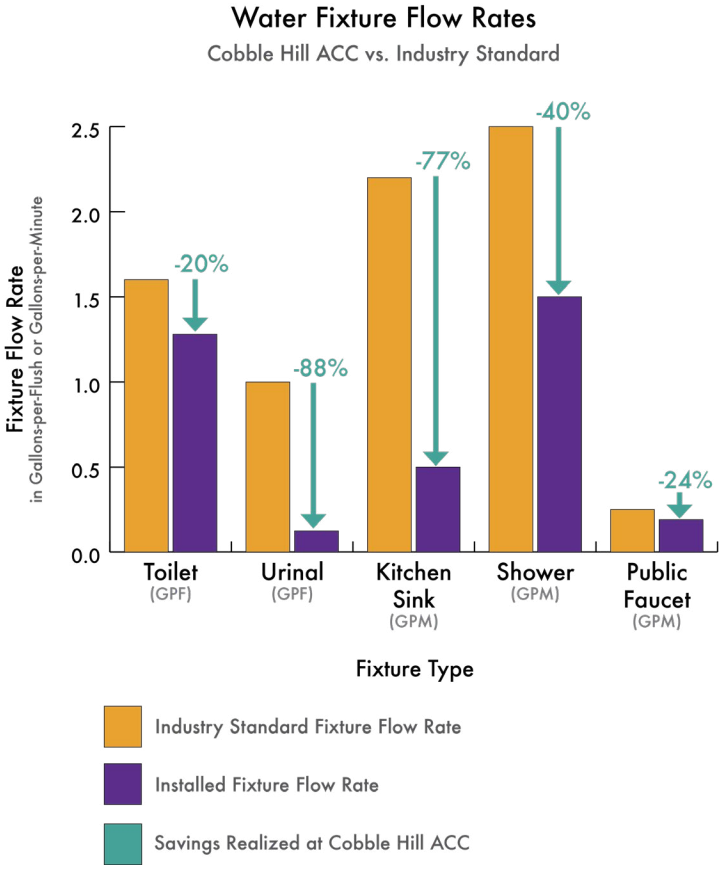
Types of Waste:

- Municipal Solid Waste
- Glass-Metal-Plastic
- Cardboard & Paper
- Hazardous Waste
- Regulated Medical Waste
- Reprocessable Medical Supplies
- Electronic Waste
- Construction Materials
- Pharmaceutical Waste
- Universal Waste

Water Reduction

Water is a finite resource and this facility is designed to use 38% less water than a similar facility built to code.

- Water use reduction strategies include using low-flow faucets and toilets.
- This facility uses 47% less water for irrigation due to the use of smart controls as well as the use of native plants, which naturally grow well in this climate and require less water.

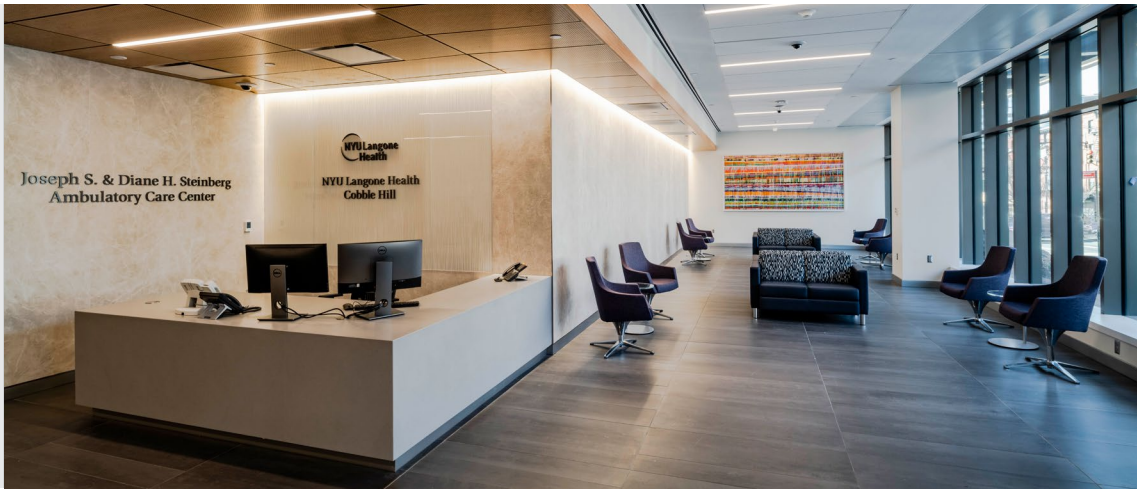


Low-flow water fixtures are used in patient restrooms (shown here), public restrooms, and pantries.

