

SAN XAVIER DEL BAC

CONSERVATION MANAGEMENT PLAN OVERVIEW

PREPARED BY: PENN PRAXIS
THE CENTER FOR ARCHITECTURAL CONSERVATION

 PennPraxis

 Weitzman
SCHOOL OF DESIGN
UNIVERSITY of PENNSYLVANIA

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PREPARED FOR:
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Acknowledgments

The compilation of this CMP was possible thanks to the thoughtful input, research, and documentation of the dedicated professionals and volunteers who have cared for San Xavier del Bac over the past decades and centuries. We deeply appreciate the participation of the San Xavier parish community, clergy, and staff, members of the Wa:k Community, the San Xavier Feast Committees, and the generous input of Robert Vint, Timothy Lewis, Matilde Rubio, Susie Moreno, and Luke Addington. The staff, Board, and docents of Patronato San Xavier were incredibly generous with their time, offering their insight through workshops, presentations, tours, focus groups, and interviews and helping to facilitate this project. Additional thanks to the professionals, advocates, and scholars who offered thoughts, perspective and assistance throughout the process, including: Nancy Odegaard, Linda Mayro, Brooks Jeffery, David Yubeta, Pat Taylor, Abbey Valenzuela, Eric Means, Austin Nunez, Deni Seymour, David Tenario, Tony Burrell, Peter Steere, Margy Parisella, Simon Herbert, Alex Lim, Gina Chorover, Erica Castano, Monica Young, Helga Teiwes, Jeanelle Weakly and Rachelle Hornby.

Plan Objectives



[Image 1] A group of visiting nuns walks in the plaza. The plaza is lined with ocotillo ramadas where people gather and local vendors sell food and drinks.



[Image 2] View from Wa:k. The Mission is visible from many parts of the residential community.



[Image 3] View of the plaza and Wa:k, looking towards Black Mountain from Grotto Hill.

*Unless specified, photographs within this document were taken by the CMP team.

This overview provides a summary of the Conservation Management Plan for San Xavier del Bac, which was developed in accordance with a Collaborative Agreement between the Stuart Weitzman School of Design at the University of Pennsylvania and the Patronato San Xavier, The Center for Architectural Conservation, and in collaboration with Penn Praxis. **A Conservation Management Plan is “a document which sets out the significance of a heritage asset, and how that significance will be retained in any future use, management, alteration or repair.”** (Heritage Lottery Fund)

Developing a CMP for San Xavier del Bac serves many functions:

- It sets out the significance of the site as a whole;
- provides a clear and comprehensive conservation/preservation history;
- assesses and prioritizes the conservation of various site components;
- outlines recommendations, maintenance schedules, and conservation policies that help to ensure consistency in conservation and management approaches; and
- provides an updateable reference document for how to holistically approach conservation, use, and development based on the retention of significance.

The CMP was developed based upon an understanding of the mission campus as a working parish, spiritual site, place of local, national and global cultural significance, and tourist destination located within the San Xavier District of the Tohono O’odham Nation in Southern Arizona. It describes the Mission’s historical and contemporary significance; sets out a clear chronology of the site including past conservation efforts and alterations; identifies and prioritizes heritage assets and landscape features; and offers a clear set of preservation guidelines that can be used to inform future work, maintenance, and stewardship. The purpose of this plan is to establish management policies that will ensure that San Xavier del Bac is conserved to the highest standards for present and future generations.

This Conservation Management Plan provides a framework for the ongoing care and management of the historic built structures of the San Xavier del Bac Mission campus. It is based on a thorough assessment of the site and its associated heritage values, and provides a range of specific policies and recommendations that will assist with long-term management moving forward. The goal of the CMP is to guide work in a manner that is appropriate to the significance of the site and its elements, and to help ensure that associated values and significance are understood and maintained into the future.

This study addresses only the historic buildings of the Mission campus, which consists of a roughly 14 acre rectangular parcel surrounding the Mission and supporting structures, and does not extend to the Museum Collection, nor the wider setting.

Background

Mission San Xavier del Bac is located within the San Xavier District, a subset of the Tohono O’odham Nation in southern Arizona. O’odham and their ancestors have historically inhabited a large area known as the Papagueria, which spanned what is now southern Arizona and northern Sonora, between the Gulf of California and the San Pedro River. Settlement in the area stretches back thousands of years prior to European contact. Residents of the ancestral village today identify as Wa:k O’odham.

The Mission was established in 1692 by the Jesuit priest Father Eusebio Francisco Kino. The present structure dates to the late 18th century and was constructed under the Franciscans. It is considered the oldest European structure in the state of Arizona and has been in nearly continuous use as a church since it was completed in 1797.

Today, the Mission primarily serves parishioners from the local community of Wa:k, whose ancestors helped build it, and who continue to help care for it for future generations. As such, the Mission San Xavier del Bac represents an intersection of faith, tradition, and culture and holds a deep spiritual meaning to those who worship there.

San Xavier is also an incredibly intricate and architecturally complex building containing one of the finest collections of *in situ* Spanish colonial art in the country. It is a superlative example of regional design and construction, and its envelope and contents are subject to daily wear from use, visitation, and the extreme desert environment.

Since its formation in 1978, the Patronato San Xavier has funded numerous projects to help stabilize the Mission church at San Xavier del Bac. To date, the group’s focus has included the systematic replacement of the cement-based exterior render with a compatible lime-based system, and the intensive conservation of the interior painted artworks. As at nearly all historic sites, conservation and preservation at San Xavier have been limited by available funding and resources. As an active parish church, conservation priorities must also be coordinated and balanced with the needs of the worshiping community.

Work carried out by the Patronato has been approached thoughtfully and intentionally; however, the complexity of the conservation needs throughout the campus require a diligent schedule of cyclical maintenance and upkeep in perpetuity. Moving forward, prioritizing resources and funding and pursuing a conservation program built around preventive maintenance is essential, especially as Patronato San Xavier works to implement a long-range strategy for ongoing conservation and care. The Conservation Management Plan (CMP) will be a critical tool for informing and shaping that strategy.



[Image 4] Interior view of the Mission. Mass is held in the main church on weekends and in the smaller Juan Diego Chapel during weekdays. The church is open to visitors daily, free of charge.



[Image 5] San Xavier is one of the top tourist destinations in the region and more than 200,000 people visit the church annually.



[Image 6] San Xavier is also a regional pilgrimage destination. The small Mortuary Chapel, which sits west of the Mission and is part of the 18th century construction, is also a destination for people making pilgrimages to San Xavier del Bac.



[Image 7] A map showing the location of San Xavier del Bac relative to the American Southwest and northern Mexico.

[Image 8 & 9] This crop and aerial photograph shows the Mission campus and its surrounding environment. The legal boundaries of the campus are indicated by the red boxes. (source: Bing maps)



Patronato San Xavier

Nonprofit Patronato San Xavier was founded by Southern Arizona community leaders in 1978. According to their mission statement, the Patronato "funds and directs ethical conservation, conducts scientific research, and interprets the significance of Mission San Xavier del Bac, a National Historic Landmark in the community of W̱a:k, part of the Tohono O'odham Nation." The Patronato is a non-sectarian, non-denominational 501(c)(3) and does not receive sustaining support from any government or religious organization.

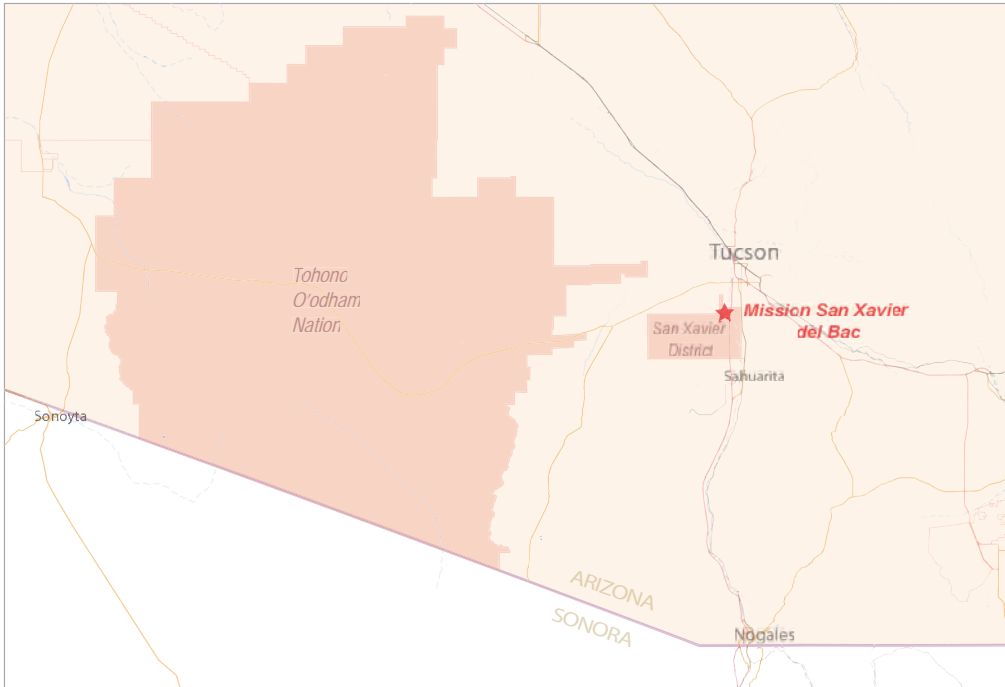
Ownership and Heritage Status

Though San Xavier is located within the San Xavier District of the Tohono O'odham Nation, the San Xavier Mission Roman Catholic Parish LLC, an independent corporation of the Catholic Diocese, owns the Mission campus. The campus boundaries extend slightly beyond the southern and eastern perimeter walls, the parking area to the north, and the Friary and chain link fences to the west (see images 8 & 9). Though perceptually the plaza, parking lot and Grotto Hill feel like part of the Mission campus and landscape, they are owned by the San Xavier District.

