

## Custom integrated louvers designed for Nationwide Children's Hospital's behavioral health unit

The Big Lots Behavioral Health Pavilion at Nationwide Children's Hospital, in Columbus, Ohio, is the largest U.S. center on a pediatric medical campus dedicated exclusively to child and adolescent behavioral and mental health. The uniquely designed, nine-story, 386,000 sq. ft. glass building features 673 beds along with integrated

inpatient and outpatient services, a psychiatric crisis center, and a robust research department. The pavilion broke ground in 2017 and offers family-centered care through a rooftop play area, outdoor courtyards, and other amenities to help meet the growing demand for behavioral and mental health services in the U.S.

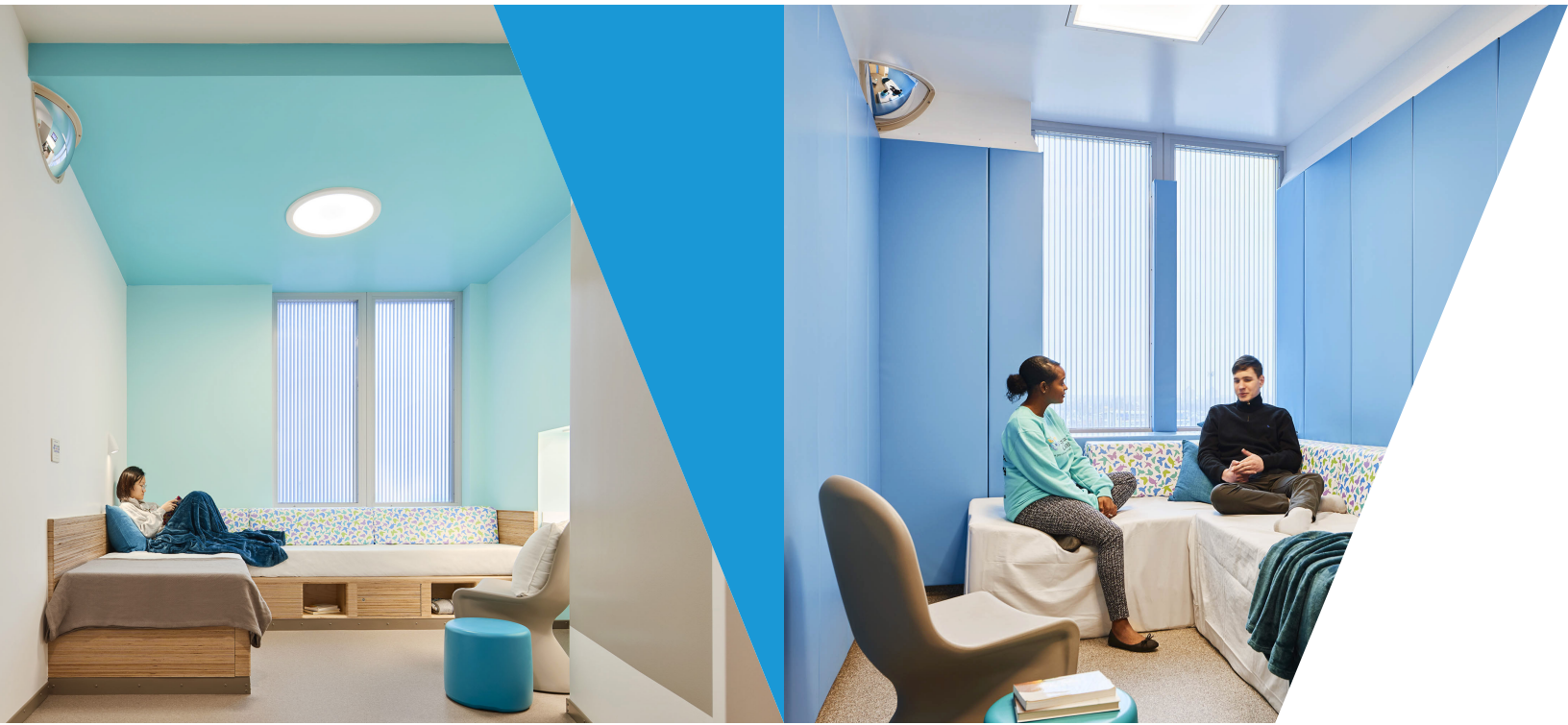


## The Challenge

Behavioral and mental health facilities have unique requirements to ensure patient and staff safety, including good visibility into patient areas and materials that protect patients and staff from harm. Because Unicel Architectural has a strong track record of supplying materials to other behavioral and mental health centers, it was approached by NBBJ's Columbus office to deliver an integrated louvers product to provide safety, comfort and natural light along with vision, temperature, light, and sound control. The hospital also required the louvers to be vertical – rather than the typical horizontal alignment – to match the building envelope's vertical line-themed design.

To ensure safety, the client required replaceable, shatter-resistant polycarbonate panels on the interior (patient) side of all exterior windows, ligature-resistant operators that could be removed as needed, and low-profile interior doors featuring 1/2" (12.5mm) shatter-resistant polycarbonate on both sides.





## The Solution

Because Vision Control® integrated, ligature-resistant louvers are made of extruded aluminum with pivots (rather than the alternative of cord-suspended blinds), the client quickly realized it was the right product to meet the vertical louver alignment specification while also helping to ensure patient and staff safety:

- The interior 1/2" (12.5mm) polycarbonate, which could have been integrated within the window units, was instead installed separately to meet the glazing requirement of replaceable polycarbonate on the patient side.