Architects and engineers are required to specify low-flow fixtures on NYU Langone's projects, as indicated in our Design Guidelines. This helps ensure that our commitment to reducing water use is implemented across our portfolio of properties.

Electronic waste is diverted from the landfill by a certified ITAD vendor who ensures safe handling of equipment. This waste goes to a local recycling facility in Brooklyn, which means fewer truck miles to travel for processing. Of these materials, 28% is recovered for reuse and the remainder is recycled.

Strategies like enhanced commissioning and post-occupancy energy use monitoring provide insight on opportunities to optimize and reduce the building's energy use throughout its lifetime.



This Facility Saves:

1,025,100 kWh
Of electricity every year
(equivalent to electricity used by 96 average homes)

599,144 Gallons
Of water every year
(equivalent of 45 residential pools)

49,626 Therms
Of natural gas per year
(equivalent to 671,543 miles driven by an average gasoline-powered vehicle)

Improving Air Quality

This facility optimizes indoor and outdoor air quality through airflow monitoring, use of cleaner materials, and encouragement of low-carbon modes of transportation.

High Indoor Air Quality

Good air quality minimizes your exposure to indoor allergens and pollutants. At the Cobble Hill ACC, we maintain high levels of filtration to ensure superior indoor air quality for our patients and staff. Permanent air handling units use filters with a minimum efficiency reporting value (MERV) of 13. All occupied spaces receive increased outdoor air by at least 30% above the minimum rates required by ASHRAE 62.1-2007.

An indoor air quality management plan was used during construction to ensure the well-being of construction workers and building occupants. Prior to occupancy, a flush-out was conducted to eliminate air pollutants such as particulates, ozone, VOCs, and odors. This is especially important because products — such as millwork, furniture, carpets, and paint — can release airborne chemicals like VOCs the most when they are new.

Other strategies implemented to improve air quality:

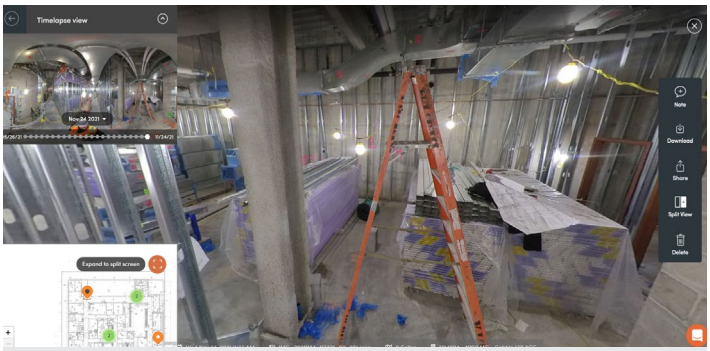
- Erosion and Sediment Control
- Site Selection
- Development Density
- Community Connectivity
- Public Transportation Access
- Bicycle Storage and Changing Rooms
- Parking for Low Emission Vehicles
- Heat Island Mitigation

Air Quality Monitoring During Occupancy

Sensors that detect carbon dioxide and measure outdoor airflow are used throughout the facility to maintain comfort and to ensure that fresh air is continuously supplied. These sensors automatically alert staff if airflow rates are out of range, allowing facilities staff to immediately identify and address issues.

