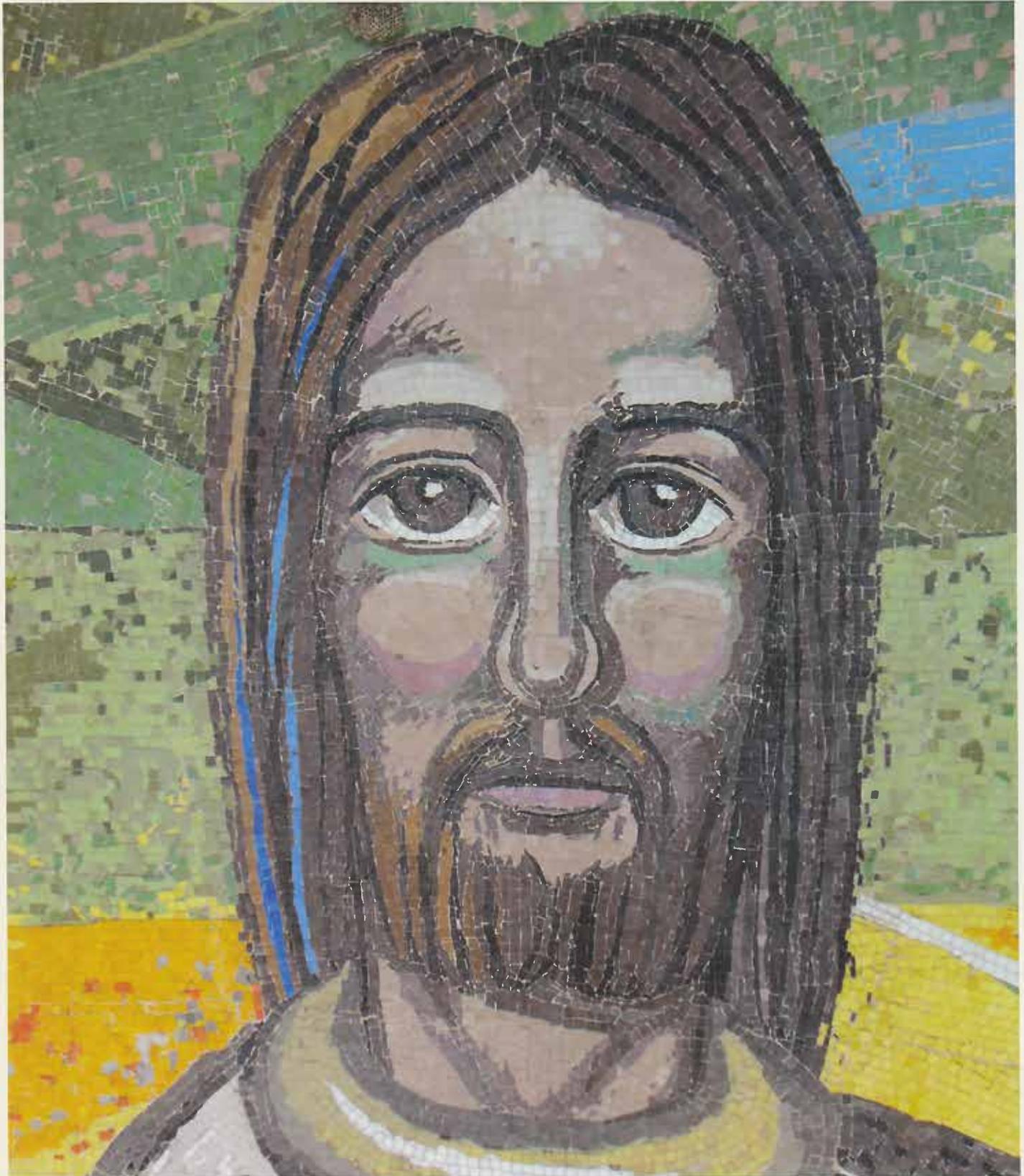


# STAINED GLASS

THE QUARTERLY MAGAZINE OF THE STAINED GLASS ASSOCIATION OF AMERICA

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# LANDMARKS:

## ARIANA MAKAU & NZILANI GLASS CONSERVATION

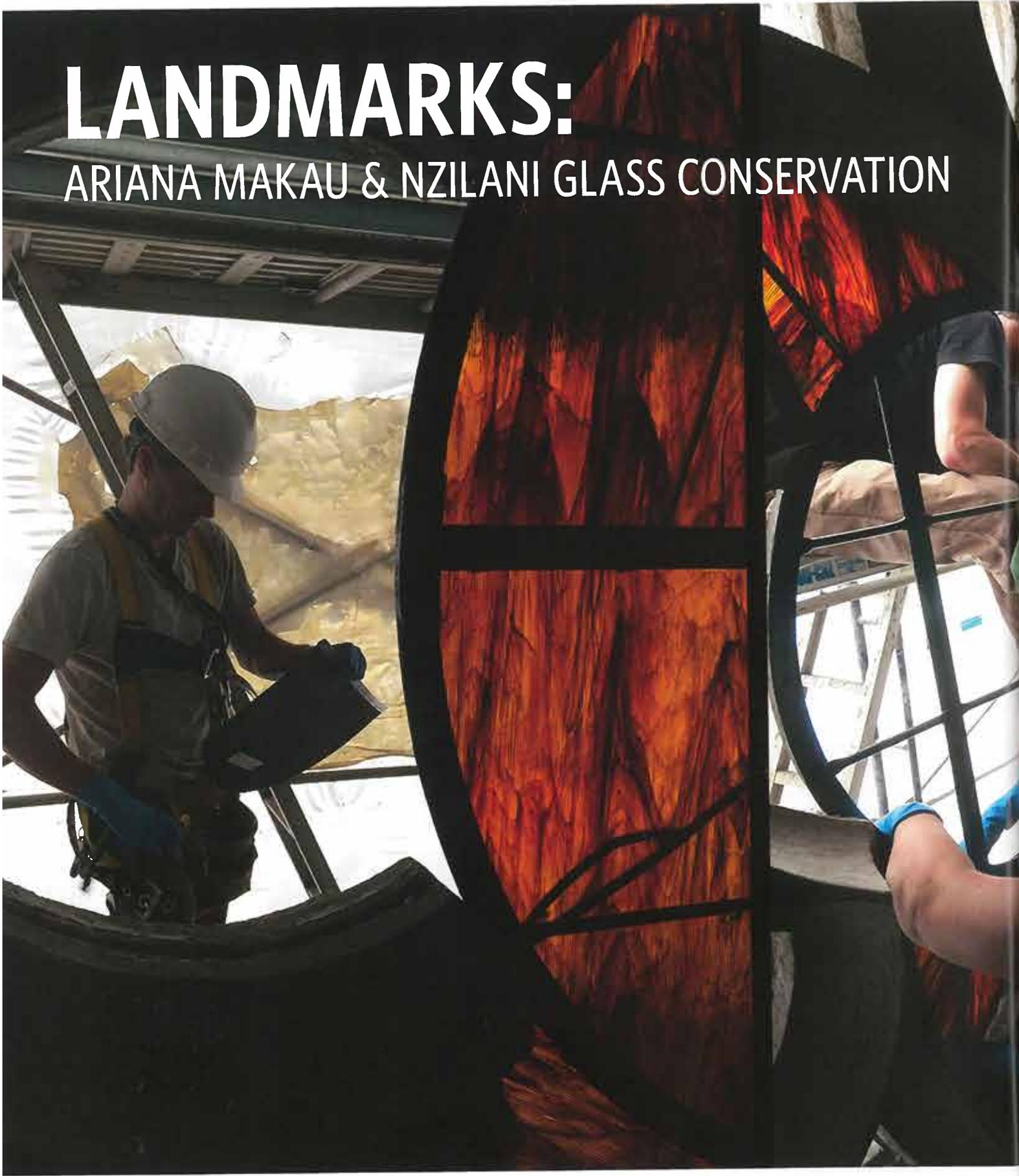




PHOTO: TOMMYNGUYEN

by Melissa Barclay

**A**riana Makau is President, Founder, and Principal Conservator of Nzilani Glass Conservation (est. 2003) which is situated in the New Daylight Studios Building located in the “Dogtown Art District” on the West Oakland border. Despite ongoing gentrification, people who live and work here care about preserving the ambience of the neighborhood just as Ariana is committed to the preservation of stained glass.

