



Mount Sinai West Hospital – NICU Privacy & Shading

Retrofitting exterior windows for optimal daylight and environmental performance in new, state-of-the-art NICU

Mount Sinai West is a full-service medical center with a 24/7 emergency department, proudly serving patients from Midtown and the West Side of Manhattan, New York City, and beyond. With a rich history of medical innovation, Mount Sinai West is renowned for numerous specialty clinical services, including orthopedics, neurology, neurosurgery, obstetrics and gynecology and urology. The Neonatal Intensive Care Unit (NICU) at Mount Sinai West provides comprehensive medical care to preterm and other high-risk newborns.

The Challenges

Mount Sinai West is committed to providing patient-centered care for all expectant mothers and supporting each mother's unique childbirth experience. To ensure state-of-the-art facilities, the hospital enlisted in support of Cannon Architects to design a new labor and delivery area and NICU expansion to provide improved patient safety, comfort and delivery of care to all mothers and infants - especially those who require extra attention. The planned renovation project was to add 13 new NICU beds and 10 post-partum beds, and to further enhance post-partum services.

As part of the expansion and renovation, Mount Sinai West needed to replace and retrofit its exterior windows in careful consideration of patient privacy, daylighting management and environmental protection. Specifically, the exterior windows needed to:

- Provide solar heat barriers ensure optimal thermal performance to reduce HVAC costs and energy consumption.
- Eliminate the need for curtains, shades or any type of blinds.
- Block unwanted glare, heat and harmful UV rays while maximizing entry of light further into the space to reduce the need for artificial lighting.
- Provide a retrofit solution that would meet Environmental Protection Agency (EPA) guidelines for the control and mitigation of any residual hazardous building elements that often come with older buildings.

"It was essential to get the exterior privacy and shading solution exactly right to ensure an optimal healing environment for these tiniest and most vulnerable of patients."

- Mary Jean Tims, Architect

The Solution

Architect Mary Jean Tims sought a privacy and shading solution that would effectively address all the requirements while ensuring pleasing aesthetics for NICU occupants and staff. Her research took her to Unicef Architectural's award-winning Vision Control® solution for healthcare facilities. Vision Control® is a patented, hermetically sealed glass unit combining louvers within glass that can be customized to virtually any shape for interior or exterior healthcare glazing applications. Its advanced louvered glazing technology eliminates strings, ensures alignment, requires no maintenance, ensures maximized hygiene and provides the ideal privacy solution for ICUs, operating rooms, nurseries and more. Vision Control® is HIPAA-compliant and, when installed in exterior applications, significantly reduces energy consumption in support of LEED® requirements. Vision Control® is a winner of The Architects' Choice Award from the National Symposium on Healthcare Design and a Product Innovation Award from Architectural Products Magazine.

Mount Sinai West NICU installed 74 Vision Control® units as exterior windows. These were comprised of a 2" airspace with ¼" x 1 3/8" gray louvers, featured ¼" clear tempered glass on both sides with Energy Advantage Hardcoat LowE on surface 2, and included Gray antiligature knobs for easy operation. Custom frames were supplied by Champion Metal & Glass Inc. These ensured that existing frames did not require removal to avoid compromising the exterior cavity of the building.

"A great added benefit of Vision Control® solution was that the units could be installed from the inside of the building thereby eliminating the high cost of external hoisting in the site's congested New York streets."

- Mary Jean Tims

Today

After a 14-month renovation project, Mount Sinai West celebrated the opening of its vastly expanded NICU with a ribbon-cutting in February 2019. Today, it is a state-of-the-art, Level III, 35-bed unit providing comprehensive medical care to preterm and other high-risk newborns. The NICU—which now occupies 14,000-square-feet of space, a 60 percent increase from its previous size—features 32 patient bays, offering families a bright, comforting environment to spend time with their newborns.



The NICU also has two isolation rooms and a “nesting room” with overnight accommodations for parents who wish to stay with their infants. Neonatologists provide expert, comprehensive, family-centered care for more than 500 newborns each year. Its multidisciplinary staff includes board-certified neonatologists, attending pediatricians, and pediatric medical subspecialists. The unit is also staffed with more than 50 nurses who specialize in newborn care, as well as dedicated social workers, lactation consultants, music therapists, rehabilitation specialists and respiratory therapists.

“This state-of-the-art expansion demonstrates Mount Sinai’s continued commitment to providing the best maternal child health patient experience for New Yorkers.”

- Mary Jean Tims

Participants

Client: Mount Sinai West, New York, NY

Architects: CannonDesign, New York, NY

Insulating Glass with Integrated Louvers: Unicel Architectural, Montreal, Canada

Glazier: Champion Metal & Glass, Hauppauge, NY

Construction Management Company: LendLease, New York, NY

“This was a collaborative effort between Unicel and the glass manufacturer, providing solutions to complex existing conditions, and the only way that we could achieve this was by incorporating Unicel’s Vision Control® product.”

- Mary Jean Tims

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Defining the Space Within