Air Quality Monitoring During Construction

Monitoring air quality during construction is crucial for the project to meet stringent air quality requirements before occupant move-in. Pollutants released during construction create health risks to workers and occupants of the surrounding neighborhood. These can lead to acute and chronic respiratory issues as well as cardiovascular diseases. To avoid these risks, the team protected materials from moisture to prevent the formation of mold, protected ductwork from dust and construction debris, created barriers to minimize the dispersion of construction pollutants, and used HEPA filters and vacuuming, among other strategies.



Careful monitoring and documentation of worksite conditions and practices help safeguard indoor air quality for construction workers, and the surrounding neighborhood during construction, and finally for staff and patients during occupancy.

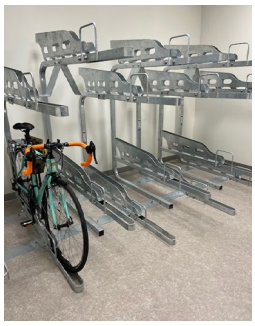
NYU Langone's Smoke-Free environment policy applies to interior and exterior spaces, protecting patients and staff entering the building while maintaining high indoor air quality.

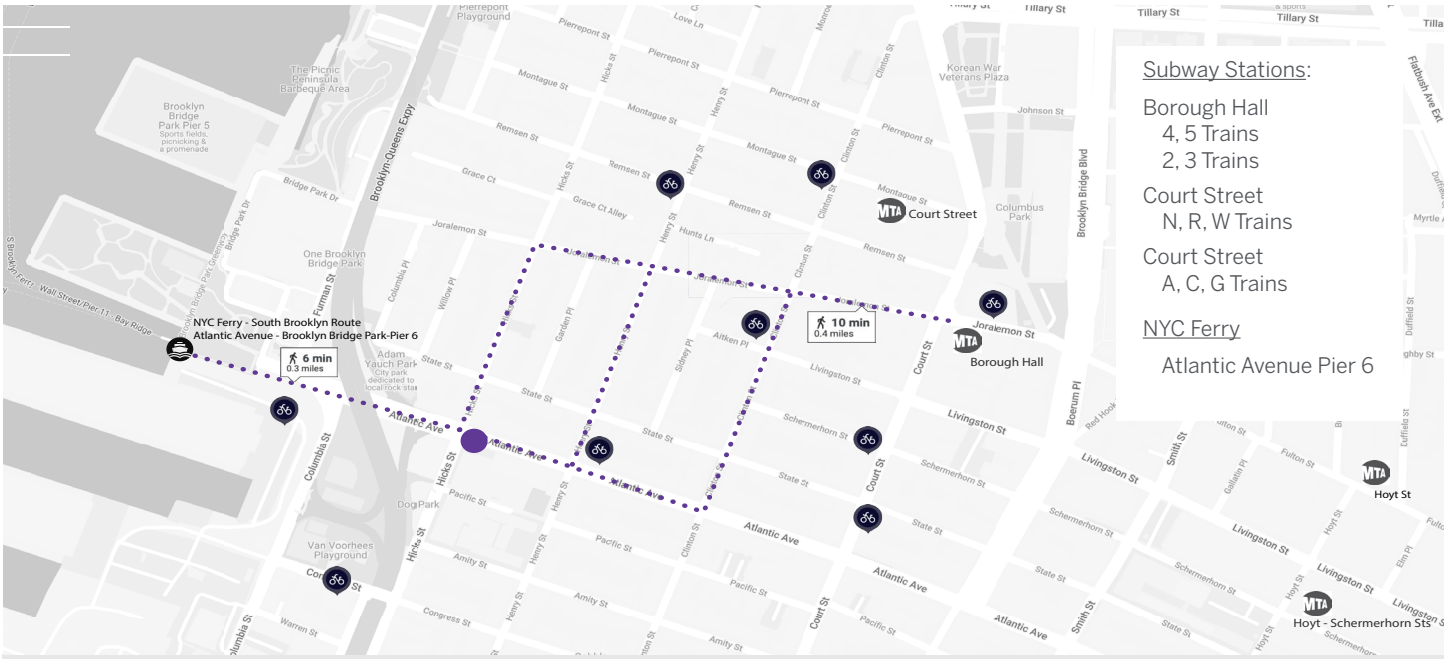
Low-Carbon Transportation

Air pollution emitted from transportation contributes to smog and poor air quality, which has negative impacts on the health and welfare of communities. This facility's location and amenities encourage the use of low-carbon modes of transportation and discourage the use of private vehicles.