While taking a course in Paris as part of her BA in Studio Art from Scripps College, Ariana realized that stained glass was her calling. An internship with the Antiquities Conservation Department at J. Paul Getty Museum (1993-94) was pivotal in plotting her professional trajectory toward conservation rather than just as an artist producing new work. “I just had a prescient feeling,” she says. “This is where I want to be. There’s an accent on art that a lot of disciplines don’t have. The confluence of science and art history, plus the challenge of reproducing techniques from someone else’s hand really appealed to me.”

Ariana went on to pursue a Master’s in Stained Glass Conservation at the Victoria & Albert Museum (V&A)/Royal College of Art, London. The graduate program required working in the museum’s Stained Glass Department conserving pieces for exhibits. Most ranged from the 17-19C, but in her final year, she had the rare opportunity to conserve c. 1144 roundels from St. Denis Cathedral in France.

“The studio space was small but efficient, in the upper levels of the museum. I learned so much there,” Ariana says. Training came from Department Head Agnes Holden as well as her roommate and best friend, Liza Enebeis (currently Creative Director at Studio Dumbar, Rotterdam, NL). Enebeis was studying graphic design, which appealed to Ariana’s love of layouts and the precise side of documentation. “How” Nzilani conveys information as well as “What” the content is, continues to be pivotal at the company.

While in England, Ariana interned at Canterbury Cathedral Studios and at Goddard & Gibbs in London. She toured French studios to view their approach to conservation. The name Nzilani (zee-LAH-knee) originates from a tradition of the Akama people of Kenya. A child is given one name at birth and a second name when they ‘come into their own’ later on in life. Upon receiving her Master’s degree, Ariana’s father gave her the name Nzilani, after his mother Tabitha Nzilani Makau,

The Nzilani Team during installation of temporary streaky glass at Grace Cathedral.



PHOTO: ZOE FROST

who lives in rural Kenya. Ariana received her grandmother's blessing in using her name for the company during a 2007 visit to East Africa.

After graduation, Ariana spent a year at New York's Metropolitan Museum of Art as a Kress Fellow in Advanced Training in Conservation (working on LaFarge and Tiffany glass), before returning to her native California to start working professionally.

Churches, public and private buildings, and residences request Nzilani's specialties in glass conservation, new work, consulting, and survey condition reports. The company has a team of 14, some with a studio background, such as Studio Head Armelle Le Roux. With a BA in Environmental Art from Ecole Supérieure Duperré in Paris, Le Roux is a Master Glass Painter who worked at several studios before joining Nzilani 12 years ago. Others did not formally study art but are skilled workers nonetheless.

Says Makau, "When I started Nzilani, it was just me working on small projects. I was happy in my autonomy. As the company

grew, I became passionate about representing inclusiveness at Nzilani. Employees' backgrounds range from the traditional trades to conservation or artists in various digital or handmade media, but they all share a passion for stained glass. The strength of our group is based on our differences and gathering of skills specific to our profession. Nzilani continues every year to build on our reputation of excellent work produced by a diverse group of extraordinary individuals."

Nzilani's core values of "Be Safe. Have Fun. Do Excellent Work" are woven throughout everything the company does. Safety is taken seriously, with EPA certifications, OSHA training, each employee being fit-tested for PPEs (personal protection equipment), lead bloodwork carried out every six months, plus separate rooms for clean/dirty work, and eating. Weekly meetings follow the format of core value headings, with "Have Fun" often announcing employees' art openings or poems read out to the team. Past parties have featured a band comprised entirely of "Team Nzi" members.

"Excellent Work" is recorded by monitoring each panel



PHOTO: JEREMY EHLING



PHOTO: ARIANA MAKAU



PHOTO: ARIANA MAKAU

throughout the conservation process—from initial photography and rubbings, to soaking, dismantling, and rebuilding—with a customized Excel document. Both analog and digital, it affords Nzilani the advantage of providing clients with accurate percentage of complete performance on a weekly basis. One can instantly see the global view of a whole project, or drill down to one lancet or just one panel. Color-coordinated charts, masking tape, folders, and drawers assist in the organization of the studio and increase efficiency.

Nzilani takes advantage of modern technology using iPads to document the stained glass treatment process of this ancient craft. Daily input eventually becomes final treatment books which are printed out-of-house by a professional printing company. With the internet, the team is flexible. One staff member moved to Oregon, and has been able to continue to work remotely as a contractor in documentation, having first mastered the Nzilani shorthand in-house.

