

MORPHOSIS

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Bloomberg Center Design Fact Sheet

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Bloomberg Center Press Release//

The Bloomberg Center at Cornell Tech Designed by Morphosis Celebrates Formal Opening

*Innovative Building is Academic Hub of New Applied Science Campus with
Aspiration to Be First Net Zero University Building in New York City*

NEW YORK, September 13, 2017 – Morphosis Architects today marked the official opening of The Emma and Georgina Bloomberg Center, the academic hub of the new Cornell Tech campus on Roosevelt Island. With the goal of becoming a net zero building, The Bloomberg Center, designed by the global architecture and design firm, forms the heart of the campus, bridging academia and industry while pioneering new standards in environmental sustainability through state-of-the-art design.

Spearheaded by Morphosis' Pritzker Prize-winning founder Thom Mayne and principal Ung-Joo Scott Lee, The Bloomberg Center is the intellectual nerve center of the campus, reflecting the school's joint goals of creativity and excellence by providing academic spaces that foster collective enterprise and collaboration.

"The aim of Cornell Tech to create an urban center for interdisciplinary research and innovation is very much in line with our vision at Morphosis, where we are constantly developing new ways to achieve ever-more-sustainable buildings and to spark greater connections among the people who use our buildings. With the Bloomberg Center, we've pushed the boundaries of current energy efficiency practices and set a new standard for building development in New York City," said Morphosis founder and design director Thom Mayne.

The four-story, 160,000-square-foot academic building is named in honor of Emma and Georgina Bloomberg in recognition of a \$100-million gift from Michael Bloomberg, who was responsible for bringing Cornell Tech to New York City while serving as the city's 108th Mayor.

The Design of the Bloomberg Center

The Bloomberg Center is a four-story building set beneath a photovoltaic canopy, with a low and narrow profile framing stunning views across the island. One of the building's most distinctive features is its façade, optimized to balance transparency—maximizing daylighting and exterior views, and opacity— maximizing insulation and reducing thermal bridging.

Designed as a rain screen system, the outermost layer of the façade is composed of aluminum panels surfaced in an iridescent, PPG polymer coating. Viewed from afar, the aluminum panels register a continuous image that merges the river-view scenery from Cornell Tech's Roosevelt Island location and Cornell University's idyllic campus in Ithaca, New York. Facing the city, the Bloomberg Center's west façade registers the image of the Manhattan skyline as it is viewed directly across the East River. Along the campus' main entry and central circulation spine (the "Tech Walk"), the east façade registers an image of Ithaca's famous gorges.

Bloomberg Center Press Release (Continued)//

Designed in collaboration with Zahner, an architectural metal fabricator, the façade utilizes Zahner's Louvered ZIRA™ system to create the image patterning. Each pixel of the image is translated into the specific turn-and-tilt of a two-inch circular tab punched into the aluminum paneling; the depth and rotation of each tab determines the amount of light reflected. This pixel map was fed into a repurposed welding robot, which processed the digital information into the mechanical turning-and-tilting of the façade's 337,500 tabs. The algorithm controlling the robot was developed in collaboration with Cornell and MIT students.

"Our collaboration with the Cornell and MIT students to develop the building's façade is an example of the type of connections that Cornell Tech will foster between academia and tech industries," said Ung-Joo Scott Lee, Principal at Morphosis and Project Principal of the Bloomberg Center. "We were ultimately interested in demonstrating that designing for net zero creates not only a more energy efficient building but, in fact, a healthier and more comfortable environment to its occupants. The very systems that provide our path to high building performance are the same systems that provide better control to its users while giving the building its distinct identity. Cornell University's leadership in sustainability is central to their mission; we look to continue that leadership in both upstate as well as downstate campuses."

The Bloomberg Center also serves as a focal point for the Roosevelt Island community, with a publicly accessible ground-floor café located at the southern end of the building. The entry atrium and the Lecture Hall, aligned with Manhattan's 57th Street, connects building users with Manhattan views across the river. Visible from the campus' Tech Plaza, a monumental stair rising from the main lobby guides vertical circulation to all levels. Highlighting Cornell Tech's river-to-river campus, the main stair looks out onto Queens through a viewing corridor framed by other campus buildings. An open galleria extends throughout the length of the building, serving as a shared avenue for informal encounters, discussions, and collaborations. Enclaves for impromptu meetings line the main galleria, with conference rooms and multipurpose meeting areas capping the ends.