Public transportation like the bus, subway, and ferry are available within ¼ to ½ mile of the facility. NYU Langone's own ferry allows for better intercampus travel for staff. Multiple public bike-share stations are within walking-distance from this facility.

There are more than 34 bicycle parking spots available on site for the public and staff to use. Staff also have access to changing rooms and showers, making the use of their bikes for commuting even easier. Five percent of parking spots are designated as preferred parking for electric vehicles.





Top right: Views of exterior and interior bike parking at the facility, and public bike sharing terminal located one block away from the facility.

Bottom: The Cobble Hill ACC is located within a half-mile of low carbon transportation amenities, including access to public transportation options such as subway, ferry, and bus, as well as public ride share bikes.

Supporting our Community

Caring for our environment strengthens the health of our communities.

Resilient Design
As a healthcare institution, it is imperative that our facility stands strong during times of extreme weather and potential disruptions to care. In order to continue providing care during such extreme events, the facility has an onsite emergency generator.

Urban Heat Island Effect
Dense urban neighborhoods experience microclimates where temperatures may be higher by as much as 22°F due to the heat absorbed by materials used for pavements and rooftops. This is called the urban heat island effect. This increase in temperature contributes to extreme heat stress experienced by residents, and contributes to heat-related poor health outcomes such as respiratory difficulties, heat exhaustion, and general discomfort.

To address this phenomenon, the Cobble Hill ACC uses materials that absorb less heat. Our terraces and courtyards use light-colored concrete hardscape surfaces with a solar reflectance index (SRI) of at least 29, which ensures cooler ambient temperatures for comfort.

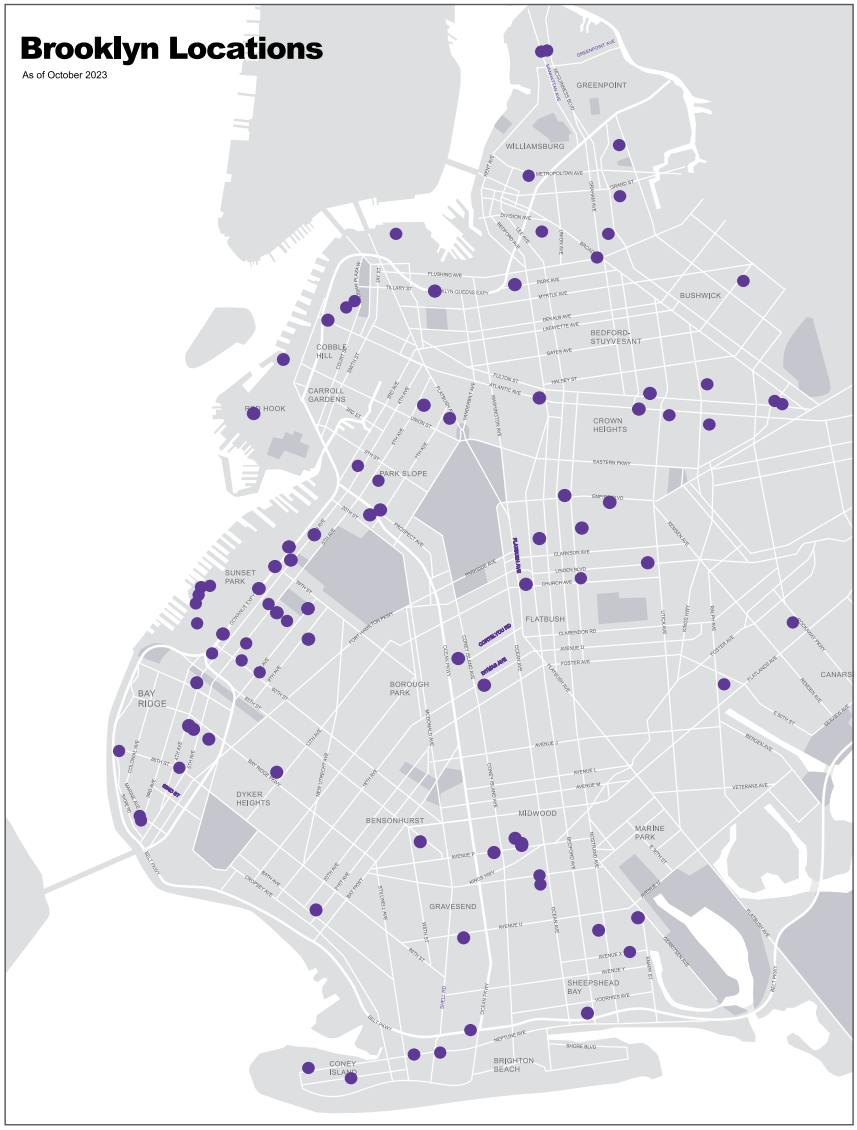
Native plantings can be seen on our green spaces, such as (from left) Allegheny serviceberry (Amelanchier laevis) and The Lady Fern (Athyrium filix-femina),

