Transforming a Dated Building into a State-of-the-Art Consolidated Laboratory Facility

PRACTICE
Health + Science

SECTOR
Laboratory

LOCATION
New Jersey

SERVICES
MEP Engineering
Design Engineering

CONSTRUCTION COST
$30M

PROJECT SNAPSHOT
Atlantic Health System's conversion of an older office building into a state-of-the-art consolidated medical testing laboratory will require mechanical, electrical, plumbing, and fire protection engineering services.

Concord's solution will overcome the building's physical constraints, meet strict BSL-3 requirements and enable collaboration amongst multiple trades and stakeholders.

The scope will include engineered systems for HVAC equipment, piping, duct routing, electrical distribution systems, and laboratory systems.

Atlantic Health System

PROJECT BACKGROUND

Concord is providing Atlantic Health System and Flad Architects with mechanical, electrical, plumbing, and fire protection engineering services to renovate a 1970s, three-story office building to a new state-of-the-art consolidated medical testing laboratory. This vital new facility, expected to be completed in mid-2023, will streamline all medical laboratory testing throughout Atlantic Health System's facilities in New Jersey. It will house new, efficient laboratory automation lines and a wide array of clinical laboratories, including Pathology, Microbiology, Genomics, Chemistry & Immunology, and more.

THE CONCORD DIFFERENCE

- ✓ Conversion of a 1970's building into a cutting-edge laboratory despite space constraints.
- ✓ Meets complex standards for a BSL-3 laboratory.
- ✓ Designed for long-term resiliency and reliability of equipment in a heavily used medical laboratory.
- ✓ Utilizing a collaborative process and cloud-based tools for working with multidisciplinary stakeholders

THE CHALLENGE

- Must adhere to strict requirements for a Biosafety Level 3 (BSL-3) laboratory, especially related to controlled airflow and filtered ventilation systems, to prevent infectious agents or toxins from being transmitted via air.
- A need for close collaboration with multiple stakeholders, including the landlord, as the health system does not own the building.
- Dated building has physical space constraints, including minimal rooftop space and structural load capacity for HVAC equipment.
- Multiple systems must be reworked to transform the building into to a state-of the-art medical facility capable of infectious disease crisis management and high-volume laboratory services, with resilient and easily serviceable equipment.

THE SOLUTION

- Concord's expertise with complex BSL-3 laboratory requirements will ensure adherence to all regulations, including a dedicated exhaust and proper filtration and pressurization.
- Our collaborative approach and open communication have been critical with all stakeholders to keep the project on time, on budget, and meeting the need to fit equipment "akin to a Swiss Watch" due to constricted space.
- Our team's use of the cloud-based tool BIM 360 provides a central workspace hub for multidisciplinary stakeholders to collectively manage workflows and make real-time adjustments throughout the project's full scope, from design to construction.