The academic spaces in The Bloomberg Center are designed around fundamental changes in learning and teaching that are happening at all institutional levels today. The Center features a varied set of spaces to support different learning modes allowing for flexible and mobile learning. Collaborative and flexible spaces are as important as private and meditative spaces. While offering traditional classroom spaces and large open workspace areas, there are also clusters of break-out spaces, huddle rooms, and social areas that allow for group study, as well as quiet rooms and micro-pods that function as private work spaces or telephone booths.

In keeping with the mission of sparking creativity, one percent of the Bloomberg Center's overall budget is dedicated to art. Newly commissioned, site-specific artworks by prominent contemporary artists, including Matthew Ritchie, Michael Riedel, Alison Elizabeth Taylor, and Matthew Day Jackson are integrated within the fabric of Morphosis' design. The Bloomberg Center also includes a restored WPA-era mural by Ilya Bolotowsky that was uncovered in the former Goldwater Memorial Hospital on Roosevelt Island after its closure in 2014.

Bloomberg Center Press Release (Continued)//

Sustainability at the Bloomberg Center

Planned to be among the largest net-zero energy academic buildings and reach LEED Platinum status, the building's primary power is generated on-site. The campus employs multiple strategies to achieve a low-energy building through a stepped approach. The building prioritizes energy demand reductions and load reductions as well as maximizing passive and energy efficient design through the use of renewable energy to power building systems. Key design elements to achieve the environmental goals and efficient energy usage include:

- **An all-electric building:** No fossil fuel is used in the building.
- **Solar power:** A 40,000-square-foot canopy supporting 1,465 photo voltaic panels tops the Bloomberg Center (and neighboring The Bridge building), converging engineering requirements and architecture to generate solar power while decreasing cooling loads by providing building shading.
- **Green roof:** A low-maintenance green roof houses native plant species along the southeast outdoor terrace to help cool roof surface and manage stormwater runoff.
- **Smart building technology:** Designed by Morphosis and engineering firm Arup, smart building features link lighting control, occupancy sensors, security, and other building controls to provide on-demand power and respond to user needs and occupancy.
- **Highly insulated façade:** A unitized, continuously insulated rainscreen wall system covered by a metal panel façade balances exterior views and daylight, maximizes insulation values, and minimizes thermal bridging. The project achieves 60 percent of its façade to be heavily insulated opaque walls, with 40 percent high-performance insulated glass units.
- **Geothermal wells:** 80 closed-loop geothermal wells, each 400 feet deep, are located under the South Lawn, the campus' main public open space. Electrically powered ground-source heat pumps are used for heating through perimeter hot-water radiation and cool the building through an active chilled-beam system.
- **Rainwater collection system:** A 40,000-gallon rainwater harvesting tank is buried under the campus lawn, providing non-potable water for the building's plumbing system, cooling tower, and on-site irrigation.
- **Resiliency:** Critical building equipment is located in a rooftop mechanical room, while the cellar-level footprint and equipment is minimized. The building's ground floor, as well as entry doors and windows, are elevated to address higher flood plain elevations.

The Bloomberg Center opens as part of phase one of the new campus, which also includes The Bridge—a first-of-its-kind building that will host a mix of cutting-edge companies working alongside groundbreaking Cornell academic teams—and The House, a residential building that is the largest Passive House in the world, widely recognized as the most rigorous international energy efficiency standard.

About Morphosis//

MORPHOSIS

Founded in 1972, Morphosis is an interdisciplinary practice involved in rigorous design and research that yields innovative, iconic buildings and urban environments. The firm is committed to the practice of architecture as a collaborative enterprise, with founder and Pritzker-prize winning architect Thom Mayne serving as design director alongside principals Arne Emerson, Ung-Joo Scott Lee, Brandon Welling, and Eui-Sung Yi, and more than 60 professionals working in Los Angeles, New York, and Shenzhen. With projects worldwide, the firm's work ranges in scale from residential, institutional, and civic buildings to large urban planning projects. Named after the Greek term for 'to form or be in formation', Morphosis is a dynamic and evolving practice that responds to the shifting and advancing social, cultural, political and technological conditions of modern life.