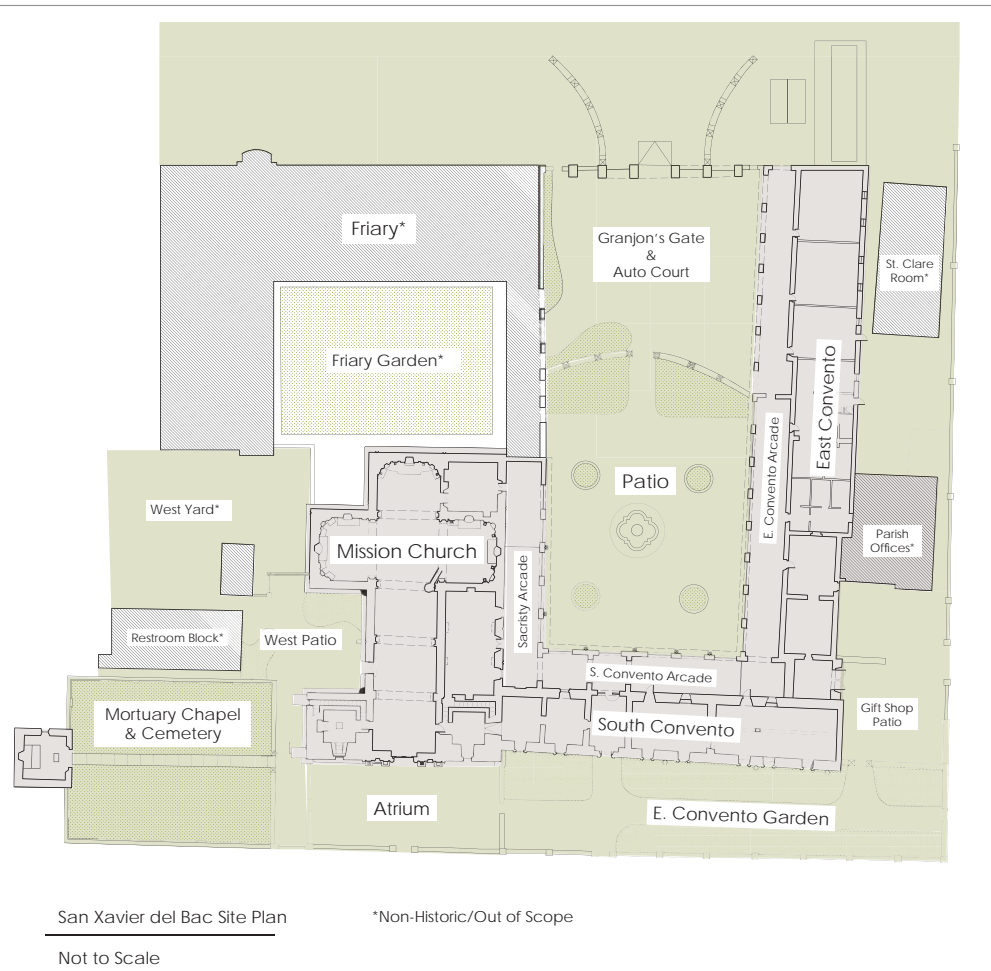
The Patronato San Xavier has an agreement with the Diocese and LLC which provides the Patronato jurisdiction to initiate necessary conservation work throughout the historic campus. The State Historic Preservation Office also holds a fifty-year easement over the property. The easement agreement was revised in 2015 and is in effect until 2065.

San Xavier was one of the first sites to be designated a National Historic Landmark by the United States Secretary of the Interior and was listed as such in October of 1960. It was also listed on the National Register of Historic Places in 1966.

The campus is located within an overlay zone called the San Xavier Environs Historic District, outlined in the Pima County Code of Ordinances. The code restricts the density and height of development with successive radii zones at varying distances from the Mission. The World Monuments Fund placed San Xavier on its "Watch" list in 2016 in order to raise awareness and advocate for its continued preservation.



[Image 10] Map illustrating the location of the Mission relative to the San Xavier District, the main Tohono O'odham reservation, and the border between Arizona and Sonora. The entire region is part of the O'odham's ancestral lands.



[Image 0.5] Site plan of Mission campus showing historic buildings and open spaces. (Base drawing adapted from Vint & Associates)



[Image 16] Circa 1900 photograph of the cast bronze bells in west tower, looking south. Adobe structures in Wa:k are visible in the background. (Arizona State Historical Society)



[Image 17] View of the south facade of the church, prior to the earthquake of 1887, taken by Henry Buehman. The East Tower is unplastered and the original atrium wall is still standing. (UA Special Collections)

Historical Significance

Prior to the arrival of European colonists, Wa:k was a large and significant settlement in the region, home to a community of several hundred Sobaipuri O’odham who lived along the Santa Cruz River. The name of the village was derived from the river, meaning “goes in” or “enter,” referencing the point at which the Santa Cruz moved back underground. Prior to the Sobaipuri, prehistoric hunter-gatherers and the Hohokam occupied the area. The river supported the community of full-time farmers, who had developed a vast network of canals that fed fields of crops and gardens woven through and around the village. Maps and oral histories show that during the 17th century, the village of Wa:k was located approximately one mile farther north along the Santa Cruz, in a lower-lying area near the riverbed, from the location of the Franciscan-era structure that stands today.

In 1692, the Jesuit missionary Padre Eusebio Kino traveled to Wa:k re-christening it San Xavier del Bac, adding the name of his patron saint to the Spanish mispronunciation of the village name Wa:k. In his lifetime, Kino missionized throughout the Pimeria Alta, a region spanning the area we now call Sonora and southern Arizona, and established 24 missions and *visitas*. Though interpretations of existing documentation differ, it is very likely that a simple church was built during Kino’s time at Wa:k and that subsequent Jesuit church structures were constructed over the ensuing century.

Historical accounts indicate that the village of Wa:k was moved south to the Mission’s current site sometime between 1772 and 1780, after the Franciscans had taken over the Pimeria Alta missions. In 1780 the engineer Geronimo de la Rocha y Figueroa documented the area and created a map and a journal entry containing a description of Wa:k that is consistent with the environment of the current location.

Construction of the present structure likely began around 1783 and stopped in 1797, an assumption based on the end date inscribed on the door of the Sacristy, and an account made by Bishop Salpointe citing an oral tradition that claimed its construction took fourteen years. However, it is likely that the construction of the present structure was at least underway by 1783, as an account from that year by Friar Barbasto, who was the overseer of the Pimeria Alta, mentioned the presence of “beautiful vaults.” Other than recorded observations and accounts, no original documentation concerning the construction of the church has ever been located.

Two Franciscan missionaries oversaw the initial building campaigns, Juan Bautista Velderrain and Juan Bautista Llorens. Velderrain, who arrived in Wa:k in 1776, is said to have initiated construction and Llorens took over after his death in 1790. Though the architect or master builder responsible for designing the church and overseeing construction is not definitively known, documents suggest that the architect, or master mason, was Ygnacio Gaona, who is also credited with the construction of the Mission church at Caborca, which was begun in 1803 and shares a number of stylistic similarities to San Xavier.

Spiritual Significance

Today, the Mission San Xavier del Bac represents an intersection of faith, tradition, and culture and holds a deep spiritual meaning to those who worship there. The Mission primarily serves parishioners from the local community of Wa:k, whose ancestors helped build it, and who continue to help care for it today. San Xavier is a pilgrimage destination for Catholics throughout the borderlands region, drawing thousands of worshipers on feast days and for special celebrations and spiritual holidays throughout the year. For those who have grown up intimately connected to the place, its significance is deeply personal, rooted equally in the past, present, and future.

