



The lobby shines with a refurbished floor, new desk and lighting, and LED display screens. Photograph by Monica Meehan.





## A NEW LEASE ON Light

Take a peek behind the (busy) scenes of the Museum of Art's epic centennial renovation.

BY MICHELLE GALLAGER ROBERTS



When the New Mexico Museum of Art opened its doors as a purpose-built art gallery for the Museum of New Mexico in 1917, the building exemplified a new/old style of architecture that helped to define Santa Fe Style. As the celebration of the New Mexico Museum of Art's 100th anniversary approached, museum staff prepared to give the architecturally significant building a thoughtful renovation. Our challenge was two-fold: to reveal and restore the original elegant simplicity of the interior public spaces, and improve the visitor experience by creating a more welcoming entrance with brighter galleries.

This would build on a series of substantial improvements to the historic building that staff have overseen in the past few years, including the restoration of the courtyard garden; repair of the museum foundation and west wall; reroofing to protect the interior spaces from water penetration; and improved security systems, environmental systems, and fire detection and suppression.

Closing to the public for a little under 10 weeks, museum staff were faced with a monumental task: de-install the current exhibitions, undergo renovations, and then reinstall the entire museum. We were determined to accomplish our goals and open for the museum's 100th birthday party with the building looking its best.



Workers from Advanced Concrete Design in the Beauregard Gallery, after they removed the initial layer from the floors with a terrazzo grinder. Photograph by Michelle Gallagher Roberts.



The most complex and least predictable part of the planned renovations was the restoration of the floors throughout the building. When the museum first opened its doors in 1917, the hand-poured concrete floors were a light color which helped to reflect light up onto the walls and ceiling. A detailed examination of the concrete throughout the museum showed a mix of challenges. After 100 years of use and various treatments, the floors had become dark, discolored, and uneven. While the floors had some remedial treatment in the 1980s, by 2017, the floors were again in acute need of attention. In various areas, the surface of the concrete was spalling (partially deteriorating and separating).

For over 18 months prior to the start of the renovation, museum staff worked with our general contractor, J. M. Evans, Inc., and various concrete specialists to find a method that would both restore the floors to their original appearance and stabilize the areas in need. We tried several methods, including chemical and mechanical removal. Due to the various surface treatments used over the years, all attempted chemical treatments failed. We also had concerns about using chemicals near the historic plaster walls. Working with the Museum of New

Mexico Conservation Bureau and the New Mexico Historic Preservation Division, we identified the best solution to achieve our goals with the least amount of risk: grinding, polishing, and sealing 13,200 square feet of floors, plus 420 square feet of stair treads and risers. It was clear from the start that every section of the floor would offer a unique challenge, as the concrete mixes in different areas had various colors and textures. We wouldn't know exactly what we would be facing until the discolored surface treatments were removed.

Advanced Concrete Design, the floor subcontractor, completed the first stage with a terrazzo grinder, which uses different grades of stones (from coarse to polishing) to achieve a glossy finish. ACD workers also hand-cleaned about 15,000 linear feet of joints. The grinding and polishing process removed approximately  $\frac{1}{32}$  inch of floor surface, and in some areas, exposed the sand and stone aggregate below. ACD applied a water-based densifier to the surface in order to solidify and strengthen it. They consolidated voids and areas of spalling with a color-matched concrete epoxy, and applied a final two coats of a clear low-sheen sealer throughout the museum.

The grinding process created a lot of dust, and while workers sealed the floors, no one was allowed to walk on them. There was a running joke among the staff about finding new and imaginative pathways around the building in order to avoid the floor rehabilitation process; it was not an uncommon sight



The staircase leading up to the second floor, post-renovation. Photograph by Michelle Gallagher Roberts.

to see people using the roof to get from one side of the building to the other.

The two staircases in the museum had the potential to derail the renovation schedule. The large terrazzo grinders couldn't be used on the stairs, so workers had to use small, hand-held grinders. At some point in the past, someone had covered and then painted the surface of the stair risers. We knew the plaster was hiding something; we just didn't know what. Since the plaster had started to crack and chip off in large sections, leaving it alone wasn't an option.

After the grinders removed the paint and plaster, we finally saw what had been hiding. It appeared as though an additional two inches of concrete had been added at some point in order to make the stairs taller. The point at which the two pieces of concrete met, which was clearly visible on the stair riser, had a very noticeable crack, with significant voids. Some stairs had bigger cavities than others. The general contractor and the New Mexico Historic Preservation Division staff hypothesized that perhaps when the stairs were first poured, they were too short to reach the second floor, and an additional two inches of concrete was added. Over the years, the seam had cracked and separated. To solve this problem, workers filled the voids and cracks with a bonding agent, and painted the risers with a neutral matching color. We chose not to paint the stair treads, letting their natural concrete color shine through a clear sealer mixed with grit to provide traction.