### Recent Projects

St. Boniface, an historic landmark built soon after the 1906 earthquake, is located in the heart of San Francisco's Tenderloin. German-Italian architecture reflects the history

of its original immigrant parishioners, especially in over 50 c. 1908 windows by Von Gerichten Studios. (For more on this studio, please see Spring 2017 issue of *Stained Glass Quarterly*.)

Already aware that the century-old windows needed care, St. Boniface requested assistance from Nzilani, who carried out a survey in September 2012 on St. Boniface's jewel-like windows. The windows were cracked, bowed by gravity and time, and the paint was not well-adhered to the glass. Taking into account the church's limited funds, St. Cecilia (labeled "Phase 1 - Priority 1" in both location and condition) was identified as the most cost-effective choice to start. The window had easy interior access via a balcony, eliminating the need for interior scaffolding, so the public could view the work up close after treatment, garnering more support for future work.

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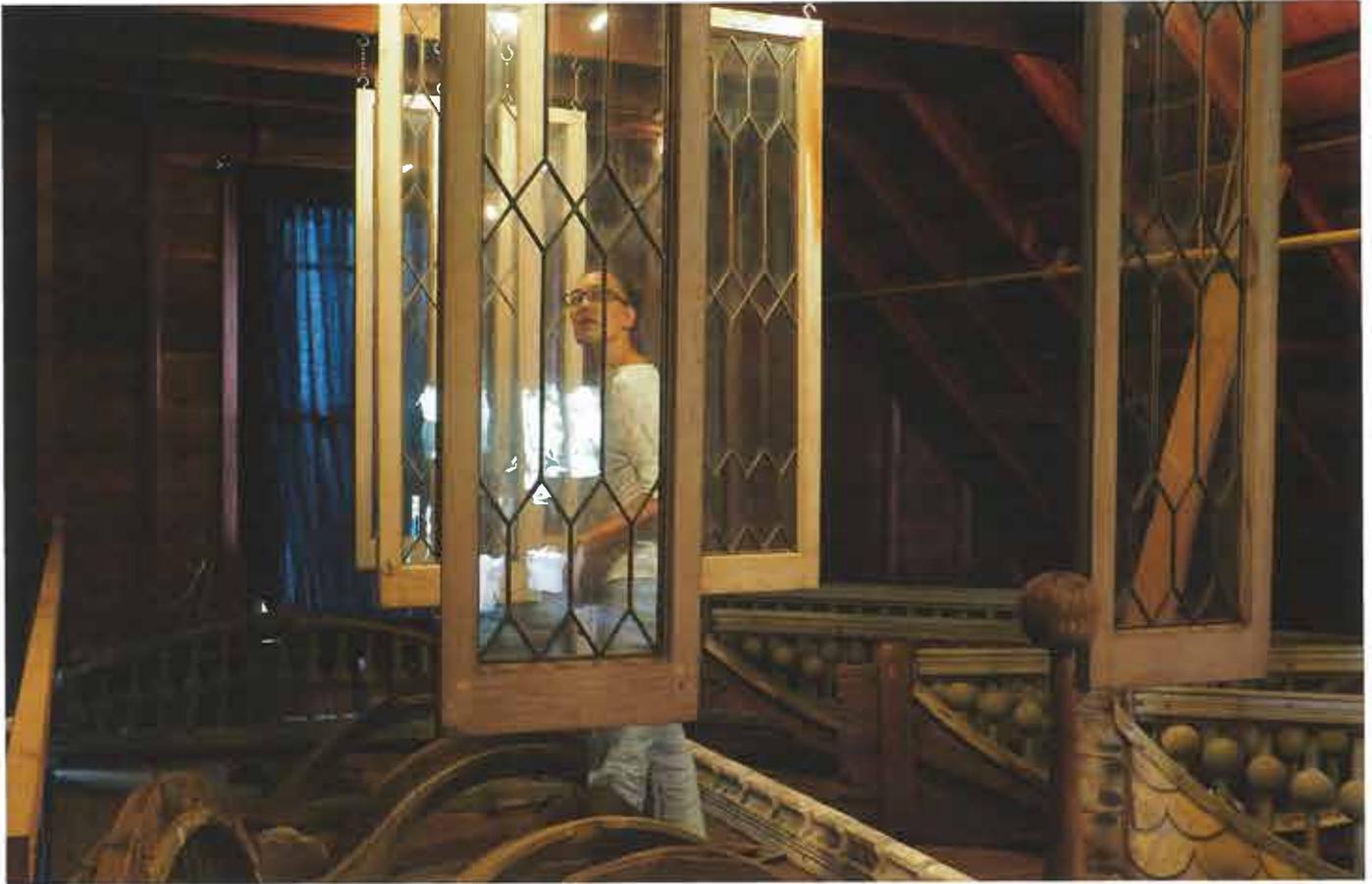
Ariana Makau consolidating Tiffany Window 'confetti glass'

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Nzilani 'Command Center' with window maps, job pockets & labels.