Architectural and Art Historical Significance

Architecturally, San Xavier del Bac stands out compared to other missions in the region. Its spectacular baroque interior and impressive dome and vault construction make it by far the most elaborate of all of the Missions in the Kino chain. The architectural style is often described as Ultra Baroque or Churrigueresque, a Spanish Baroque style that emerged in the late 17th century, which is characterized by heavily ornamented and elaborately detailed stucco design.

The church’s roof consists of a series of shallow, elliptical vaults made of fired brick, with a large dome at the transept crossing and smaller dome over the sanctuary. Its walls, which measure six feet thick at the base of the towers, and three feet thick overall, are constructed of a volcanic rubble stone core embedded in a lime slurry encased in a fired brick veneer. The church’s footings are basalt and rest on bedrock at five to six feet below grade and its towers top out at over eighty feet. The main dome reaches sixty feet high, representing a feat in early construction and engineering.

All of the bricks and lime were made, quarried, burned, and slaked on site, though the location of the clay pits and lime kilns have never been identified. Rocks, wood, sand, and other materials were sourced locally, though it is speculated that some of the statuary and architectural woodwork, including some of the more elaborately constructed wooden doors and hardware, were imported from Mexico.

The stunning interior consists of a layer of lime and sand plaster, gesso, and polychromatic tempera murals, consisting of natural pigments in a protein binder. It is clear that throughout the Mission’s history, the interior murals have been highly valued and the majority of early repairs to the building were intended to preserve and protecting the interior artwork.

The church’s vibrant interior is primarily decorated in a late Mexican Baroque style, though its execution relies on less ornate, more geometric and abstracted design motifs. Decorations include wall paintings, polychromed and gilded statues, ornate reliefs, and architectural elements. The tempera wall paintings are applied a secco, meaning they were painted onto a smooth, dry gesso layer, which sits atop a buff sand and lime plaster. Imported pigments, including orpiment (yellow), vermilion (bright red), smalt (deep blue), and Prussian blue (bright blue), were mixed with an aqueous tempera binder, likely some form of animal protein, producing a relatively lightweight, but colorful pigment. The design also used silver and gold leaf, which was coated in



[Image 18] View of the Mission at night during the Feast Day of St. Francis, circa 1939. (University of Arizona Special Collections Library)



[Image 19] A Guadalupe charm hangs from a painting of the Virgin in the Sotocorro. Coins have been placed along the lower section of the frame.



[Image 20] I'toi, which translates to “man in the maze,” is the creator god of the O’odham and is incorporated into various liturgical motifs at San Xavier. He is shown here on the vestments of Our Lady of Sorrows, in the East Transept. Her dresses are made by members of the community.



[Image 21] Detail showing the vibrant polychromy and interesting marble-like patterning along the cornice of the East Transept.



[Image 22] The conservation approach for the interior wall paintings includes carefully inpainting areas of loss with water-soluble pigments, a reversible treatment that does not harm original fabric.



[Image 23] Detail of the gilded retablo mayor in the Sanctuary.

colorful transparent glazes, in a technique developed in Europe in the Middle Ages known as Chinese varnish.

While most Mission churches in the Kino chain have either fallen into ruin or undergone intrusive repair and restoration campaigns, San Xavier del Bac has been the focus of relatively sensitive preservation and conservation activity for more than a century. As a result, the church retains a remarkable degree of integrity, particularly its original tempera wall paintings, ornamental relief plaster work, architectural woodwork, and statuary.

The Mission has inspired revival-era architecture throughout the region and its influences are present in a number of buildings in Tucson. References to its two towers and highly embellished façade retablo appear in the “new” San Augustine Cathedral, the Benedictine Monastery (Roy Place, 1940), and the second Owl’s Club (Trost & Rust, 1902).

All of the early repair campaigns at San Xavier have prioritized some notion of preservation of the original design, though the specific interpretation of those concepts has differed over the centuries.

Archaeological Significance

The Mission, its historic structures, and the area surrounding it are archaeologically rich. Though some archaeological investigation has been carried out in parts of the Mission campus in the past, most of the area has remained relatively undisturbed. Given its continued use as a Mission church and parts of the site as a cemetery, underlying the site will be evidence of its earlier phases and may likely including human remains. The historic buildings themselves also have the potential to yield information in the future, particularly through the analysis of materials.

Place & Community

Mission San Xavier del Bac is located in the rural agricultural community of Wa:k, a village in the San Xavier District of the Tohono O’odham Nation, approximately 9 miles south of Tucson, Arizona. It stands west of the Santa Cruz River, paralleled by Interstate 19. The brilliant structure pops against its muted desert backdrop and the surrounding low, basalt bluffs and agricultural fields and is an important visual landmark for the region.

The Mission is part of a complex cultural landscape within an indigenous social/ political community. It sits in close proximity to the Mission School, Cemetery, Tribal Council Offices, the San Xavier Mission Elder Center, the San Xavier Co-op farm, and the sacred Black Mountain. Agricultural fields, owned cooperatively by the Tribe, stretch out to the north and west of the campus. The large, open plaza, a modern intervention that extends south of the church’s primary facade, hosts a number of vendors, festivals, and other activities year round.

Our origins are linked to our homeland, the Sonoran Desert. Thousands of years ago, our predecessors, the Hohokam, settled along the Salt, Gila, and Santa Cruz Rivers. The Hohokam were master dwellers of the desert, creating sophisticated canal systems to irrigate their crops of cotton, tobacco, corn, beans, and squash. They built vast ball courts and huge ceremonial mounds and left behind fine red-on-buff pottery and exquisite jewelry of stone, shell, and clay.

—Tohono O’odham Nation website

O’odham and their ancestors have historically inhabited a large area known as the Papagueria, which spanned what is now southern Arizona and northern Sonora, between the Gulf of California and the San Pedro River. Settlement in the area stretches back thousands of years and residents of the ancestral village today identify as Wa:k O’odham.

In the 17th century, Wa:k was a large and significant settlement in the region, home to a community of several hundred Sobaipuri O’odham, a subset of the Akimel O’odham, who lived along the Santa Cruz River and farmed using an intricate canal system. The name Wa:k was derived from the river, meaning “goes in” or “enter,” referencing the point at which the river moved back underground.

The Reservation around the Mission, now the San Xavier District, one of eleven districts comprising the Tohono O’odham Nation, was created by executive order in 1874. The boundaries of the reservation, which encompassed more than 71,000 acres, included the Mission, which was considered an anchoring landmark for the reservation’s location. The main reservation was established in 1917.

The Mission is central to religious life for many, but not all, residents of the San Xavier District. The parish consists of members of the Tohono O’odham Nation, primarily from the Wa:k community, and people from the Pascua Yaqui Pueblo, as well as Hispanic and Caucasian families who have chosen to make San Xavier their primary place of worship. It is also a pilgrimage site, with thousands of visitors making lengthy treks on foot annually.

For the Catholic O’odham community who worship there, the Mission is their church. Their ancestors helped to build it and maintain it, as will future generations. There are also many O’odham residents of Wa:k who attend different churches, or maintain other religious practices. Positioning the church as central to the spiritual life of all residents of Wa:k, as it has been portrayed at times in the past, is an oversimplification. However, the cultural ownership of the place by the O’odham community remains a clear defining value.

San Xavier is a place where many people come to worship at significant life moments, attracting worshipers throughout the greater borderlands region, especially for significant spiritual days like feast days. Two feast days are celebrated at San Xavier for its two patron saints: October 4th for Saint Francis of Assisi and December 3rd for Saint Francis Xavier.

Unlike other churches in the Diocese of Tucson, San Xavier is run by the Franciscan Order of Friars Minor, from the Western Province based in Oakland, California. San Xavier holds a deep spiritual significance for both the Mission clergy and its parishioners. Though it is broadly appreciated for its historical, aesthetic, and art historical value, San Xavier is a place of real, lived religious experience for the community that worships there.



[Image 24] View of the plaza from the West Tower, looking south towards the Santa Rita Mountains, 2019. The ocotillo ramadas can be seen on the left. The plaza is a modern intervention and was completed in 2009 by Vint & Associates Architects.