When the museum first opened its doors, natural light was an integral part of the architecture. Windows and skylights provided illumination throughout the building. Our goal was to reintegrate this key feature while still allowing the museum staff to control the light, as it is damaging to the artwork and historic woodwork located throughout the museum.

The windows' existing UV film, which had been added at some point in the past, had deteriorated to the point that edges were peeling and curling, and it no longer served its purpose. Sol Solutions, a Santa Fe-based window tinting company, replaced the existing UV film with new film to reduce the visible and UV light in the spaces, with minimum intrusion of the historic architectural features. The new UV film also increases the energy efficiency of the windows. A great deal of



A window with a new UV-filtering cover in the Beauregard Gallery.  
Photograph by Michelle Gallagher Roberts.

heat enters the building during the summer months through the windows. As a museum, it is imperative that we maintain, to the best of our ability, a stable interior climate in order to preserve the artwork. We also want to minimize the amount of electricity required to cool the building during those high-heat months.

We also replaced the non-moveable window covers with roller screen shades. These shades offer additional unobtrusive UV protection for the artwork, historic woodwork, and furniture. The sheer material allows light to enter the room while reducing glare and softening the view to the outside. We have the option of raising the window shades and allowing visitors to view the building architecture and surrounding cityscape when light control isn't mandatory for an exhibition, or during different times of the year when the sun doesn't shine directly through a window.





The Goodwin Gallery during the renovation process. The newly uncovered windows at the far end shed light on the entrance to St. Francis Auditorium. Photograph by Michelle Gallagher Roberts.

The lower floors of the building have skylights in almost all the bays. They historically allowed natural light into the spaces, as windows are limited in this area. Over the past 100 years, various directors have made the decision to cover or reopen the openings. New Mexico's light is very intense, and difficult to deal with in an exhibition space. The skylights also leaked repeatedly. Taking advantage of current technology, staff worked with J.M. Evans, Inc., to reintroduce this feature back into the galleries in a limited fashion. Workers rebuilt three skylight bays with new insulation, and increased the pitch and slope so they would drain better and reduce the chance of leaking. Unfortunately, given the manufacturing lead time and the

limited time frame of the renovation, they were not ready for the November reopening. Three Kalwall S-Line skylights were added in March 2018. The new skylights allow a diffused and muted light into the spaces that changes throughout the day and with the weather.

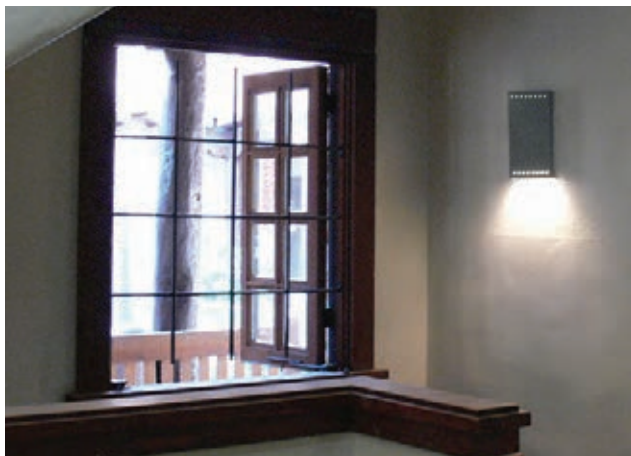


Over the years, walls had been added throughout the building to accommodate the needs of various projects and exhibitions. Even after their original purpose ended, they remained in place. We identified these walls and removed them. Once they came down, the very modern nature of the original architecture shone

through. One notable example is the alcove near the back doors to St. Francis Auditorium, at the top of the ramp to the New Wing. When we took down the wall and removed the water fountains hidden behind it, it exposed a window overlooking the courtyard which had been covered up for more than thirty years. This window now reveals a beautiful vista into the garden, and helps visitors spatially place themselves within the building. During this process, removing walls also restored sightlines to windows, doors and across galleries.