- To meet the removable operator requirement, Unicel Architectural initially provided a model that inserted the crank handle into the glass stop to turn the shaft inside – leaving only a small hole on the stop, rather than something protruding. However, this hole created a new problem: The patients were filling it in with whatever materials they had on hand, from pencils to Play-Dough. After brainstorming with subcontractor Anderson Aluminum Corp., Unicel modified the assembly to hide the hexagonal socket inside the glass stops, ensuring the stops remained smooth and tamper-proof.
- For the interior doors, because the architect was again looking for a low profile solution, the final design used 3/8" (10mm) LEXAN MR10 polycarbonate on both sides.

## The Results

Having opened its doors in March 2020, the Big Lots Behavioral Health Pavilion now boasts more 307 exterior Vision Control units with vertical louvers and glass stops in glossy white and custom gray, each perfectly suited to the architect's specifications. The extensive exterior windows provide comfort and natural light for patients and staff alike. Staff now have full control over the amount of heat and light passing through the windows at all times of day, while shatter-resistant polycarbonate panels and ligature-resistant controls ensure safety.

On the inside, the pavilion's 120 Vision Control units and low-profile door trims with horizontal louvers provide patients with much-needed privacy and sound dampening. Staff, on the other hand, can discreetly observe patients in private or common rooms through good sightlines and easily adjustable louvers (when adjusted correctly, louvers provide a feeling of privacy by allowing observers to see in, while patients cannot see out). All aluminum frames, polycarbonate sheets, and glass stops successfully passed American Architectural Manufacturers' Association (AAMA) 501.8 performance testing for resistance to human impacts (2,000 ft-lbs).

## Participants

**Architects** – NBBJ

**General contractor** – Turner Construction Co.

**Exterior subcontractor** – Anderson Aluminum Corp.

**Interior subcontractor** – Norwood Hardware & Supply Co.

**Manufacturer of Vision Control® integrated cordless louvered glazing** – Unicel Architectural Corp.

### Requirements:

- Vertically integrated, ligature-resistant louvers
- Removable, shatter-resistant interior polycarbonate panels
- Removable, tamper-resistant window operators
- Low-profile interior doors with shatter-resistant polycarbonate

### Solution:

- Custom designed, ligature-resistant Vision Control integrated louvers
- Separately installed, shatter-resistant interior 1/2" (12.5mm) polycarbonate panels on windows and doors
- Low-profile, removable, tamper-resistant operators
- AAMA 501.8 tested frames, glass stops and polycarbonate