[Image 25] A circa 1960 aerial view of the Mission and Mission School shows the relationship to the surrounding agricultural fields to the north. (University of Arizona Special Collections Library)

Abbreviated Chronology and Conservation History

[Image 26] A painting by Samuel E. Chamberlain, made in 1848, is one of the earliest known depictions of the Mission. It shows the configuration of the Convento Wing, extending east of the church, with an arched in the center. (Arizona Historical Society)



[Image 27] This photograph, made by William A. Bell in 1867, is the first known photograph taken of San Xavier. It was taken from Grotto Hill, just east of the Mission. The South Convento Wing, extending east from the church, appears to have been configured with a room adjoining the base of the east tower and rooms at the easternmost end of varying heights. (Arizona State Archives)



[Image 28] Carlo Gentile's 1868 image shows the south facade and atrium wall before the earthquake of 1887. The zaguan of the South Convento Wing is visible and appears to be open to the courtyard. Textured markings are visible on the exterior render of the Convento Wing. An infilled window and a window with a turned wooden grille are also visible on the room attached to the base of the East Tower. (Library of Congress)



[Image 29] This circa 1880 photograph by Carleton Watkins shows the mission compound from Grotto Hill. By this time, the South Convento Wing had been modified to serve as a school, forming one, cohesive east-west structure with a walled courtyard to the north. An arcade was also added to the east of the Sacristy. The demarcation to the south of the South Convento Wing indicates where a wooden fence will be built. (Arizona Historical Society)



[Image 30] This photograph by Henry Buehman was taken after the 1887 earthquake, but before the Mission's lower wall and balconies were repaired. An additional room was constructed north of the South Convento Wing, forming what we now refer to as the East Convento Wing. It is possibly the "little dormitory and community room" mentioned by Sister Bernadette in the Arizona Daily Star in the 1930's. (Arizona Historical Society)



[Image 31] An undated view of the Mission compound from Grotto Hill showing extensive construction of the East Convento Wing (projecting north of the original convento). The west tower, parapets and dome appear to have been recently replastered. This possibly reflects a series of smaller, Federally funded repairs that were made leading up to the Granjon restoration in 1906. (Arizona Historical Society)



[Image 32] (left) This circa 1906 image shows scaffolding in place on the East Tower, indicating that Granjon's campaign is underway. The rails of the three balconies were rebuilt in an earlier campaign. Lightning damage is also visible on the West Tower lantern. (Arizona Historical Society)

[Image 33] (right) Circa 1906 view of the church's south facade following the plastering of the East Tower. Additional courses of stone have been added to reinforce the base of the south wall. (University of Arizona Special Collections Library)



[Image 34] View of the Mission from Grotto Hill during Granjon's restoration. Reconstruction of the Atrium wall is underway. (Arizona Historical Society)



[Image 35] View of the Mission from Grotto Hill following Granjon's restoration. The exterior walls south of the church, around the cemetery, and Granjon's arched gates to the east, north and west are complete. (Arizona Historical Society)

[Image 36] (left) The entire Mission campus was thoroughly documented from 1939 to 1940 by architects and photographers with the Historic American Buildings Survey (HABS). A set of 41 drawings and hundreds of interior and exterior photographs were produced. (Library of Congress)

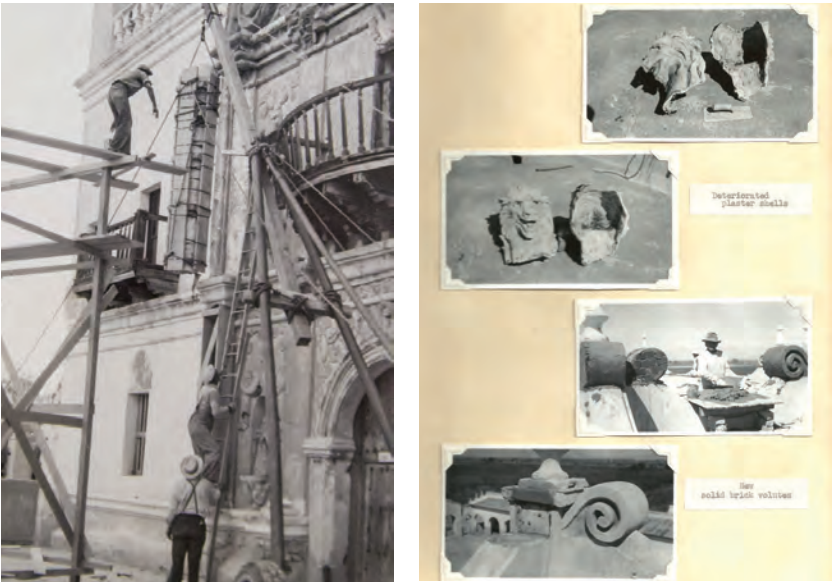


[Image 37] (right) One of the last remaining original finials, located behind the East Tower, flanked by one of the cast plaster lion's heads that were introduced by Bishop Granjon. Granjon intentionally left one of the original finials when he replaced the rest, to serve as a documentary record. It no longer remains. (Library of Congress)

[Image 38] View of the Mission circa 1939 showing lightning damage to the West Tower lantern. The central dome also appears darker than other parts of the building, suggesting that a different coating may have been applied to it, perhaps in an attempt to limit water infiltration. (University of Arizona Special Collections Library)



[Image 39] (left) Men work to remove the two remaining original estipites on the Facade Retablo in 1942. The decorative columns were removed and stored and were eventually used to create a mold to cast replicas, which were installed in the 1950s. (Arizona State Historical Society)



[Image 40] (right) A page from a scrapbook compiled by architect Eleazar Herreras and Byron Ivancovich detailing restoration work carried out in the 1950s. In 1954 the cast lion's heads added by Granjon were replaced by scrolls modeled after the church at Caborca, which were thought to be a more "authentic" choice. Architect Eleazar Herreras also had the wood balconies reconstructed, the Facade Retablo repaired and repainted, and the South Convento wing refaced with a revival style facade. (San Xavier del Bac Mission archives)

[Image 41] (lower left) A circa 1968 photo shows a mold being prepared in the Patio to pour concrete for the new fountain. Previously, the Patio, or courtyard, had served more utilitarian functions. (University of Arizona Special Collections Library)



[Image 42] (right) A circa 1970 photograph shows changes made to the Patio in the late 60s, under the direction of Brother Lawrence Hogan. The changes were part of a larger plan to transform portions of the historic campus into a Museum and community center and to open up more of the historic campus to the public. (John Schaeffer)



[Image 43] After a large piece of plaster fell from the ceiling in 1989, it was determined that impermeable cement-based and synthetic coatings were accelerating the deterioration of the underlying brick and creating dangerous conditions inside the Mission. Beginning with the roof's dome and vaults, impermeable cement-based coatings were systematically removed, the substrate repaired, and the whole re-coated with a more compatible lime-based mixture. Removal of the existing coatings revealed large, deep cracks in the central dome. Work was supported by numerous grants and has been ongoing for more than 30 years. All images on this page were taken circa 1993 by architect Robert Vint, who oversaw this work.



[Image 44] (left) Lower-lying areas of the roof were repaired with harder, higher-fired modern brick, to encourage water runoff and drainage. (Robert Vint)

[Image 45] (right) The crew burnishes the finished lime plaster with river rocks, a traditional technique that buffs the surface by compressing the final layer of porous plaster, thus reducing permeability. (Robert Vint)



[Image 46] (left) Lime putty slaking in plastic barrels on site. Slaking the lime for weeks or even months in advance improves its workability. (Robert Vint)

[Image 47] (right) The regional tradition calls for adding mucilage from prickly pear pads to the lime mixture. The pads are often cut and then boiled, are boiled whole, or may simply be left to soak in water in order to extract the mucilage. This "cactus juice" is said to improve the plaster's ability to cure and to repel water. It is also used as a binder for plaster repair by the interior conservation crew. (Robert Vint)



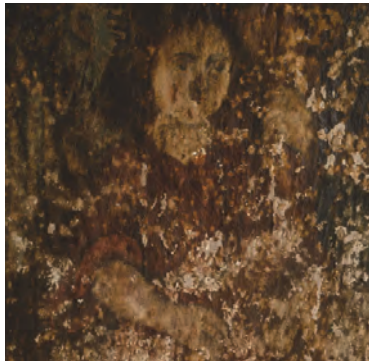
[Image 48] Due to decades of deterioration from water infiltration, some portions of the low-fired brick comprising the vaults, dome, and walls have substantially eroded, as seen in this photograph. In other areas the substrate was very much intact and traces of well-adhered original plaster still remained and were left in place. (Robert Vint)

Conservation and Stabilization of Interior Artwork

Between 1992 and 1997, the Patronato funded the cleaning and consolidation of the interior artwork. Conservator Paul Schwartzbaum, of the Solomon R. Guggenheim Museum in New York City, organized an international team of art conservators to clean and consolidate the church's interior paintings and statuary. Throughout the 1990s, exterior restoration efforts were coordinated in preparation for interior work, with the exterior crew preparing areas in advance of the art conservation team.