New Mexico is a state of talented craftspeople and makers. The museum has used locally sourced, handcrafted items whenever possible since its inception, and we aimed to uphold that tradition. All of the contractors who worked on the project were based in Santa Fe or Albuquerque. Additionally, we worked with local artisans when replacing fixtures and furniture. Alchemy Lights, a Santa Fe-based company, designed and handcrafted the museum's new stairway light fixtures. The chosen material, tin, is reminiscent of historic fixtures and compliments the museum architecture, but would not be confused with an original element. Punched tinwork is a traditional craft in New Mexico that is often used to create wall sconces and chandeliers. The museum lobby has punched-tin chandeliers created in the 1930s and in the 2000s. The new stairway sconces pay homage to this tradition, but with a



The new stairway wall sconces combine tinwork, a traditional genre, with a contemporary design. Photograph by Michelle Gallagher Roberts.

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thoroughly modern design. They replace frosted glass and chrome stairway sconces from the 1980s.

We also worked with talented craftspeople when updating the museum's versatile lobby, where we greet museum visitors, host receptions, and receive people who are on their way to events in St. Francis Auditorium. In addition to the dramatically lighter floor, we installed new recessed LED lights that mimic the undulations of the latillas, and help to increase the overall illumination of the space. The recessed lights replaced mismatched track lighting added over the years, reducing visual clutter near the ceiling. As a result, many longtime visitors now comment on the carvings on the corbel ends, having never noticed them before.

The two reception desks have been replaced with one custom-designed desk. Ulibarri Construction of Albuquerque worked with our designer and staff to handcraft a unique desk for the museum. Materials, design elements, and colors were specifically chosen in order to complement the historic features. The quartz counters' appearance echoes the concrete floors. The cherrywood is similar in color to the woodwork throughout the lobby. As the wood in the desk ages, it will further darken and take on a similar patina as the columns. The panel design evokes the panels on the historic doors.

We also moved the desk farther down the lobby towards the gift shop, which gives our visitors more space in which to adjust to the light change from outside, and to decide on whether to

## By The Numbers:

- ▶ 3 new LED signs in the lobby
- ▶ 3 gallons of Johnson's paste wax
- ▶ 12 feet of new exhibition track lighting added
- ▶ 16 new light fixtures in the stairways
- ▶ 23 new pedestals fabricated
- ▶ 24 new window shades
- ▶ 24 pieces of historic furniture cleaned and waxed
- ▶ 28 new light fixtures in the lobby
- ▶ 204 gallons of paint
- ▶ 226 objects installed in three exhibitions
- ▶ 576 window panes installed with new UV film
- ▶ 1,110 linear feet of new baseboards installed
- ▶ 13,200 square feet of floors, plus 420 square feet of stair treads and risers, refinished
- ▶ 15,000 linear feet of concrete expansion joints cleaned by hand and sealed

purchase tickets. We added new, ultra-high definition digital monitors to entice people deeper into the space to view ticket prices, current exhibitions, and upcoming programs. The digital signs eliminate the need to reprint signs every time prices or information change. The glass doors off the lobby into the gift shop have been replaced with a locally created wrought-iron gate which is easier to see, and folds more compactly. A new coat rack and bag check has been designed in the same style as the reception desk, and will be produced as soon as the necessary funds become available. All of these changes add up to a lobby that now feels lighter, bigger, and more welcoming.



Given how quickly we needed to turn around the exhibitions for the reopening on November 25, 2017, renovation tasks had to happen simultaneously. Once the floor refinishers left a space, the painter would enter. We also painted areas not usually altered during an exhibition change-out, including the ceilings in the Roland, Goodwin, and Clarke galleries, stairways, and the lobby. Once the paint was dry, exhibition installers moved into the space.

The floor refurbishing process created a lot of dust that lodged in the museum's windowsills, doorways, ceiling latillas, and vigas, and so a crew of security staff trained and led by the museum's collections manager, Erica Prater, went to work to refresh the historic wood, which needs ongoing attention in New Mexico's arid climate. They also used cotton swabs and rags to clean more than 24 pieces of historic furniture. Gently cleaning woodwork with archival soap, and then waxing it helps to preserve it for future generations.

Throughout the renovation process, we were repeatedly asked what our Plan B was if we didn't finish on time. Our answer was always the same: "There is no Plan B." We would open on time, and looking good. There was no way we wouldn't be ready for our own birthday party!

With over 7,600 people showing up on November 25, 2017 to see our hard work and efforts, we couldn't disappoint. Based on the comments we have received, it seems unanimous that we succeeded in our efforts to make the building shine. ■

**Michelle Gallagher Roberts** is the New Mexico Museum of Art's head of registration and collections, and served as renovation project manager.





A refurbished floor and updated wall configuration in the New Wing gallery. Photograph by Monica Meehan.