**St. Cecilia** (detail).

Printed surveys: St. Vincent de Paul, Grace Cathedral, St. Catherine of Siena, St. Ignatius, and Glide.



Delaminating paint was the most critical condition addressed during treatment. Nzilani collaborated with another conservator to create a consolidant delivered by airbrush. The technique returned the luminosity to the surface while adhering the remaining vitreous paint onto the glass, preserving what little paint remained. Nzilani's work also set standards for future replacement pieces. One previous repair included improperly painted thicker glass installed in situ.

During Nzilani's dismantling process, small areas of intact paint were discovered preserved under the lead flange. Referencing these sections, the options were to paint new replacements as they appeared originally or emulate the deterioration (albeit properly fired) so the new replacements would fit in seamlessly with the surrounding pieces. The church opted for the latter. Repair and conservation were completed in 2014.

About the same time, the church's namesake window *St. Boniface*, valued at \$35,000, was stolen from the church. Utilizing Nzilani's completed survey, the church was able to provide photos and a description of the purloined window to local police, who contacted area pawn shops and subsequently recovered it in a Mission District shop a few miles away. The SF

Police Officers Association chipped in to buy back the window. SFPD Lieutenant Joseph Nannery continues to be motivated to track down the thief, as he has a special connection to *St. Boniface*. "My grandmother used to go to church there, so it's a little personal with me," he said. Upon its return, Nzilani team members firmly anchored the window in place.

Another historic landmark *St. Vincent de Paul*, located in San Francisco's Marina District, was built as a showcase for the 1915 Panama-Pacific Expo. The Swiss-inspired church contains 61 windows of 1940s stained glass by Carl Huneke, founder of Century Stained Glass Studio. The German-born immigrant began his apprenticeship in stained glass at age 13 and brought his craft with him to America in 1925, founding his studio on Fillmore Street, San Francisco in 1940. During his lifetime, he provided 1,200 windows for about 80 California churches.

Larger windows comprise 16 panels each, and consist of a triple lancet topped by rose traceries. Figure windows 35' high line the nave.

The Swedenborgian Church, another San Francisco historic landmark, was built by renowned Arts & Crafts Movement

Ariana Makau assesses various panels hung in a temporary display at the Winchester Mystery House.

architect Bernard Maybeck in 1895. It has two windows—*The Dove* (1905) and *St. Christopher* (1897)—designed and built by Bruce Porter. A key figure in the San Francisco arts scene, Porter (1865-1953) was directly influenced by two glass artists he visited on his travels: John LaFarge and Edward Burne-Jones. He subsequently applied the era's most modern innovations, aesthetics, and techniques to glass, and used minimal painting on clear glass, creating the window design with multiple layers of opalescent glass and lead lines. Porter also has windows in other California churches.

In 2012, the deterioration of the church's glass was immense, as parishioners noticed that pieces were falling out of the *St. Christopher* window. Called in to assess the window's condition, Makau recommended a complete reglazing of the two panels that compose the window. "There was a certain blue glass that fell apart as we touched it," says Ariana. "I've never seen anything like it before. It appeared to be badly annealed, and most likely came from the same sheet or batch."

Since *St. Christopher* was relatively accessible via stepladder and not part of the architecture (its original installation was an internal, removable hinged frame), the studio workers approached the window almost like a museum piece. Porter was known for the detail and thoughtfulness of his glass choices, "painting with color" rather than glass paint, making the preservation of the glass truly paramount. Therefore, the blue glass was heavily consolidated to maintain his original glass choice. If the treatment proves not to be strong enough, the entire window can easily be removed for additional work in the future. A new wood frame incorporating the original hardware was created by Al Wengard, octogenarian master woodworker at New Daylight Studios, who replicated the design and used the original hardware in keeping with the artist's intention.