The ongoing cleaning, consolidation and conservation of the interior artwork continues today under the direction of art conservators Matilde Rubio and Timothy Lewis, both of whom worked on the Schwartzbaum team. Since the work carried out in the 1990s, they have continued conservation in areas that were not part of the original scope (including the Baptistry), conduct routine conservation and maintenance of the wall paintings, statuary, oil paintings, and interior woodwork, including the original altar railing, and conserve objects in the museum collection.

[Image 49] Angel on East (left) side of Mural of La Virgen con Nino on upper level of the west transept, prior to conservation (Helga Teiwes, 1993, UA Special Collections)



[Image 50] Angel on East (left) side of Mural of La Virgen con Nino on upper level of the west transept, after conservation (Helga Teiwes, 1993, UA Special Collections)



[Image 51] V. Centanni injects Rhoplex behind paint on mural of La Virgen con Nino in the West Transept. (Helga Teiwes, 1993, UA Special Collections)



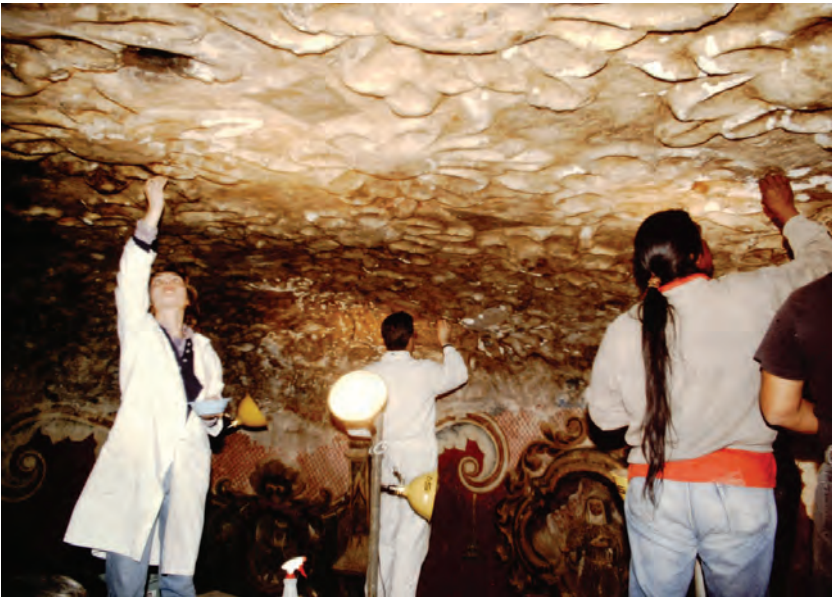
[Image 52] V. Centanni cleans paint on mural of La Virgen con Nino in the West Transept. (Helga Teiwes, 1993, UA Special Collections)



[Image 53] Flower vases in the West Transept prior to conservation. The colors are visibly darkened by the varnish. (Helga Teiwes, 1993, UA Special Collections)



[Image 54] The same area following conservation. The varnish has been lifted and areas of loss have been subtly infilled. Helga Teiwes, 1993, UA Special Collections)



[Image 55] In the 1990s, conservators returned for consecutive years to clean, consolidate, and stabilize the interior artwork. The team was led by Paul Schwartzbaum of the Guggenheim and included a number of European conservators. The crew trained four local apprentices from the Tohono O'odham Nation. Here, members of the crew are working on the floral relief vault of the East Transept. (Robert Vint, circa 1994)



[Image 56] Conservator Timothy Lewis was one of the four O'odham trainees that worked with the Schwartzbaum crew. He and Matilde Rubio, also a member of the original crew, now oversee the ongoing conservation of the Mission's artwork. Here, he works to infill areas of loss in the dado in 2018.



[Image 57] The Patronato continues to fund apprentice training. Lewis and Rubio have trained members of the Wa:k community as well as university students studying conservation. In this image, apprentice Susie Moreno works on a wall painting in the Choir Loft. Moreno is a member of the Tohono O'odham Nation and is currently studying conservation at the University of Arizona.



[Image 58] Though legally the Mission Campus only includes the church and immediate surrounding buildings, various landscape elements, such as Grotto Hill, are perceptually part of the place.



[Image 59] View of original cast bronze bells in the West Tower, looking south. The bells are used as a communication device throughout the village to announce marriages, baptisms, funerals, and other events.



[Image 60] Portions of the facade retablo, like the arched surround framing the southern doors, were refinished during the 1950s restoration campaign with pigmented cement-based plaster.

Survey Methodology & Summary of Features

This CMP only considers the historic built elements of the San Xavier del Bac Mission campus, which includes a number of historic built elements of the site, including the Mission Church, the Mortuary Chapel and Cemetery, the South Convento Wing, the East Convento Wing, and Granjon's Gate and Auto Court. These specific terms are used throughout the CMP and are identified on the Historic Resources Map (opposite page). The names given to various spaces and components were typically drawn from historical documents and existing terms used by the Patronato, clergy and site managers. They are referred to throughout the document as proper nouns for consistency and ease of reference.

In June, the CMP team conducted a site-wide survey for the purpose of identifying extant historic fabric, character defining features, and assessing the overall condition of historic resources. Due to the size and complexity of the San Xavier del Bac campus and its structures, a rapid-assessment survey was determined to be the most appropriate approach. Results informed the development of conservation policies, prioritization assessments, and tolerance for change. The survey itself serves as an important reference document for site managers and is included as an appendix to the full CMP.

The survey consisted of forms identifying historic features, character defining features, and extant historic fabric, and was completed using input from physical observation and from historical research incorporated into the project database. The forms are supplemented by annotated photographs showing specific and representative existing conditions and, when possible, historic photographs which help to illustrate the evolution of individual places. The purpose of the survey was to both record current conditions and remaining historic fabric, as well as inform prioritization of future work, rather than to provide detailed information about conditions to inform specialized treatment.

Building elements, particularly those of highest heritage value, such as the Façade Retablo and the interior artwork, require highly detailed conditions surveys performed by qualified professionals prior to treatment. Given the complexity of the church interior, surveys of those spaces focus on architectural features, movable furniture, and general conditions present in reference to the interior maintenance schedule.

In order to conduct the survey, the campus was first subdivided into four distinct areas. Defined spaces within each area were assigned a number. The numbering system contains an alpha-numeric code in which the two-digit alpha code corresponds with the overarching category and a three-digit numeric code identifying the space.

The aim of the survey was to provide an overview of historic buildings and features in the Mission Campus and assign each a Heritage Value denoting significance. Understanding the materials present, managers can use the assigned Heritage Values to determine the appropriate treatment approach for significant features and spaces.

Historic Resources Map



[Image 61] The above site plan illustrates the various spaces on the campus. Spaces were assigned alpha-numeric codes that correspond with feature area/type for the historic resource survey. The survey was designed to provide an inventory of historic resources and potentially significant resources throughout the campus and an overview of general condition. The survey was submitted as an appendix to the full CMP.

The scope was limited to the historic resources of the campus; modern additions, such as the Friary, to the northwest, are indicated in gray. (Base drawing adapted from Vint & Associates)



[Image 62] View of the uppermost portion of the retablo mayor in the Sanctuary.



[Image 63] View of the Façade Retablo surrounding the main entrance.



[Image 64] View of the Mortuary Chapel and cemetery, now a cactus garden.

The Church

The Mission campus dates from the late 18th century, when the Franciscan church was constructed, to the present day. The church retains a remarkable amount of original fabric with a very high level of authenticity. New material has been introduced over time, through repair, systems upgrades, remediation, and additions, though for the most part, new material has been added sensitively. The interior contains a remarkable collection of in-situ Spanish Colonial art in the form of tempera mural paintings, plaster relief, and statuary.

Façade Retablo

The portal around the Mission's southern entry was constructed of molded burnt adobe covered in pigmented lime plaster. The *estipites*, or decorative columns, were made of molded brick around a wooden core. By the 1930s, all but two had fallen and been destroyed. Today, the façade still retains original finishes, however much has been obscured, and possibly was destroyed, following the 1950s restoration campaign when portions of the façade and sculpture were reconstructed and the finishes were coated with pigmented cement plaster. The balcony, doors, and *estipites*, are reconstructions. The statue of St. Francis at the broken pediment was encased in cement in the late 1970s.

Mortuary Chapel and Cemetery

The Mortuary Chapel was completed around the same time as the Mission, though early images show that the rear was not plastered until Granjon's restoration in the early 20th century. The earthquake of 1887 destroyed the two east-west walls of the cemetery, which were built of sun-baked adobe blocks. The walls were also rebuilt in the early 20th century renovations after which, a sign on the front of the Chapel indicates, it was no longer used as a mortuary, but as a small chapel dedicated to "The Most Holy Mother of Sorrows." It is unknown how many bodies remain buried in the cemetery. The enclosed space was converted into a cactus garden in the mid-20th century. The present cemetery, likely begun in the late 19th century, lies about a quarter mile west of the Mission.