Our outdoor spaces include native trees, shrubs, and seasonal plantings that provide shade and keep our areas cool. These green spaces also absorb stormwater, diverting water away from the city's sewer system and preventing overflows.

Reducing Emissions Locally and Globally
This facility uses select refrigerants and HVAC systems that minimize or eliminate the emission of compounds that contribute to ozone depletion and global climate change. Additionally, all fire suppression systems do not use ozone-depleting substances including CFCs, HCFCs, or halons.

Locally Sourced Materials and Products
39% of the materials and products used have been manufactured and extracted within 500 miles of this facility. Local purchasing supports the local economy, while reducing transportation-related air pollution.

> *Climate change may be a global issue, but we must be a part of the solution in our communities. It is our responsibility as healthcare professionals and stewards of the environment to create a sustainable path forward and partner with industry leaders, stakeholders, and governmental agencies to accelerate progress.*
>
> **Robert I. Grossman, MD**
> CEO of NYU Langone Health and Dean of NYU Grossman School of Medicine



Access to Health

The neighborhoods we live in shape our behaviors and can influence our health. Proximity to primary care providers and support services are important characteristics of a community, which may encourage routine preventative care, a key to staying healthy. In Brooklyn, there are more than 40 NYU Langone sites that offer a range of resources for residents to utilize. We have facilities to treat long-term and short-term health conditions, and family health centers that provide social support services, in addition to outpatient care, to adults, children and families.

We also recognize that healthy eating plays an integral role in wellness. In 2019, the Family Health Centers at NYU Langone launched The Table, a space where residents can access fresh produce and other food items, and to participate in interactive healthy cooking demonstrations. Within our facilities, we prioritize enhancing the nutritional content of our patient meals, and to serve local, seasonal, and chemical-free and hormone-free foods whenever possible.

References & Acknowledgments

This report was developed by the Energy & Sustainability team, a division of NYU Langone Health's Department of Real Estate Development and Facilities, with the assistance of the Cobble Hill design and construction team.

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Lady Fern by Oregon Caves National Monument via Flickr CC BY 2.0 (creativecommons.org/licenses/by/2.0) - page 10 (native plant, right)

Resources

- Sustainability at NYU Langone Health
- NYU Langone Health's 2023 Sustainability Report
- Joseph S. & Diane H. Steinberg Ambulatory Care Center—Cobble Hill
- Joseph S. & Diane H. Steinberg Ambulatory Care Center—Cobble Hill Press Release

References

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What are the Benefits of Interacting with Nature? - International Journal of Environmental Research and Public Health Issue 10 No. 3

Healthy Interiors - Practice Greenhealth

Local and Sustainable Food Purchasing - Practice Greenhealth

Heat Island Impacts - U.S. Environmental Protection Agency

Health Benefits of Nature - American Society of Landscape Architects

Greening Your Purchase of Cleaning Products - U.S. Environmental Protection Agency