



## Greenville Zoo | Veterinary Hospital

GREENVILLE, SOUTH CAROLINA

### OVERVIEW

The Greenville Zoo, opened in 1960, is a premier regional attraction for families and animal lovers. With a diverse animal population, including giraffes, large cats, primates, and domestic breeds, the zoo has an ongoing need for best-in-class veterinary care at their on-site facility. The zoo recently renovated their hospital facilities and enlisted Modular Millwork to create state-of-the-art casework to ensure the highest levels of cleanliness, durability, flexibility and aesthetics.

### WORKSPACE CHALLENGES

- Required worksurfaces that are impervious to disinfectants, fluids, bleach and chemicals
- Desired high-quality aesthetics that did not compromise flexibility, durability, UV resistance, or warranty
- Requested an alternative to stainless steel (lower cost) with the same antimicrobial properties and durability
- Needed rapid implementation – 8 weeks – that no other manufacturer could meet (24-week industry standard)

“Modular Millwork’s HDPE casework system let us optimize available floor space and workflow in every room and the designer finishes gave us flexibility to create a pleasing and functional interior for the zoo veterinarian hospital staff. After exploring various material alternatives, the team settled on the HDPE system as it was extremely durable, held up well when exposed to water, was easy to disinfect, and saved the client 15% over the stainless casework alternative.”

**MICHAEL T. PRY, AIA, LEED AP | DP3 ARCHITECTS, LTD.**



HDPE FOR IMPROVED HYGIENE & AESTHETICS



PHARMACY – SOLID SURFACE COUNTERTOPS AND WALLS FOR EASY CLEANING/DISINFECTING

## SOLUTIONS

Modular Millwork immediately began identifying product material options with the project architect and testing alternative materials in their CNC production processes to ensure fabrication viability. In the end, the team recommended High Density Polyethylene (HDPE), a thermoplastic with exceptional tensile strength, imperviousness to liquids/biohazards, UV resistance, and strength surpassing stainless steel. Plus, it is sufficiently durable to merit a lifetime warranty and 100% recyclable, making it both cost-effective and environmentally sound.

Once the Zoo accepted this recommendation, Modular Millwork began the process of modifying their production processes to accommodate HDPE. Through cutting-edge CNC machining technology and parametric programming, they readily customized the casework solution to the hospital's exact workflow requirements while optimizing use of the physical spaces available for all workstations. Leveraging Modular Millwork's design flexibility, these customized configurations and workstation efficiencies added no cost to the project, a benefit that could not have been achieved using traditional stainless steel.

Augmenting the sanitation benefits of HDPE, Modular Millwork employed stainless hinges and drawer pulls (the most frequently touched workspace elements) and an innovative, waterproof Swiss fastener technology to ensure strong casework construction. Once installed, the millwork is easily sanitized with powerful disinfectants, making it a snap for hospital workers to maintain a sterile environment and eliminate the presence of germs, bacteria and viruses. Entire workstations can be hosed down with pressure cleaners for wholesale eradication of biohazards without damaging the modular casework.

Modular Millwork was able to manufacture, deliver and install the HDPE casework in under 8 weeks (their standard lead time, well below industry averages), meeting the Zoo's deadline to complete and occupy the space.

## OUTCOMES

- Custom-designed modular, flexible workstations using HDPE that ensure easy cleaning/sanitizing and imperviousness to liquids/biohazards
- Optimized spatial layouts and workstation efficiency through CAD visualization and parametric programming support for the architect and hospital staff
- Created a cost-effective and durable millwork solution that redefines what is possible in research, healthcare, lab and hospital environments
- Reworked manufacturing processes to accommodate alternative materials and still delivered the project in an 8-week timeframe



LABORATORY | X-RAYS & TREATMENT



PHYSICIAN'S WORKSTATION



CORNER WORKSTATION WITH AMPLE STORAGE AND SPACE FOR STAFF

“The Modular Millwork team devised a unique solution that allows us to provide vital medical care in the safest, most hygienic manner for our animals and staff. The HDPE casework is a game-changer, providing a superior option for virtually any healthcare application.”

**DR. NICK KAPUSTIN**  
DEPUTY DIRECTOR, VETERINARIAN