In 2014, the *Dove* roundel (another Porter design of a dove perched on a chalice, with platted glass) was assessed in conjunction with other treatment at the church. Since this window was part of the building's architecture, it had to be treated as a landmark itself. Immediately, upon close assessment, an unfortunate discovery was made: the identical blue glass had been used, and appeared to be in a similar condition. Access was very difficult as the original ceramic roof tiles had to be moved individually by hand in order to provide a workspace for Nzilani. Due to their previous experience with the *St. Christopher* window, the decision was made to replace all the unstable blue glass. Sourcing matching glass proved problematic, as some of the blue shades are no longer available. Makau and Le Roux worked in conjunction with Ted Ellison, owner of Theodore Ellison Designs and Porter expert, to find glass that matched in texture, transparency, and color. Eventually, using combined old stock, the team



PHOTO: DOUGLAS STINSON

arrived at a platted solution that worked. Again, the goal was to restore the artwork to its original condition where possible, only replacing glass and materials as a last resort. This resulted in a complete rebuild.

In early 2015, Makau returned to Grace Cathedral to create an extensive condition report survey on all 66 windows, with conservation work beginning soon after. The team started on Charles J. Connick's c. 1931 55-foot high, 569 square foot, 303-panel, 12,000-piece *New Testament* window located in the South transept. The *New Testament* design consists of a central large rose and six concentric roses above five lancets. This was not Makau's first time conserving stained glass here. During her tenure at Reflection Studios (1998-2002) as Stained Glass Conservator and Chief Documentarian, she had been involved in repair of the *Virtues* and *Cherubim* window, along with later restoration of three pairs of Connick apse windows *Archangels*, *Powers*, and *Seraphim*, and three windows by Willet. Other "Team Nzi" members also had previously worked at Grace. These projects have been documented in previous issues of *SGQ* (Spring 2002, Summer 2008).

Al Wengard, master carpenter.



Augmenting on previous experience, Nzilani contracted site hygienists to monitor every step of the conservation process, both on-site and in the studio, to meet state and federal regulations, and to keep team members safe. Following established company procedure, each member of the site team passed a three-day course and is a certified lead worker, which qualifies them to work on-site within containment areas, and to remove and install panels instead of handing off to third-party vendors without expertise in stained glass.

Nzilani's crew extensively photographed and noted the condition of each panel before removal. The windows suffered from material fatigue, water seepage, and old in-situ repairs. Lead channels had deteriorated, and holes were allowing water to seep in. In some cases, a hand-mixed putty solution of linseed oil and calcium carbonate had migrated onto the glass surface, resulting in amber-colored globs. Leads had oxidized, middle sections were bowed, and fillets were cracked. Once removed, many sections were held together only by tape. While repairing the window over an eight-month period, the space was filled with streaky amber glass. The *New Testament* window was reinstalled by Easter 2016.

In summer 2016, the corresponding *Old Testament* window (c. 1932) in the North Transept was removed for similar conservation. One advantage of conserving the two windows

back-to-back was that it provided a rare conservation and learning opportunity for Nzilani staff to compare and contrast various aspects of the two windows, using recent memory and hands-on experience. The *Old Testament* window was reinstalled in June 2017.

In July 2017, further conservation work began on five North Quire double lancets in the *Nine Choirs of Angels* series *Thrones, Dominations, Principalities, and Angels*, as well as *St. Ambrose* and *St. Jerome* from the *Latin Fathers* series.

At Beringer Winery, Rhine House, in Napa Valley, Nzilani conserved 41 windows. The 17-room ornate Victorian mansion festooned with gables and turrets is a replica of founder Beringer's youthful home in Germany. It boasts a large collection of stained, painted, and enameled Victorian-era American stained glass. Many windows are decorated with hand-painted jewels in the borders and roundels. For this work, Nzilani received the California Preservation Award for Craftsmanship/Preservation Technology.

"It was interesting to work on an historic building that wasn't religious," Ariana says. "The imagery was obviously different, as was the scale. As in sacred places, we found that there was a certain reverence that people have for stained glass. The tourists were inherently curious (as were the docents) to find out any information about the windows. Since we did a lot of work in situ, our only difficulty was carrying out our job in public spaces without constantly stopping to answer all the thought-provoking questions about what we were doing.

"It was rewarding to work as part of a larger team that wanted to preserve other aspects of the building and grounds. We met skilled woodworkers, historic stencilists, and also worked with an amazing general contractor who appreciated and worked alongside us."