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Biography of Thom Mayne//



to the President's Committee on the Arts and Humanities in 2009, and was honored with the American Institute of Architects Los Angeles Gold Medal in 2000. With Morphosis, Thom Mayne has been the recipient of 27 Progressive Architecture Awards, over 120 American Institute of Architecture Awards and numerous other design recognitions. Under Mayne's direction, the firm has been the subject of various group and solo exhibitions throughout the world, including a large solo exhibition at the Centre Pompidou in Paris in 2006. Morphosis buildings and projects have been published extensively; the firm has been the subject of 33 monographs.

Throughout his career, Mayne has remained active in the academic world. In 1972, he helped to found the Southern California Institute of Architecture. Since then, he has held teaching positions at Columbia, Yale (the Eliel Saarinen Chair in 1991), the Harvard Graduate School of Design (Eliot Noyes Chair in 1998), the Berlage Institute in the Netherlands, the Bartlett School of Architecture in London, and many other institutions around the world. There has always been a symbiotic relationship between Mayne's teaching and practice, evidenced in his concurrent position as Executive Director of the Now Institute at UCLA, a research and design initiative focusing on applying strategic urban thinking to real world issues. He is a tenured Professor at UCLA Architecture and Urban Design since 1993.

Thom Mayne founded Morphosis as a collective architectural practice engaged in cross-disciplinary research and design. As Design Director and thought leader of Morphosis, Mayne provides overall vision and project leadership to the firm. With permanent offices in Los Angeles and New York City, the firm currently employs over 60 architects and designers.

Mayne's distinguished honors include the Pritzker Prize (2005) and the AIA Gold Medal (2013). He was appointed

About Cornell Tech//

Cornell Tech brings together faculty, business leaders, tech entrepreneurs and students in a catalytic environment to produce visionary results grounded in significant needs that will reinvent the way we live in the digital age. The Jacobs Technion-Cornell Institute embodies the academic partnership between the Technion-Israel Institute of Technology and Cornell University on the Cornell Tech campus.

From 2012-2017, the campus was temporarily located in Google's New York City building. In fall 2017, 30 world-class faculty and about 300 graduate students moved to the first phase of Cornell Tech's permanent campus on Roosevelt Island, continuing to conduct groundbreaking research, collaborate extensively with tech-oriented companies and organizations and pursue their own startups. When fully completed, the campus will include two million square feet of state-of-the-art buildings, over two acres of open space, and will be home to more than 2,000 graduate students and hundreds of faculty and staff.

Bloomberg Center Project Information//

LOCATION

Roosevelt Island, New York, NY

CLIENT

Cornell Tech

SITE AREA

1.4 acres / 0.6 hectares

SIZE

160,000 gross ft² / 14,865 gross m²

PROGRAM

Classrooms, instructional labs, lecture hall, huddle rooms, collaboration areas, conference rooms, cafe, classrooms, open work areas, and shared spaces

DESIGN

2012 - 2014

CONSTRUCTION

2015 - 2017

COST

\$130 Million

TYPE

Educational

LEED

Platinum (Expected)