South Convento Wing

The South Convento Wing projects east of the Mission from the first floor of the east tower and was likely added shortly after the Mission was completed, in the early 19th century. The wing helped enclose and defined the corral to the east of the Mission and has been reconfigured multiple times to suit the needs of San Xavier's inhabitants. Historically, its primary function has been to serve as flexible utilitarian space for the functioning of the Mission. It was primarily used as housing for clergy

and classrooms throughout the 19th and 20th centuries. It now houses the Museum, Candle Shop, and Juan Diego Chapel. Though the south facade of the South Convento Wing was completely re-imagined during the 1950s restoration campaign to more closely resemble the Mission, the interior retains *vigas* and other details dating to the wing's construction.

South Convento Garden

The South Convento Garden was defined during Bishop Granjon's restoration of the Mission campus and the construction of the south wall and arched gate to the east. The garden's landscaping has changed over the century, though not drastically. The current configuration, which includes a central bricked walk flanked by desert landscaping dates to the mid-1990s.

East Convento Wing

The East Convento Wing was constructed in various stages between 1887 and 1920. Portions have been added and modified from the 1950s to the 1990s to accommodate the Gift Shop and new Parish Offices (1993). The northern portion of the wing still retains most of its early 20th century appearance, similar to a Sonoran-style row house. The area comprising the Gift Shop, south of the Parish Offices, has undergone subsequent treatment and appears to be encased in a hard, cement stucco. A heavy parapet has been added mimicking that of the South Convento. The portion of the building extending north of the Parish Offices has seen less intervention overall. The wing is constructed of unfired adobe with a rubble stone foundation and a metal roof over timber framing. Dropped ceilings are present throughout. The exterior appears to have been coated in a hard, cement-based render.



[Image 67] View of the East Convento Wing from Grotto Hill.



[Image 65] View of the South Convento Wing and Garden, looking west, towards the Mission.



[Image 66] View of the East Convento Wing and mobile trailer, currently used as a conference room, looking north.



[Image 68] View of South Convento Wing, looking west.



[Image 69] View of the East Convento Arcade. The space is currently used for storage of candles and maintenance equipment.



[Image 70] View of the Patio and the East Convento Arcade from the roof of the Sacristy.

Sacristy Arcade

The Sacristy Arcade, which runs along the east side of the Mission's Chapter Room and Sacristy, is freestanding of the church and was added by 1880. The piers, originally built of unfired adobe, were partially reconstructed and reinforced in 2013 after water damage from the patio garden led to significant deterioration. The traditional Sonoran-style roof, which consisted of 8 inches of soil fill as insulation above the original mesquite *vigas* and saguaro rib *latillas*, was removed when the roof was re-framed due to concerns about the weight. A 1950s-era concrete parapet was also removed to reduce the load on the adobe arches.

South Convento Arcade

The south Convento Arcade is very similar in construction to the Sacristy Arcade with unfired adobe piers, mesquite, and saguaro rib ceilings. It was likely added at the same time.

East Convento Arcade

The East Convento Arcade differs from the other two in the use of milled lumber for the structural *vigas* due to its later construction date (likely circa 1910-1920). The ceiling still retains a heavy layer of soil fill above the saguaro rib *latillas*, which is straining the *vigas* and resulting in visible sagging in places and which requires reinforcement. The arcade piers appear to be constructed of stone at the base and are otherwise built of unfired adobe.

Patio

The Patio was originally the Corral for the Mission in the 19th century. The fountain and brick paving were added in 1968. The patio wall was constructed in 1951. The patio is currently off limits to visitors, though in the past it has been integrated into the visitor experience.

Granjon's Gate and Auto Court

Granjon's Gate and the Auto Court were constructed towards the end of Bishop Granjon's extensive restoration campaign in the early 20th century. By the mid-1950s, the arched gateway that borders the north end was leaning precariously to the north. It was deconstructed down to its piers and rebuilt with a combination of burnt adobe, rebar, and concrete masonry units. It has not been modified since that time. The west arched wall, which now screens the Friary, was slightly modified during the construction of the Friary and garden (an arch was infilled) but otherwise has remained undisturbed.

Parish Offices

The Parish Offices are non-historic and were added to the East Convento wing in 1993. Restrooms and services for the offices occupy a central portion of the East Convento Wing.

Friary and Private Garden

The Friary and Private Garden were constructed from 1991 to 1999. They serve as private living quarters for the resident friars and are off limits to visitors.

Atrium

The Atrium was reconstructed by Bishop Granjon after the 1887 earthquake had collapsed its walls. The flooring has since been modified, but the walls and entryway date to Granjon's design.

Museum Collection

The Mission museum collections include paintings, sculptures, catholic ritual objects including vestments, liturgical garments, furniture, and an extensive collection of native American baskets, many of which have been made by local community members and were gifted to the Mission over the years.



[Image 71] View of the Atrium from the southeast corner.



[Image 72] View of museum displays in the Chapter Room, facing south.



[Image 73] View of Granjon's Gate, facing south.

Vulnerabilities

In this context, a vulnerability is defined as any factor that may alter or impact the site's significance now or have the potential to do so in the future. Identifying vulnerabilities is a key early step in the planning process. The CMP will address vulnerabilities by: assessing resources and assigning priority areas for treatment; providing historical context for elements, spaces, and characteristics of the site; and outlining values associated held by stakeholders.

Lack of clarity in philosophy/approach to preservation work

- In the past, there has not been a formal, organized, and objective process for determining and prioritizing conservation and preservation needs for the campus as a whole. Work was typically executed in response to an immediate issue and informed solely by hired consultants. The result has been an ad hoc comprehensive vision where treatment choices for various aspects of the site have not been determined and agreed upon prior to the commencement of work. This has, at times, resulted in an incongruous approach and has, occasionally, led to the loss of significant historic fabric.

- Although the importance of the church architecture and artworks is relatively well understood, the significance of contributing elements and historic structures throughout the larger campus have not been formally recognized and, in some cases, has resulted in the replacement or improper treatment of significant or potentially significant features.

Lack of clarity in management structure and community representation processes

- There is a complex intersection of stakeholders who are immediately involved at San Xavier including: the clergy and parish, who operate and own the church; the Patronato, which financially and logistically supports conservation works; and the O'odham parish community, which has a strong cultural ownership of the place.

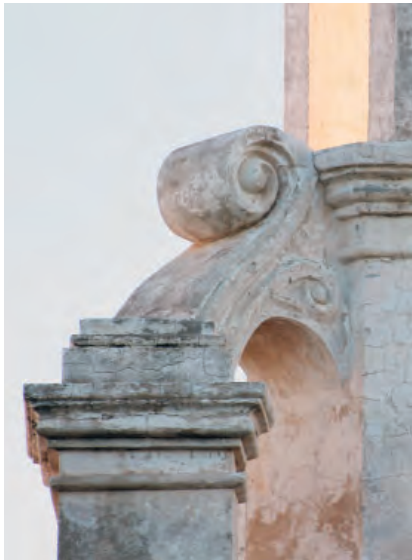
- Communication between these groups and inclusion of representatives from all factions has not been optimum in the past and community representation in the decision-making process has often been overlooked.

Daily Wear and Visitor Impact

- The impact of daily use, operation, and general wear on parts of the building are mitigated somewhat, but still pose a potential risk to historic fabric.

- Historic areas in frequent use (such as the Sacristy) are part of the necessary day-to-day functioning of the church, however, adequate space for storage of items should be provided so that clutter doesn't accumulate against the wall paintings or in historic features, like the piscina, where it can damage original fabric.

- San Xavier experiences high levels of visitation by tourists, which can include large tour groups with little oversight. While parts of the church and campus have been blocked off, tourists move freely through the visitor circuit without any formal staff supervision. This can lead to overcrowding, unintentional damage and contact with sensitive historic fabric, and can disrupt the peaceful atmosphere inside the Mission for those who worship there.



[Image 74] The East Tower is the only remaining portion of the exterior where the cement-based render has not been removed.



[Image 75] Exposed reinforcement wire beneath cement-based render in the South Convento Wing.



[Image 76] Daily wear takes a toll on the lower walls, baseboards and furnishings.

Environmental Factors

- **Climate Change, Storms, and Severe Weather:** Increased frequency and intensity of storms and rain events due to climate change may pose a threat to the longevity and performance of exterior render and roofing systems, and impact the presence and duration of periods of humidity, thereby posing a potential threat to the interior artwork. Lightning is also a concern as it has damaged parts of the building in the past.

