



# Interior Magic

**Aesthetically pleasing aluminum screens provide safety**

By Patricia Brehm, Associate Editor

*"The façade is magical," says Ron van der Veen, Metal Architecture Design Award Judge. The façade he refers to is the 150-foot atrium at the **Elmer Holmes Bobst Library at New York University in New York City** that features giant aluminum screens. Designed by Joel Sanders Architect, New York City, the approximately \$2 million screens serve the dual purpose of providing a fascinating interior façade while also acting as a suicide prevention tool. According to Judge Mark DeWalt the façade creates a "dual image that is transparent, yet at the same time, solid."*

The aluminum panels were fabricated by Maplewood, Minn.-based MG McGrath. Mike P. McGrath, president, explains that while other metals such as steel were considered for the project, aluminum was ultimately the best choice due to weight and structural properties. "[Aluminum is] easy to machine and readily available in the different types of sizes needed," he says. "For the panels themselves, it was 19 feet long by 5 feet wide, which is very difficult to get with other metals."

The panels that create the distinct screens do not appear to have a discernable pattern, notes McGrath, despite the fact that the screens have five patterns that repeat through each elevation. In addition, the perforations on the panels vary the amount of light that streams through. The south has the smallest amount of light streaming through, while

the north has the greatest amount of light. The east and west receive about the same amount of light. McGrath explains that the different lighting percentages are deliberate and conform to the atrium nature of the space.

The fabrication process was of critical importance to the project and of particular interest to the Design Award Judges. Before any fabrication was completed, McGrath had to find the right workers willing to work around the library's tight schedule. The library was open throughout the fabrication and installation process, meaning the crew had to work at night, typically from midnight to 6 a.m. "We had a real small window of opportunity to work every day," McGrath explains. "We didn't have any storage space, so we had to box in the center of the atrium on the ground floor. What came in that day





would go up in the air in the next few days after that."

In addition to the project's tight schedule, the atrium required precision fabricating. There are 361 panels in the project. MG McGrath took the 6,601 square feet of 1/4-inch-thick T6 raw aluminum sheets and used a CATIA model, later translated into AutoCAD, to guide the process of using a water jet to cut the panels. The front and back sides of the panels were non-directionally sanded to give the panels a clean finish after the water jet cutting. Each panel leveraged 21 clips on the right and left jams. To place a concealed weld on the panel, MG McGrath had to pre-heat the aluminum to 180 degrees using an oxyacetylene torch before the metal would accept a weld. The panels were then finished by Schofield, Wis.-based Crystal Finishing in a Kynar Gold Metallic coloring from Arkema Inc., King of Prussia, Pa.

To creating an aesthetic that complimented the pre-existing architecture, the gold coloring of the aluminum panels matches the existing railings found on each floor of the library. The library was

originally constructed in the 1970s by acclaimed architects, Philip Johnson and Richard Foster, so adding the new screen element was a bit of a risk. The design and installation of the panels required weekly collaboration between Sanders; general contractors Skanska USA, Queens, N.Y., and SHoP Construction, New York City; and MG McGrath's team.

The patterned screen's purpose complements aspects of Johnson's original design. "Although retooled for the 21st century, our patterned screen was inspired by mid-century architectural precedents," says Joel Sanders. "[The inspirations] include Johnson's bronze metal balcony railings in the atrium at the New York State Theater at Lincoln Center and decorative grilles designed by Johnson's peers, such as Edward Durrell Stone."

With mid-century inspiration in a design for the 21st century, the end result is a work of precision fabrication and interior design that according to McGrath, pleases all parties, especially the building owner, New York University. 

## Elmer Holmes Bobst Library, New York University, New York City

**Completed:** August 2012

**Total Square Footage:** 33,000 square feet

**Building owner:** New York University, New York City

**Architect:** Joel Sanders Architect, New York City, [www.joelsandersarchitect.com](http://www.joelsandersarchitect.com)

**General contractors:** Skanska USA, Queens, N.Y., [www.usa.skanska.com](http://www.usa.skanska.com), and SHoP Construction, New York City, [www.shop-construction.com](http://www.shop-construction.com)

**Metal screen fabricator/installer:** MG McGrath, Maplewood, Minn., [www.mgmgrath.com](http://www.mgmgrath.com)

**Metal screen finisher:** Crystal Finishing, Schofield, Wis., [www.crystalfinishing.com](http://www.crystalfinishing.com)

**Coating:** Arkema Inc., King of Prussia, Pa., [www.arkema-inc.com](http://www.arkema-inc.com)