Other recent efforts were completed at the Bohemian Club, the Pacific Union Club's Garden Café, and various historic Bay Area homes. Occasionally, the preservation of landmarked pieces extends outside of leaded glass. Recently, Nzilani assessed the condition of the glass components of the first-order Fresnel lens at Point Reyes Lighthouse, which was first lit on December 1, 1870.

### Museum Glass Conservation

In 1999, Ariana conserved two c. 1516 panels by Hans Holbein the Younger for an exhibit "Painting on Light: Drawings and Stained Glass in the Age of Dürer and Holbein" at the J.

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View from inside the Fresnel lens, Point Reyes Lighthouse, Point Reyes Station, Marin County, CA.

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Before, during, and after conservation

Paul Getty Museum. She has also conserved William Morris stained glass at the Huntington Library, and evaluated, repaired, and cleaned the Salviati Venetian glass collection at Stanford University Canter Arts Center for an exhibit.

In 2006, she returned to the Getty to conserve a 4" x 8" piece of *St. John* (Netherlands, c. 1490). Old repair leads were removed, infilled, and painted to the window's original design. In 2014, cracks in the head piece of *St. George with the Arms of Speth* (Zurich, c. 1517) were stabilized and inpainted, and *St. Margaret* (German, c. 1420-30) had old repair leads removed to show the medieval face correctly.

Nzilani employs other conservators on staff besides Makau, which enabled a piece from the Getty to be treated at the studio in 2016. Other recent projects include surveys of the Ft. Bragg Guest House (b. 1892) museum, and the historic landmark Winchester Mystery House in San Jose (b. 1882).

The latter proved to be extremely tricky, as the floor plan of the building was not clear, and windows may have been replaced up to a dozen times on the property. Much of the work has been spearheaded in conjunction with Janan Boehme, Historian and Head of Special Projects at the Winchester Mystery House. The survey reveals the depth and appreciation that Sarah Winchester had for craftsmanship in all aspects of her home, including "zipper cut" beveled crystal, intricate fleur-de-lis patterns, and numerous geometric-pattern colonial zinc comes with gold patina. One goal of the survey is to provide a written and visual database of every window (400+) and eventually return some panels currently in storage back to their rightful place.

## The Future

Ariana combines the day-to-day duties of a small business owner with artistic and community pursuits, all while raising two children with her husband. Stained glass conservation milestones are measured by their children's birthdays.

"I have a 'St. Vincent de Paul' kid (6) and a 'Beringer' kid (10)," she laughs. "Time flies when you're a parent and a business owner. In my mind, all other jobs are either current, or I think we must have done them within the last three years!"

A goal from the beginning, Nzilani can now afford the time to give back to the community. The company is in talks with local youth non-profits to create internships at Nzilani. Says Makau, "The worst-case scenario is that we have someone in the studio for a few months and they leave with hands-on knowledge about stained glass conservation that they can list on their CV. That's still pretty great." A secondary goal is that an internship could segue into permanent employment at Nzilani.

Reaching out to public schools and giving community talks have also increased in the last few years. Nzilani sponsored a day of service, with the entire company teaming up with a West Oakland third grade class organized by The Legacy



PHOTO: ARIANA MAKAU

Project to install a mosaic at their school, all while talking to the kids about the stained glass profession.

"If I get one kid who falls in love with working with glass, I'm happy to inspire them," Ariana says. "Before long, they will be in 12th grade, and perhaps looking for work. Maybe they like math, drawing, working with their hands, or building things. If I've sparked an interest, there's a place they can come."

"We hope to change peoples' perceptions of stained glass," she adds. "So many people are fascinated when I tell them what we do; to them it seems like an antiquated, lost art that is interesting, but doesn't resonate with them personally. If you think about it, society is primed to embrace stained glass. People are walking around, checking their cell phones constantly. What they're actually doing is looking at pieces of glass with color filtered through them. I don't think it's too much of a stretch to use that as a bridge to engage people in what we do and create as artists. Once you make that corollary, people are more open to really look at stained glass as something that is relevant now, as well as being timeless. With that quick 're-view,' you've gained another advocate for the continuing preservation of stained glass."

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*Melissa Barclay received BA and MA degrees in English: Creative Writing from San Francisco State University, loves all manner of stained glass, and has been writing about it for more than 15 years. ■*