- **Dust and Wind:** There is currently no system for mitigating dust from entering the building. Both the front and west doors are left open for extended periods during visitation hours and, while the surrounding plaza and parking lots are laid in decomposed granite, gravel and sand, the surrounding agricultural fields and dirt roads contribute to problems with airborne dust.

- **Earthquakes:** San Xavier has survived multiple earthquakes, the largest of which took place in 1887. Examining damage caused by the 1887 quake has provided some understanding of how the building will perform during significant seismic activity, however, conducting a more in-depth seismic analysis may yield more specific recommendations for mitigation measures that could reduce the risk of damage in a future event. Some seismic retrofitting--such as reinforcing the lantern on the west tower and the finials along the parapet with fiberglass rods--has been implemented.

- **Fire:** The risk of fire is relatively low at San Xavier, given its masonry construction, however, the presence of candles throughout the church, arcades, and in the Mortuary Chapel do pose some risk, especially to the interior artwork. The wooden pews also pose a risk as they could catch fire and damage the interior. There is currently no fire protection system in place.

- **Decay Processes:** Sun, frost, temperature variations, wind, and rain all contribute to the decay of building fabric and can lead to loss or significant damage. Rates of decay can be minimized by adhering to a cyclical maintenance plan and through regular monitoring of the site. These factors particularly impact the exterior envelope, which experiences frequent and extreme temperature fluctuations in the high desert climate. Some decay, such as hairline cracking in the roof and walls due to thermal expansion and contraction, is typical and not a high concern, however, these processes should still be monitored to ensure that they are well understood and that related maintenance and mitigation efforts are effective.

- **Insects, birds, and rodents:** Physical damage caused by animals, insects, and birds, including guano, can cause damage to interior and exterior finishes, wood, fabric, and collections stored within the church.



[Image 77] The wall paintings, relief, and statuary require regular dusting and maintenance.



[Image 78] Evidence of prior water damage is present on some of the vaults, but the current extent and patterns of infiltration and moisture movement are not well understood.



[Image 79] Maintaining a watertight roof membrane has proven to be one of the biggest challenges at San Xavier.



[Image 80] Webbed cracking in the render of the roof vaults is caused by natural cycles of expansion and contraction. Despite the inclusion of expansion joints in the surface render, cracking has persisted and some delamination has occurred.



[Image 81] Some lower priority areas and features, such as the atrium and cemetery walls, show signs of deferred maintenance, such as cracking and delamination.



[Image 82] The original yellow pine doors are still in place, though they have deteriorated from exposure to the elements. They have never undergone conservation treatment.

Material Limitations

Working with historic and traditional buildings often means that there are limitations to material performance that may pose both benefits and risks. At San Xavier, the church's construction of primarily low-fired brick and stone rubble masonry requires a compatible exterior render system that limits liquid water penetration and allows moisture vapor to evacuate the walls and roof at a similar rate to the underlying substrate. Using a lime-based render and work system satisfies that compatibility, though it also requires frequent maintenance, monitoring, and upkeep. Thermal expansion and contraction, weathering, and erosion will cause the lime render system to exhibit reduced performance over time.

Deferred Maintenance

One of the most significant challenges at San Xavier is deferred maintenance, which is a common issue among historic sites directly related to limited funding and resources. In the past, work has been triaged because deferred maintenance and incompatible repairs led to urgent issues. Though certain projects should always be prioritized (such as roof maintenance), the ultimate goal is to shift to a more systematic, long-range approach based on cyclical maintenance, monitoring, and prioritization.

Shifting to a maintenance-centric approach is critical to avoiding issues that require high-cost emergency stabilization or conservation in the future. Ideally, work undertaken is preventive rather than reactive and is based on the understanding of the significance of all components and elements of the site.

Funding and Resources

As at nearly all historic sites, conservation and preservation activities are limited by available funding. Routine stabilization should be executed to the extent necessary, to avoid diverting resources away from other aspects of the site also requiring conservation and stabilization.

Moving forward, projects should prioritize work that is directly connected to the physical health and survival of the structure, recognizing that interim solutions and contingencies may be necessary to accommodate existing budgets and the responsible prioritization of funding site wide.

Stewardship Guidelines and Policies

For the purposes of this plan, the recommendations related to physical conservation will focus on the church itself, the East and South Convento wings, and the historic built elements of the mission campus. The guiding conservation philosophy should recognize San Xavier in the context of a larger and intricate cultural landscape. The policies are intended to ensure that the appropriate investigation, documentation, maintenance and repair to any original or historically significant fabric take place, in order to retain maximum integrity and authenticity of fabric through any future alterations, modifications, or changes in use.

Recommendations and policies regarding management, conservation approach, and decision-making have been developed based on input from the parish and Wa:k community and the Patronato Board over the course of the year-long planning process. The structure of the CMP project allowed for in-depth research, observation, and stakeholder engagement over an extended period. As a result, the policies outlined within the full report are highly specific to the particular complexities of the site.

For brevity, the policies included within this overview are limited to the first set of general policies. For detailed policies regarding use and management, specific conservation recommendations for San Xavier, community engagement, and prioritization of tasks, see the full CMP.

Conservation Philosophy

San Xavier is in a unique position to set an example for best conservation practices, both within the Kino Mission chain and globally, in multiple regards:

- It is the most architecturally spectacular and intact mission complex of its kind in the United States, requiring highly skilled technical conservation, particularly of the interior finishes and objects;
- It sets a precedent for best conservation practices related to the use of traditional materials and craft;
- It continues to support a robust local parish community;
- It supports training of local residents in skilled conservation trades through apprenticeship programs; and
- It has the potential to serve as a model for how to thoughtfully balance the complexities of technical material conservation while respecting the needs and values of an active parish within an indigenous community.



[Images 83, 84] The use of traditional materials and methods is central to the conservation philosophy at San Xavier. The mucilage of nopal (prickly pear) cactus pads is incorporated in both the interior and exterior procedures. (lower image: Robert Vint)



[Image 84] Some parts of the campus derive significance from their use, while others, like the auto court, present opportunities to introduce new uses.

General Policies



[Image 86] Some of the original wooden doors of the church are used daily and have withstood more than 200 years of weather and wear.



[Image 87] The statue at the pediment of the facade retains historic fabric, yet there is limited photographic evidence of it in its complete original state.



[Image 88] A stepped arch between the Cemetery and the Mission, built under Bishop Granjon's campaign. While the significance of the Mission has been well understood, there are a number of other historic features and layers throughout the site that have received little attention.

Policy 1: Adoption of the CMP: This CMP is the primary working document guiding conservation, use, and management for the historic resources throughout the Mission Campus.

- Accept the statements of significance, conservation statement, and recommendations contained within the CMP as a starting point for any future intervention and planning on the Mission Campus.

Policy 2: Review of the CMP and Policies: Monitoring of the CMP implementation may be done internally or by a preservation specialist whenever necessary. Review and amendment of the CMP require appropriate professional advice.

- Review the CMP on a regular basis (every five years) to ensure that it remains up-to-date, relevant, and accurate.

Policy 3: Dissemination of the CMP: The CMP should be shared with anyone who has an interest in the site and its conservation including members of the public, relevant and legal stakeholders as well as professionals able to share specialist knowledge and experience.

- Make the CMP available for download and share with key local stakeholders.

Policy 4: Significance Guides Conservation and Planning: Conservation and planning should always be significance-driven, which means it should respond to the significance embodied by the site and the values held by its users.

- Establish whether there is sufficient information to understand the impact of potential modifications and consider the effects of any intervention/change on each aspect of the cultural significance of the place and/or object prior to beginning work.

Policy 5: Professional Conservation Advice: Connecting with other specialists and site managers can benefit the site by informing practices as well as by establishing a broad network of support for the Patronato and its efforts at San Xavier; relationships with sites and managers across the border, in different states, and within tribal communities should be pursued.

- Relevant and experienced conservation professionals and practitioners must be consulted for the development and supervision of works and proposals for the site.

- An Advisory Committee comprised of a range of professionals with relevant experience should guide and review major projects.

Policy 6: Best Practice Conservation Principles: The future conservation management and interpretation of San Xavier must be carried out in accordance

with best practice conservation principles as outlined in the *Burra Charter* and *Secretary of Interior's Standards*. Owing to its specific conditions and contexts, it is important to acknowledge that while best practices at San Xavier will be informed by professional standards, they may ultimately be unique to the site.

- **Manage in accordance with national and international heritage standards:** Any alteration or repair to historic resources (buildings, objects, or landscape features) should be made in accordance with all necessary legislation requirements as well as national and international preservation standards, such as the *Secretary of Interior's Standards for the Treatment of Historic Properties*.

- **Enact conservation based on respect for existing fabric, use, associations and meanings:** As outlined in Article 3.1 of the *Burra Charter*, this involves a judicious approach of “changing as much as necessary, but as little as possible.”

