Science + Technology

EYP
/ firm overview

We are 580 professionals in architecture, engineering, energy, and interior design who collaborate across 15 offices in the United States and Europe to deliver high-performance building design, research, and consulting services to higher education, government, healthcare, and corporate clients. Our award-winning family of practice groups includes: sustainable design leader EYP Architecture & Engineering; WHR Architects, healthcare design specialists; and The Weidt Group, building energy performance specialists.

Disciplines
Architecture, Engineering, Planning, Energy, Interior Design, Graphic & Environmental Design

Expertise
- Academic Planning & Design
- Embassies & Classified Facilities
- Healthcare
- Libraries & Learning Commons
- Medical Education
- Modernization
- Science & Technology
- Sustainable Design
- Workplace Design
- Corporate Headquarters
- Energy
- Historic Preservation
- Master Planning
- Mission Critical Facilities
- Monuments & Landmarks
- Student Life
- Undergraduate Science

Research
We conduct rigorous, original research primarily in two fundamental areas – technology, including energy performance and sustainability, and behavioral response to the built environment – to advance the delivery of intelligent, memorable design.

Ranked #1 for Energy & Sustainability
We are proud to be advancing a new paradigm for our profession: transforming buildings from energy consumers into dynamic resources that can help address global energy challenges and improve human health and well-being. Our integrated teams are assessing and contributing to the development of next generation materials, tools, and technologies to ensure a truly sustainable future in which the built environment actively supports discovery, learning, and healing to foster social, intellectual, and economic growth.

Recognition
- 2014 Architect 50 – #1 for Energy + Sustainability – Architect Magazine
- 2014 Top Architects – #1 for Healthcare Renovation – Health Facilities Construction Quarterly
- 2014 Top 300 Architecture Firms – Architectural Record
- 2014 MEP Giants – Consulting Specifying Engineer
- 2014 Giants 300 – Building Design + Construction
- 2012-2015 AIA National IDP Outstanding Firm Award
services

Architecture
• Design
• Planning
• Programming
• Interior Design
• Life Safety
• Signage & Wayfinding
• Workplace Design
• Master Planning

Energy
• Demand-side Management
• Energy Design Assistance
• Benchmarking
• Building Performance
• Custom Software Tools

Engineering
• Electrical
• Fire Protection
• Mechanical
• Plumbing
• Security
• Structural
• Telecommunications

Research
Behavioral
• STEM Environments
• Live/Learn Environments
• Healthcare

Technology
• Zero-energy Design
• Sustainable Design Computation
• Renewable Energy
• EYP Planet
• Photovoltaics
• Energy Efficiency in Historic Buildings

Consulting
• Graphic & Environmental Design
• Marketing
• Public Relations
Global reach

High-performance projects for clients in over 100 countries
We believe that knowledge is as critical to great design as creativity. Expertise – the deep knowledge that comes from research and experience – enables us to harness creativity in ways that deliver exceptional value to clients. Creativity, in turn, drives us to explore, question, and continuously advance our understanding of how the built environment influences human behavior – and how buildings and their systems impact the natural environment. The fusion of expertise and creativity yields a powerful dynamic that advances each client’s mission through unique architectural expressions that enrich human experience.
Seamlessly integrating modern architectural technology and design into scientific spaces is revolutionizing the way we view and experience the built environment. Our S&T team is passionate about increasing the sustainability and functionality of highly technical building types - including biomedical research facilities, biotechnology and pharmaceutical centers, and medical research laboratories - to create high-performing spaces that help each client achieve its critical mission. Each of our projects uniquely contributes to scientific research and development to advance our nation’s health, prosperity, and security while protecting the environment.
We helped the client identify immediate and ten-year growth needs and implemented the initial projects of the four-phase Master Plan, expanding research and research animal facility spaces and designing mechanical systems to support future wings as they come on line.

The East Research Building adds 66,000 square feet of flexible space for eight research groups. A spine of offices with informal meeting spaces and conference rooms connects to existing and future research spaces to foster a collegial environment. The Bioinformatics Commons is a 6,000-square-foot multipurpose gathering space housing dedicated and shared computers. The expansion of the Functional Genomics Building provides 41,000 square feet of new and 4,500 square feet of renovated space that increases housing capacity and separates the clean and dirty process flows of the existing Research Animal Facility. Increased space for Microscopy, Necropsy, and Histology have also been integrated to work with the clean and dirty circulation patterns of the animal facility and to accommodate expanding research support needs.

The 57,000-square-foot Genetic Resources Building is a transgenic mouse facility that expands the Jackson Lab’s capacity to acquire, develop, and distribute important new models of human disease.

**Details**
- 164,000 SF new construction
- Architecture, engineering, programming & lab planning
- 4,500 SF renovation
- Vivaria
- Containment barrier
- Transgenics facility
- Wet lab
The new JGM enables JAX to expand its human genomic research by providing a flexible, transparent and collaborative environment that can accommodate a wide range of scenarios to support increasing collaboration between dry, computational and wet-bench biological research. The limestone-clad, four-story curvilinear lab bar terminating in a three-story “commons” brands the new “start-up” entity – sited adjacent to the University of Connecticut Health Center’s Farmington campus – and its goal of developing personalized cancer treatments.

