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Garage Turns to Science

by William Lebovich

For 68 years, the industrially functional, but aesthetically minimal one-story brick Clark & Sorrell Garage in downtown Durham, North Carolina served the automotive repair needs of drivers of Fords and other American cars. Before it closed in 2000, the garage was the city's oldest automotive repair shop.

Just as Durham has changed over those decades, becoming known as the "City of Medicine," so has this building at 323 Foster Street, now on the National Register of Historic Places.

In 2002 the former garage reopened as the Triangle Biotechnology Center, a research and development facility for small medical and scientific start-up companies. Not only has the function become "high-tech," so has the interior aesthetic. With traces of the garage's interior still visible, the center is clean, bright, and flexible enough to house all manner of scientific endeavors.

Less has changed on the outside. With the stepped parapet of the front facade being the only architectural detailing, the former garage was most notable for its central bay roll-up door, once suitable for driving cars in and out. This door was flanked by large banks of metal casement windows on the left illuminating the former repair bays and on the right lighting the former shop manager's office. >>>

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The historic Clark & Sorrell Garage in downtown Durham, North Carolina was recently cleaned up and given a new life.
Photo: Michael Traister

In stark contrast to the original industrial facility, clean white lab spaces support small but growing biotechnology companies.
Photo: Michael Traister

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Garage Turns to Science

continued

Owner/developer Andrew Rothschild kept the exterior appearance largely intact and preserved original interior detailing — such as beaded vertical boarding, now moved to a new space within the building — to get federal and state historic preservation tax credits worth 20 percent of the "eligible basis of redevelopment cost."

Rothschild, who had previously redeveloped historic properties in New York while he was still practicing medicine, also wanted to preserve original materials for their intrinsic worth and because recycling is environmentally responsible. The only changes to the 1932 garage facade and its 1941 rear addition were to reglaze the windows with double panes and to install a new fiberglass rolling door.

An Internal Reorganization

Project architect Richard Grogan, AIA, with the Durham firm of RGG Architects, reconfigured the 20,000-square-foot (1860-square-meter) open-plan garage for flexibility. A corridor now runs from the original front door to rear of the building. To one side of it is roughly two thirds of the floor area, given to open lab space. On the other side of the corridor, the remaining one third of the ground floor consists of common spaces, offices, and additional labs.

This organization reflects the original two rows of columns running longitudinally through the 1932 building and 1941 rear addition. Grogan

The lab spaces of the Triangle Biotechnology Center are furnished with modular, Scandinavian-designed casework.
Photo: Michael Traister

The high ceilings of the original garage now give ample room for a second-floor mezzanine.
Photo: Michael Traister

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also created a mezzanine above the one third section, providing additional office and common spaces. Preservation consultant G. Edwin Belk, AIA ensured that this new use and configuration respected the building's historic fabric.

The main floor consists primarily of lab space.
Image: RGG Architects

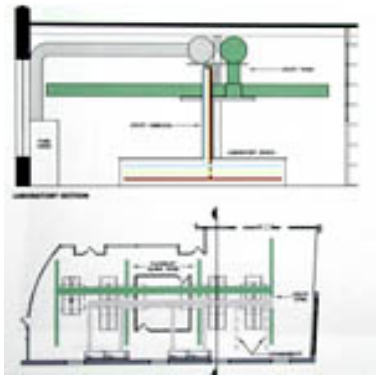
Besides the original materials, the restorers also had to consider a historic accumulation of grease, oil, and other dirt in the old garage. All the surfaces were cleaned with standard commercial cleaners, then primed and sealed, preventing remaining impurities from interacting with the laboratory activities.

More than this was not necessary because most scientific labs do not require a strictly sterile environment. The more pressing concern for scientists, according to Rothschild, a medical scientist turned developer, is air quality. The Triangle Biotechnology Center does not try to filter and recirculate indoor air but takes in 100-percent outside air at a rate of eight to ten air changes hour. The large, exposed overhead ducts accomplishing this massive air movement contribute to the "industrial chic" of the renovated space.

The mezzanine level.
Image: RGG Architects

A central "utility spine" supplies each laboratory area with supply air, exhaust, plumbing, electrical/data, and gas. New "utility umbilicals" can be run from this spine to any laboratory bench.

This infrastructure gives the center's managers the flexibility to reconfigure the spaces whenever new companies move in with differing needs. The facility can accommodate several tenants in variously sized spaces, as small as 2000 square feet (185 square meters) for labs and offices.



An overhead "utility spine" brings air, power, and other services to the lab benches.
Image: RGG Architects

The Formula for Success

Within three months of its dedication, the former garage was fully occupied by start-up biotechnology research and development

companies. The quick success of the project reflects several factors.

The "Research Triangle," made up of Durham and its neighbor cities Raleigh and Chapel Hill, is a well established environment for biotechnology research labs and has, therefore, a high demand for start-up lab space.

Moreover, the garage's open-plan has an inherent flexibility in adapting to modular laboratory use and to companies of different sizes. This project also benefited from the experience of architects specializing in both laboratory facilities and historic preservation.

No doubt also key to the center's success is having a developer with firsthand understanding of the special needs of these labs and how they function and who is on equal footing with the scientists and physicians who have rented the labs for their start-up ventures.

William Lebovich is an architectural historian and photographer from Chevy Chase, Maryland who photographs new projects for architects and developers and documents properties of historical, architectural, engineering, or industrial significance throughout the continental United States.

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Project Credits

Original Architect: Jesse Cole
Owner: Foster Street Partners
Developer: Scientific Properties
Project Architect: RGG Architects
Historic Consultant: Belk Architecture
Project Engineer: Edmondson Engineers, PA
Structural Consultant: Gardner & McDaniel, PA
General Contractor: Andrew C. Rothschild, LLC
Mechanical Contractor: Environmental Air Systems
Plumbing Contractor: Brown Brothers Plumbing & Heating
Electrical Contractor: Adams Electric Company

Fume hoods with ventilated storage cabinets.
Photo: Michael Traister

Modern furnishings contrast with exposed historic brick.
Photo: Michael Traister

Original materials and components from the historic garage are reused in the new laboratories.
Photo: Michael Traister