- **Retreatability and Reversibility:** The application of a specific treatment should not preclude future interventions and continued maintenance. When selecting an appropriate treatment, the reversibility or retreatability of changes (without damaging or altering original fabric) must be considered and prioritized.

- **Material Compatibility:** Intervene as little as possible and retain as much of the original fabric as possible. The introduction of new materials should be compatible with original materials and should not compromise their continued performance. Replacement of original fabric should be made using in-kind materials and good craftsmanship, unless sound reasoning based on solid scientific study presents a feasible alternative.

Policy 7: Coordinated Approach to Conservation: San Xavier has complex and wide-ranging conservation needs. Proposed changes or modifications to the site should be considered as part of a coordinated and holistic plan.

- Approach conservation planning in methodical and strategic manner that recognizes needs and priorities across the campus, with a focus on maximizing available resources and prioritizing preventive action.

Policy 8: Recording and Documentation: Archival recording of the existing site configuration and photographic documentation of key elements should be completed as a permanent record. Baseline recording should be reviewed and updated at regular intervals and will enhance future understanding of the site and clearly indicate conservation actions taken. *The Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation* and the National Park Service Heritage Documentation Programs provide useful guidelines for documentation protocols.

- Documentation for all future work should include a description of treatment, before and after documentation, and must be compiled into a comprehensive final submission to Patronato San Xavier.



[Image 89, 90] The conservation approach for the interior's painted surfaces includes carefully inpainting areas of loss with water-soluble pigments, which is considered a reversible treatment.



[Image 91] Conservator Matilde Rubio shows a rectified photograph of the West Transept vault where the team is documenting the presence of plaster relief stars on rectified photographs.



[Image 92] Further investigation of the underlying condition of the facade and its original structure and finishes must inform future conservation.



[Image 93] Installing rotating mounts for statuary will aid in the maintenance of the interior statues and artwork, allowing fragile items to be dusted and cleaned in situ.



[Image 94] Regularly inspecting the ground and walls around drainage grates and downspouts for moisture can help identify issues at an early stage.

Priority Actions & Recommendations

The CMP provides both broad and specific conservation policies and recommendations for implementation, however, it is understood that it is not possible for all necessary recommendations and maintenance to be carried out immediately. Limitations on funding will require that issues be prioritized and staged as resources become available. Several conservation recommendations will also require additional investigation, diagnostics, research, expert assessment, and documentation. That said, the CMP can assist the Patronato with fundraising. Full recommendations can be found in the complete CMP.

Immediate priorities

- Adopt the CMP, implement its conservation policies and regularly review them.
- Use professional conservation advice to inform and guide work; it is recommended to appoint a conservation professional to work on behalf of Patronato San Xavier to ensure that conservation efforts are prioritized, coordinated, and budgeted in a sustainable manner.
- Ensure that buildings are watertight and that site drainage is directing water away from foundations.
- Develop a long-term environmental monitoring program for the interior environment and exterior envelope by a mechanical engineer well-versed in historic buildings; in the interim, use infrared thermography to examine water ingress and retention patterns in the roof and vaults.
- Conduct a seismic analysis of the structure by a qualified engineer familiar with historic masonry buildings.
- Develop an investigation and analysis of the façade retablo including its materials and construction, polychromatic decoration, alterations, condition, and recommended treatment.
- Continue conservation of original wooden doors and architectural elements.
- Continue with cyclical interior cleaning, dusting, consolidation, and stabilization of interior artwork per maintenance schedule and in consultation with conservators; throughout this process, continue with removal of incompatible past treatments.
- Establish cyclical maintenance protocol for vertical walls and determine order of treatment based on existing conditions; refine appropriate treatment intervals as necessary, based on information gathered over periods of routine inspection.
- Work with the Wa:k community and a network of regional institutions, schools, and universities to continue and grow the apprentice training program to include specialized art conservation and exterior maintenance.

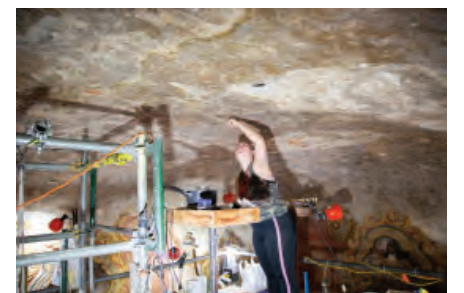
Future Recommendations

- **Shift from reactive to preventive conservation** by growing the endowment and continuing conservation apprentice programs. Understandably, work in the past has tended to be reactive due to decades of deferred maintenance. Moving forward, it's important to shift the focus to an acceptance that conservation of the Mission is a never-ending process. By working to set up the capacity for preventive and cyclical care, the future need for expensive, emergency work is minimized.
- **Use conservation activity as an opportunity to engage and educate.** Training and regional knowledge-sharing opportunities can arise from conservation activity at San Xavier. For example, board member and conservator Nancy Odegaard initiated a three day workshop focused on the conservation of the Mission's cast bronze bells in February of 2020. The workshop will engage the O'odham bell ringers, conservators, and apprentices working at the Mission, and will be open to other regional professionals from California, New Mexico, and northern Sonora. This provides the benefit of both conserving and documenting San Xavier's bells, identifying an appropriate treatment plan, and setting it up to be a hub for knowledge exchange and building a regional network of expertise.
- **Incorporate interpretation into conservation project scopes.** Conservation is itself an act of interpretation and when major projects, such as the conservation of the East Tower or the Facade Retablo, are undertaken, they provide an opportunity to share the building's history and inform visitors about how and why specific choices are made.
- **Provide regular updates on conservation work to the broader community.** Avenues for sharing ongoing and upcoming conservation work schedules and other information with the parish, Wa:k, and regional communities, such as newsletters and blog posts should be pursued. Offering or hosting public workshops or lectures regarding ongoing conservation work and new developments would help share progress with new audiences and facilitate a culture of openness and transparency.
- **Commission additional studies and research through collaborations with Universities and affiliated institutions** to further document the significance of different components of the Mission and to better understand the performance and sustainability of past and present conservation treatments. Future projects should include a Cultural Landscape Report, exploring the relationship between the Mission and elements of the broader landscape, and an investigation of the retablo facade.
- **Begin to prioritize work across the campus**, including conducting assessments of the Convento wings to determine scope of work for stabilization and rehabilitation. Making the utilitarian parts of the campus more functional for day-to-day operations of the church not only benefits the clergy, parish, and community, but also helps to alleviate some of the pressure on the Mission and other more sensitive historic areas. Part of this effort should include identifying safe and controlled storage facilities for collections, and possibly the addition of a facility in which conservation of statuary and collections may occur on site.



[Images 95, 96] Above: Signage is limited throughout the church and tends to relate more to church use and policies than to interpretation.

Below: Vestments and other items used for mass are stored in the Sacristy.



[Images 97, 98] Monitoring and updating conservation approaches is central to practice. Current stabilization efforts on the interior include removing a past repair campaign that included Rhoplex, a material that was thought to be compatible at the time it was implemented, but has proven to shrink and pull away from the historic fabric, taking traces of original material with it.

Above: Conservator Matilde Rubio shows CMP team where rhoplex-amended plaster is detaching in the vault of the West Transept.

Below: An apprentice inspects the ceiling for detaching plaster.

Glossary of Terms

Conservation	The profession devoted to the preservation of cultural property for the future. Conservation activities include examination, documentation, treatment, and preventive care, supported by research and education.
Conservator	A professional whose primary occupation is the practice of conservation and who, through specialized education, knowledge, training, and experience, formulates and implements all the activities of conservation in accordance with an ethical code such as the AIC Code of Ethics and Guidelines for Practice.
Documentation	The recording, in a permanent format, of information derived from conservation activities.
Integrity	A measure of the wholeness and intactness of a property or cultural heritage asset and its attributes.
National Historic Landmark	National Historic Landmarks (NHLs) are historic places that hold national significance. The Secretary of the Interior designates these places as exceptional because of their abilities to illustrate U.S. heritage.
Preservation	The act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however, the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.
Preventive conservation	The mitigation of deterioration and damage to cultural property through the formulation and implementation of policies and procedures for the following: appropriate environmental conditions; handling and maintenance procedures for storage, exhibition, packing, transport, and use; integrated pest management; emergency preparedness and response; and reformatting/duplication.
Reconstruction	the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.
Rehabilitation	The act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.
Restoration	Treatment procedures intended to return cultural property to a known or assumed state, often through the addition of non-original material.
Stabilization	Treatment procedures intended to maintain the integrity of cultural property and to minimize deterioration.
Treatment	The deliberate alteration of the chemical and/or physical aspects of cultural property, aimed primarily at prolonging its existence. Treatment may consist of stabilization and/or restoration.



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