The program includes private offices, wet bench space, and dry space to accommodate 34 Principal Investigators and their research staff (17 biology labs and 17 computational labs), an extensive data center, and core lab services. Strategic allocation of shared core lab resources, restorative spaces and thoughtful amenities bring together researchers across multiple disciplines such as: microbiology, immunology, cancer immunotherapy, DNA sequencing, statistical methods and algorithms to support human genome analysis, epigenetics, and the functional genomics of human cancers to support personalized medicine.

While lab buildings are typically high energy consumers, sustainable design measures result in estimated energy savings of 34.72% energy saving over ASHRAE 90.1 – 2007 baseline.

**Details**
- 189,000 GSF
- Conference rooms & 200-seat auditorium
- Library/ coffee bar
- Education & training rooms
- Fitness center & maternity room
- Fast track: design to occupancy in 30 months

*Jeff Schantz completed this project at Jacobs prior to joining EYP.*
University at Albany East Campus
Biotechnology Park  East Greenbush, NY
Gen*NY*sis Center for Excellence in Cancer Genomics
The Ge*NY*Sis Center is designed for revenue-generating multiple tenancy and to support a range of occupancies including biomedical research, instrumentation support labs, a core facility that includes a high-sensitivity mass spectrometer, and a transgenic barrier vivarium operated by Taconic Farms, as well as a conferencing center and administrative offices.

The inaugural project on the 93-acre site, Ge*NY*Sis, is planned around a double-loaded corridor with labs on either side, support labs throughout the floor, and “neighborhoods” of offices. We conducted a market study and met with multiple stakeholders to define, conceptualize, and evaluate laboratory and facility planning features. Modular, expandable laboratories are designed to allow for aggregation as scientific programs grow. Significant public and common space support a host of scientific and public relations functions to advance fundraising and recruiting. A signature double-height glass lobby serves as a beacon for hope visible across the Hudson River.

The project was executed with fast-track construction in partnership with a construction manager to define early design decisions, separate bid packages, and control costs.

**Details**
- 125,000 SF new construction
- Architecture, engineering, programming & lab planning
- DNA microarray
- Transgenics core laboratory
- Vivarium
- LCM facility
Loft-style labs replace outdated classrooms to accommodate collaborative faculty research in the converging fields of biomedical and synthetic chemistry. The project sets the design standards for transforming the entire 400,000 square foot historic building to advance NYU’s strategy for growing its research programs within its constrained urban campus.

An entire floor of outdated classrooms was transformed into an inventive, right-sized facility. The design employs the parti of a glass box within a perforated masonry box to create a modern lab environment within a nearly 120-year-old structure. The main circulation corridor provides views of Washington Square Park, which inspired the interior palette.

Program elements were arranged to maximize research efficiency, achieve a high net-to-gross efficiency, and enhance occupant comfort and safety. BIM models enabled rapid prototyping to test options for the best-fit solution and coordinate the threading of new systems within the existing building fabric. The highly efficient MEP infrastructure was designed to support phased implementation. Self-closing fume hoods and LED lighting contribute to the efficiency of this energy-intensive space. The building was continuously occupied during renovation.

**Details:**
- 20,000 GSF renovation
- Architecture, engineering, programming & lab planning
- NIH and NSF grant submission assistance
- BSL-2 lab
- Synthetic Chemistry lab
- Low-flow fume hoods
Cornell University Geneva, NY
Agriculture and Food Technology Park
The Flex Tech Building accommodates entrepreneurs, start-ups, and diversifying companies conducting field/greenhouse trials, providing lab space, equipment, and offices in close proximity to the research facilities of Cornell University.

We partnered with CAFTPC to develop a master plan for the proposed 375,000 square feet of research laboratory, pilot plant, and community spaces to guide the development of a technology park for commercial businesses related to agriculture, food science, and biotechnology research and development. Our design of the Phase 1 incubator Flex Tech Building, which can accommodate a range of research or pilot plants, sets the standard for future development of the Technology Park.

**Details:**
- Master planning, architecture & engineering
- 20,000 SF new construction
- Wet laboratory
The Center for Genomics and Systems Biology is an interdisciplinary research center that rises behind the historic façades of three 100-year-old buildings in a dense urban neighborhood. To maximize space on the tightly constrained campus, the facility is innovatively planned as a ten-story, vertical scientific community that promotes collaboration by fostering circulation and interaction between floors.

Behind the preserved façades, demolition of the existing structures and new construction proceeded in phases. The building expanded from six floors and a cellar, to eight floors, a cellar and subcellar, mechanical penthouse, and rooftop greenhouse. Flexible, open-plan laboratories efficiently co-locate more than 100 genomics and bioinformatics scientists. The facility also contains a greenhouse and special environmentally controlled rooms for plant growth and other biological functions. Shared core facilities accommodate sensitive equipment and instrumentation. Flexible informal spaces foster intellectual community; an 86-seat auditorium enables the Center to host faculty and global partners for conferences and symposia.