Bloomberg Center Credits//

MORPHOSIS TEAM

DESIGN DIRECTOR

Thom Mayne

PROJECT PRINCIPAL

Ung-Joo Scott Lee

PROJECT ARCHITECT

Luke Yoo

PROJECT DESIGNER

Nicolas Fayad

Ed Kwong

Jerry Figurski

Jean Oei

PROJECT TEAM

Christopher Battaglia

Chloe Brunner

Debbie Chen

Chris Eskew

Stuart Franks

Farah Harake

Clayton Henry

Ted Kane

Hunter Knight

Jongwan Kwon

Ryan Leifield

Simon McGown

Brian Richter

Go-Woon Seo

ADVANCED TECHNOLOGY

Cory Brugger

Kerenza Harris

Stan Su

PROJECT ASSISTANTS

Fiorella Barreto

Marco Beccuci

Paul Cambon

Vivian Chen

Tom Day

Justin Foo

Yong Fei Gu

Yoon Her

Sean Kim

Matt Lake

Sangyun Lee

Haidi Liu

Eric Meyer

Nicole Meyer

Jason Minor

Michelle Park

Vincent Parlatore

Conway Pedron

Danny Salamoun

Ben Salance

Suzanne Tanascaux

Matthew Tarpley

Ben Toam

VISUALIZATION

Stuart Franks

Jasmine Park

Nathan Skrepcinski

Sam Tannenbaum

Bloomberg Center Credits//

CONSULTANTS

STRUCTURAL

Arup

MEP

Arup

FIRE PROTECTION

Arup

SUSTAINABILITY

Arup

COST ESTIMATOR

Dharam Consulting

FAÇADE

Arup

GEOTECHNICAL

Mueser Rutledge Consulting
Engineers

LIGHTING

Arup

ACOUSTICS

Arup

AUDIOVISUAL/IT/SECURITY/ SMART BUILDING

Arup

CODE CONSULTANT

CCI, Code Consultants, Inc.

SPECIFICATIONS

Construction Specifications

WATER PROOFING

Henshell & Buccellato

FOOD SERVICES CONSULTANT

Jacobs Doland Beer

GRAPHICS AND SIGNAGE

Pentagram

VISUALIZATION

Kilograph

COLLABORATING ARTIST

Matthew Day Jackson
Michael Riedel
Matthew Ritchie
Alison Elizabeth Taylor

CONSTRUCTION TEAM

GENERAL CONTRACTOR

Barr & Barr

FAÇADE CONSTRUCTION

A. Zahner Company

PRE-CONSTRUCTION CM

Tishman Construction Corporation

OWNER'S REPRESENTATIVE

Forest City Ratner Companies

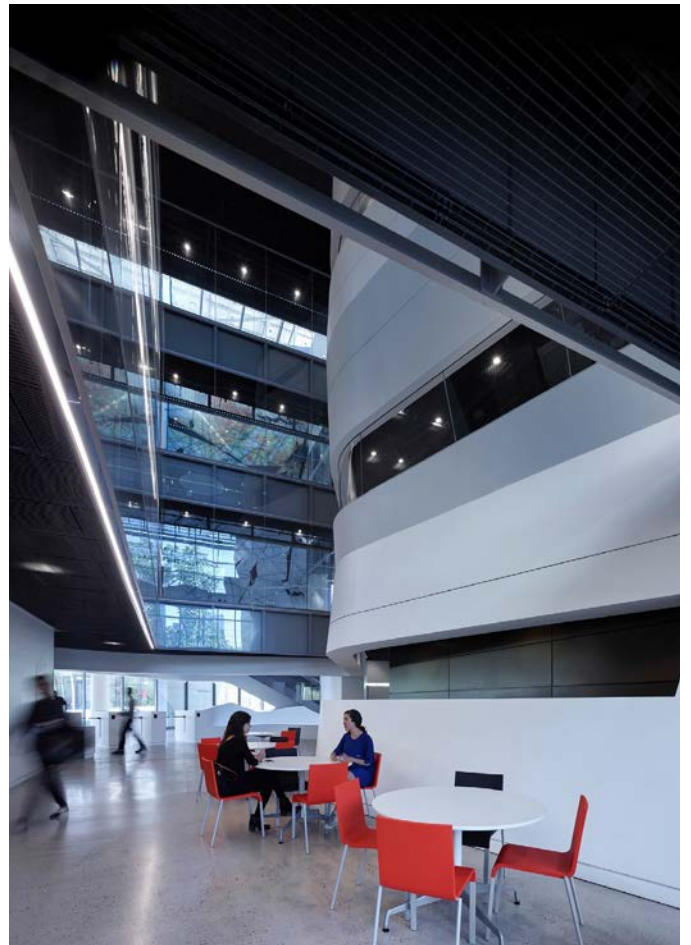
Bloomberg Center Photos//



CREDIT
Matthew Carbone

FILENAMES
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Bloomberg-14_MattCarbone

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CREDIT
Matthew Carbone

FILENAMES
Bloomberg-5_MattCarbone
Bloomberg-10_MattCarbone

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Drawings and high resolution images available upon request.
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