*EYP is Executive and Collaborating Architect in association with Ennead Architects.

**Details:**
- 71,000 SF new construction
- Programming, planning, A/E
- Core laboratory
- Dry laboratory
- NMR suite
- Vivarium
- Wet laboratory
- Greenhouse
EYP is working with Virginia Tech to reconfigure Davidson Hall into a modern state-of-the-art teaching and research facility. EYP addressed the limitations of the 1920s Collegiate Gothic Davidson Hall by designing a new addition to replace the former teaching and research addition to the original four-story structure.

The new addition will provide state of the art laboratory space and classrooms and will engage Davidson Hall to form a new green space, which will face West Campus Drive. The new middle wing will house new labs designed to be extremely flexible and safe, and be viewed from the building’s interior corridor. The labs will receive significant daylight to create a comfortable learning and working environment. The rear wing will house a lecture hall with pre-function space and faculty offices.

The addition is organized so that its main circulation corridor is centered on the original wing’s entry. This way, when entering the original wing from the drill field, a new welcoming lobby will lead straight through to the addition, creating views into the labs and working stations on the right, and views to the new green space on the left.

The new addition was designed to foster more student-to-student and student-to-faculty interaction by creating more transparent spaces and open flexible teaching spaces. To build the “Larger Community” within the building, we have found that careful design of public spaces, including the corridors, lobbies, and a variety of informal spaces can shape flexible, creative learning environments that not only encourage collaboration and investigation but foster insights and “intellectual collisions.”

**Services**
- 50,000 GSF new construction
- Programming & planning
- Architecture
- Laboratory planning
- MEP engineering
University of Pennsylvania Philadelphia, PA
Richards Medical Research Laboratory
EYP master planned the repurposing of the Richards Medical Research Complex, one of the great buildings of the 20th Century designed by Louis Kahn, away from its original purpose as a wet-lab, fume hood intensive facility with its attendant heavy HVAC requirements, into a program of computational research spaces populated by leading Principal Investigators and their support and administrative staff.

The inaugural renovation project, located in portions of the C and D Towers for the Center for Cognitive Neuroscience (CCN) and the Center for Functional Neuroimaging (CFN), will serve as a model for the eventual transformation of the entire Richards Complex.

Following a rigorous analysis of the building, program and Kahn’s design principles, EYP is developing Guidelines and a “kit of parts” for the exterior restoration and the transformation of the building’s interior. These will ensure optimum flexibility, efficiency and consistency in the creation of interventions that are simultaneously contemporary and respective of Kahn’s original design intent.

Details
• 107,000 GSF modernization
• Master planning, architecture & engineering
• Historic Preservation
• Restoration Guidelines
The rebirth of Building 53 as our Renewable Energy Global Headquarters is an important symbol of the rapid growth and success of our renewable energy business, particularly in the wind sector. We wanted to make sure that Building 53 captures the spirit of our renewable energy business, which is committed to developing and delivering cleaner and more efficient energy solutions for our customers worldwide.

Victor Abate, Vice President
Renewable Energy for GE Power & Water
The reinvention of Building 53 — as a dynamic global headquarters and R&D center for Renewable Energy — embodies GE innovation. Adaptive use of the 100-year-old structure demonstrates GE’s commitment to celebrating its legacy, living its sustainable energy brand, and cultivating an inspiring, creative workplace.

A critical data center was doubled in size and operated without interruption during construction. Advanced communication, computer, and security requirements were carefully integrated into the design. Functional spaces are unique to the plant’s research and development infrastructure. Raised floor systems throughout the facility maximize flexibility and ease of access.

Energy modeling informed a design that uses 25% less energy than a comparable ASHRAE 90.1-2004 baseline building. A new building envelope, referencing the cutting-edge R&D that takes place within Building 53, contributes to a high-tech aesthetic that celebrates the GE brand. A cantilevered sunshade "blade" off the main entry references wind turbine technology. Removing two bays of the building opened space for a dramatic atrium with a visible 24/7 worldwide wind energy monitoring center that enhances the visitor experience. The collaborative environment of the Renewable Energy Global HQ accelerates knowledge-sharing to foster synergies that power progress on projects like GE’s Digital Wind Farm.

• Architectural Record Good Design is Good Business Award
• AIA Eastern New York Design Excellence Award
• LEED® Silver Certification

Details:
• 205,000 GSF modernization
• Architecture, MEP & structural engineering, feasibility study
• Data center
• Visitors center
Boston College
Brookhaven National Laboratory
Cornell University
GE
Genzyme Corporation
Georgetown University
The Jackson Laboratory
James Madison University
National Cancer Institute
National Oceanic & Atmospheric Administration
New York State Department of Health
New York State Office of General Services
New York State Energy Research & Development Authority
New York University
Rochester Institute of Technology
State University of New York at Farmingdale
SUNY Polytechnic Colleges of Nanoscale Science and Engineering
United States Department of Agriculture
United States Army
University at Albany
University of Maryland
University of Pennsylvania
Virginia Tech